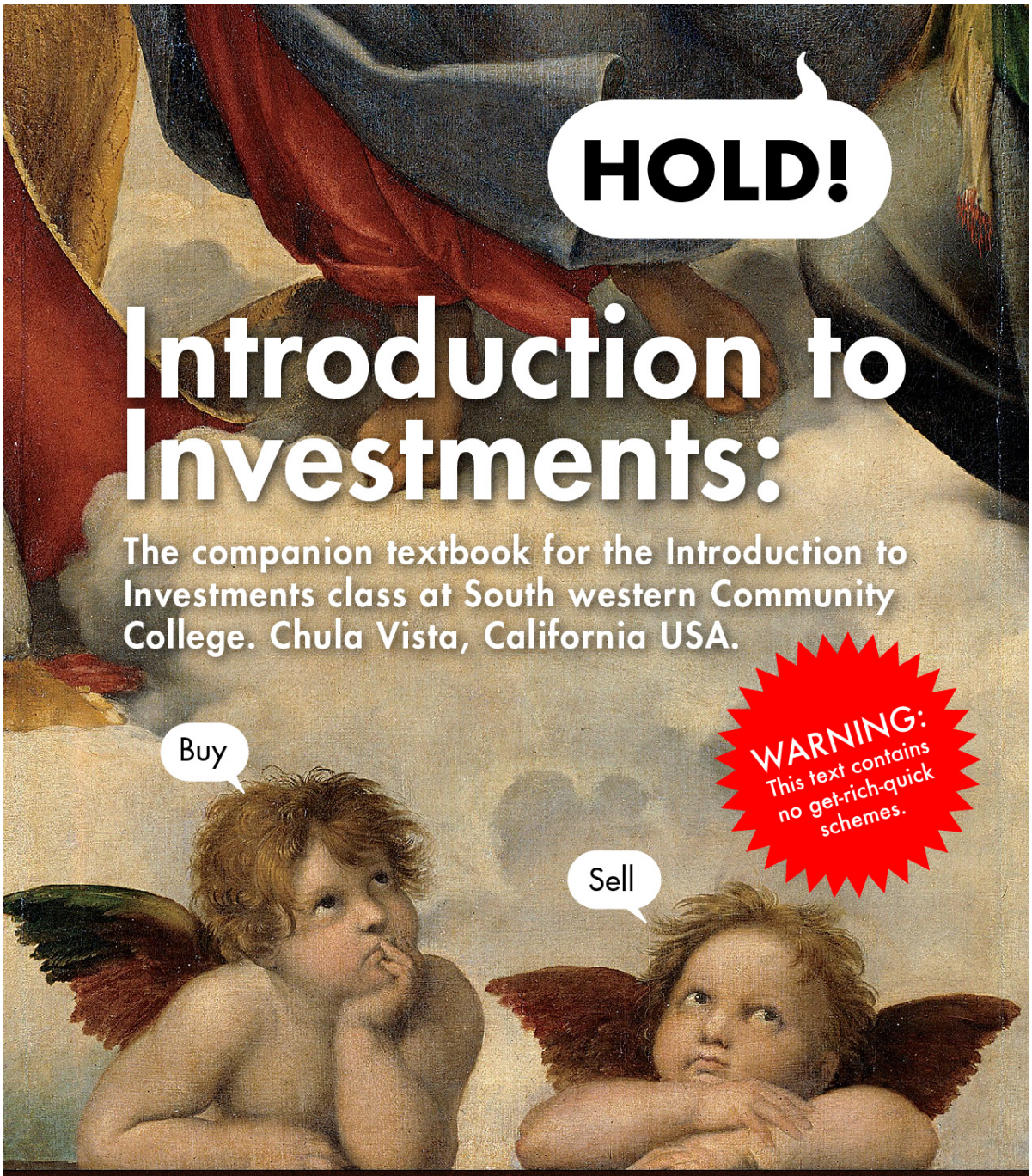
BUS 123: INTRODUCTION TO INVESTMENTS



Frank Paiano
Southwestern Community College

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Introduction to Investments:

The companion textbook for the Introduction to Investments class at South western Community College. Chula Vista, California USA.

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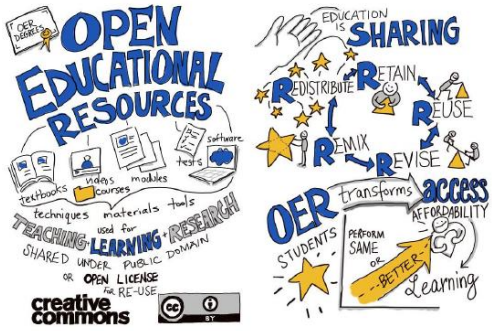
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> *"An author is a fool who, not content with having bored those who have lived with him, insists on boring future generations."* – *Montesquieu*



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Okay, so why write a book about investing when there are already many great books about investing available? That's a great question. The reason is a bit complicated. Nothing is perfect and that includes the world of academia. I have taught BUS-123, Introduction to Investments, at Southwestern Community College for 20 years now and have been a Registered Representative, also known as a Stockbroker, since 1998. I have been investing for far longer than that. If it were up to me, I would use *The Intelligent Investor* by Benjamin Graham as our college textbook at Southwestern. It is the definitive work on investing written by none other than the teacher and mentor of Warren Buffett, the famed investor. But always remember our motto in academia: If it makes sense, we don't do it. *The Intelligent Investor* is not a college-level textbook. It does not come from a college-level textbook publisher. A college-level textbook must cost at least US$340 for a book that is usually worth about US$29.95. In reality, *The Intelligent Investor* is far more rigorous than any college-level Introduction to Investments textbooks we have come across.

This is where Open Educational Resources (OER) comes in. Under their auspices, we can write a college-level textbook and have it blessed and kissed by the Academic Powers-That-Be. The reality is that this textbook is really just a restatement of the BUS-123, Introduction to Investments, class website. Websites also cannot be used as college-level textbooks even though, in my humble opinion and the opinion of many of our students, our website is also far superior to any college-level Introduction to Investments textbooks available. Again, if it makes sense, we don't do it. So there! That is why we wrote this book.

The other reason is that, as the French philosopher, Montesquieu, points out above, I am very much looking forward to boring those who are living with me and all future generations to come.

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Preface: Welcome to Introduction to Investments



> *"It is a gloomy moment in history. Never has the future seemed so dark and incalculable. The United States is beset with racial, industrial and commercial chaos, drifting we know not where. Of our troubles, no one can see the end."*

You have heard the predictions. The End of the World is Nigh! Doom and Gloom Await the Human Race! Global warming! Climate change! Rising sea levels! Pollution! Totalitarianism! Nuclear annihilation! Economic inequality! Earthquakes! Fires! Droughts! Tsunamis! Pestilence! Disco returning! Pretty scary stuff, eh? All you have to do is turn on the tele and watch the talking heads on Skunk News, ah, wait, Weasel News, no, I know, Fox News! When you ask people when they believe the above quote was said or written, they will often say, "Great Depression," or, "World War II," or maybe even, "9/11," or "2008." This famous quote is actually from *Harper's Weekly*, the nation's oldest magazine. It was written in 1847. (A few sources claim it was actually 1857. So here is your first research assignment. See if you can determine which is the actual year. Have fun!)

Did the United States face tremendous problems in the 1840's and 1850's? Yes, indeed it did. The nation was about to tear itself apart over the issue of slavery, our original sin. Do we have tremendous problems now? Yes, indeed we do. The nation is still tearing itself apart over issues similar to those fought during the Civil War along with a host of other problems we are facing, locally, nationally and globally. However, so far, equating serious with fatal has been a bad choice. In fact, the last 200 years have been the most prosperous years in the history of recorded civilization. The last 100 years, the last 50 years, the last 20 years, all of these have seen the global standard of living rise to levels never before seen by humankind. According to some sources, the global middle class reached over 50% in 2018 and is predicted to swell to over 5.5 billion people by 2030. Of course, there is much, much more that we need to do to bring all the people in the world into the global middle class so they have access to food, clothing, and shelter ... and Internet access.

So what does this mean for those of us who want to become prudent, long-term oriented, successful investors? It means that the news is good! As hundreds of millions of people enter the global middle class for the first time, they want many of the same things that we in the West have taken for granted for a hundred years. They want clean water, healthy food, safe housing, shoes, toothpaste, diapers, electronics, entertainment, bicycles, scooters, cars, etc. This will create many new and tremendous opportunities for companies to profit from this rise in the standard of living and for us investors who want to partake in that success.

Oh, by the way, you won't see this very good news on the nightly disasters, oops!, I mean, the nightly news. That is why it is a good idea to resolve to never again get your news from television. Start reading. You know what I am talking about, newspapers, magazines, books, libraries. You can download and read books, articles, and the news on your mobile phone. It's cool, really. You will feel better. And you will live longer, too. Trust me.

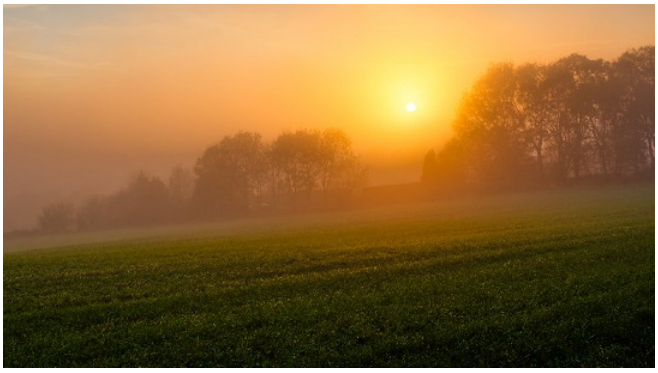
So are you ready to learn how to partake in the future success of the human race? We hope so. We will do our best to make you prudent, long-term oriented, successful investors. We want you to become the best investors the world has ever seen and become very wealthy! We also will do our best to make this class the best class you have ever taken! (I know. I know. This all sounds a bit

over the top but it is sincere.) We want to emphasize that you don’t need any previous investment experience. In fact, the less exposure to the talking heads in the media or the latest get rich quick schemes from your brother-in-law, the self-proclaimed investment expert, the better. So let’s get started with chapter 1. We start with a very simple question: What is an investment?

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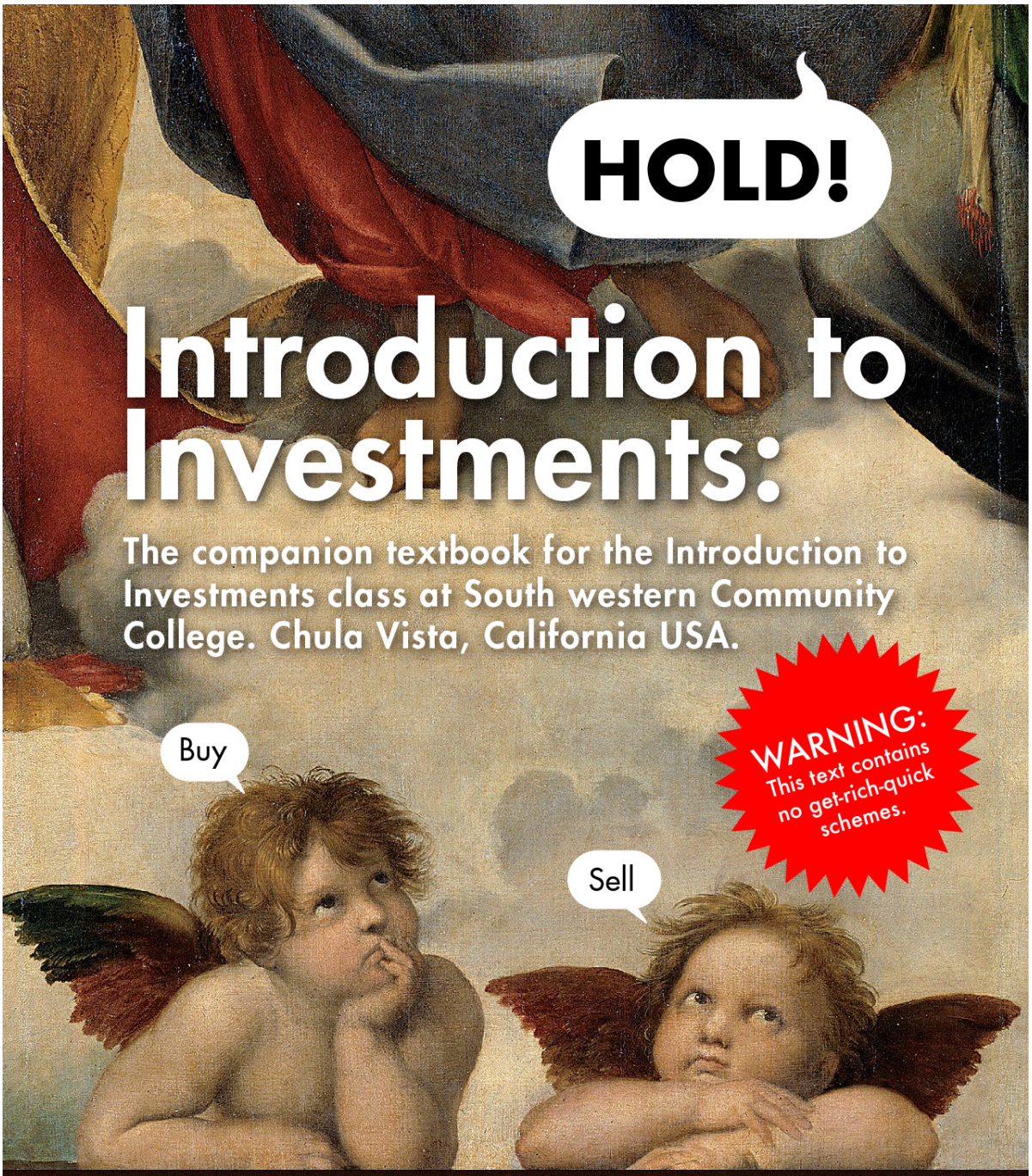
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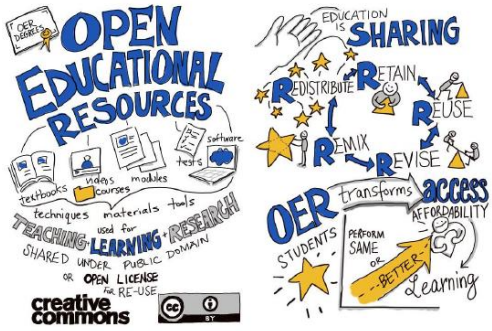
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> *"It is a gloomy moment in history. Never has the future seemed so dark and incalculable. The United States is beset with racial, industrial and commercial chaos, drifting we know not where. Of our troubles, no one can see the end."*

You have heard the predictions. The End of the World is Nigh! Doom and Gloom Await the Human Race! Global warming! Climate change! Rising sea levels! Pollution! Totalitarianism! Nuclear annihilation! Economic inequality! Earthquakes! Fires! Droughts! Tsunamis! Pestilence! Disco returning! Pretty scary stuff, eh? All you have to do is turn on the tele and watch the talking heads on Skunk News, ah, wait, Weasel News, no, I know, Fox News! When you ask people when they believe the above quote was said or written, they will often say, "Great Depression," or, "World War II," or maybe even, "9/11," or "2008." This famous quote is actually from *Harper's Weekly*, the nation's oldest magazine. It was written in 1847. (A few sources claim it was actually 1857. So here is your first research assignment. See if you can determine which is the actual year. Have fun!)

Did the United States face tremendous problems in the 1840's and 1850's? Yes, indeed it did. The nation was about to tear itself apart over the issue of slavery, our original sin. Do we have tremendous problems now? Yes, indeed we do. The nation is still tearing itself apart over issues similar to those fought during the Civil War along with a host of other problems we are facing, locally, nationally and globally. However, so far, equating serious with fatal has been a bad choice. In fact, the last 200 years have been the most prosperous years in the history of recorded civilization. The last 100 years, the last 50 years, the last 20 years, all of these have seen the global standard of living rise to levels never before seen by humankind. According to some sources, the global middle class reached over 50% in 2018 and is predicted to swell to over 5.5 billion people by 2030. Of course, there is much, much more that we need to do to bring all the people in the world into the global middle class so they have access to food, clothing, and shelter ... and Internet access.

So what does this mean for those of us who want to become prudent, long-term oriented, successful investors? It means that the news is good! As hundreds of millions of people enter the global middle class for the first time, they want many of the same things that we in the West have taken for granted for a hundred years. They want clean water, healthy food, safe housing, shoes, toothpaste, diapers, electronics, entertainment, bicycles, scooters, cars, etc. This will create many new and tremendous opportunities for companies to profit from this rise in the standard of living and for us investors who want to partake in that success.

Oh, by the way, you won't see this very good news on the nightly disasters, oops!, I mean, the nightly news. That is why it is a good idea to resolve to never again get your news from television. Start reading. You know what I am talking about, newspapers, magazines, books, libraries. You can download and read books, articles, and the news on your mobile phone. It's cool, really. You will feel better. And you will live longer, too. Trust me.

So are you ready to learn how to partake in the future success of the human race? We hope so. We will do our best to make you prudent, long-term oriented, successful investors. We want you to become the best investors the world has ever seen and become very wealthy! We also will do our best to make this class the best class you have ever taken! (I know. I know. This all sounds a bit

over the top but it is sincere.) We want to emphasize that you don’t need any previous investment experience. In fact, the less exposure to the talking heads in the media or the latest get rich quick schemes from your brother-in-law, the self-proclaimed investment expert, the better. So let’s get started with chapter 1. We start with a very simple question: What is an investment?

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SECTION OVERVIEW

Part 1: Introduction and Mutual Funds

In chapter 1, we start with a simple question: What Is an Investment? We cover the various characteristics and attributes of investment alternatives, conduct an overview of the investment universe, and discuss the never-ending tug of war between risk and return. We end chapter 1 by turning our attention to short-term investments and learn how and where to park our money. In the second chapter, we extensively cover mutual funds, investments for the masses. Very important!

Chapter 1: Introduction, Overview, and Risk versus Return

1.1: What Is an Investment?
1.2: Investment Characteristics and Attributes
1.3: An Overview of the Investment Universe
1.4: Risk versus Return – The Eternal Struggle of Investing
1.5: Short-Term Investments Revisited – A Place to Park Your Money
1.S: Summary

Chapter 2: Mutual Funds: Investments for the Masses

2.1: Introduction to Mutual Funds
2.2: Growth of the Mutual Fund Industry
2.3: Advantages and Disadvantages of Mutual Funds
2.4: Open-end, Closed-end, and Exchange-Traded Funds (ETFs)
2.5: Regulation and Organization of Mutual Funds
2.6: Fees, Expenses, and Share Classes, Oh, My!
2.7: Categories and Types of Mutual Funds
2.8: The Great Debate – Active Management versus Passive Management
2.9: Mutual Fund Families and Fund Services
2.10: A Sample Mutual Fund
2.S: Summary

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CHAPTER OVERVIEW

Chapter 1: Introduction, Overview, and Risk versus Return

> *"In investing money, the amount of interest you want should depend upon on whether you want to eat well or sleep well."*
> *-- J. Kenfield Morley*

Investing is not as difficult as you think; we will show you how. (Speculating and trading are very, very difficult; we can't help you with those. Sorry.) After you have taken this course, you will have a strong foundation of the most important financial investments. We cover stocks, bonds, mutual funds, short-term investments, commonly referred to as "cash," hybrid instruments, and a few others. We want to emphasize that this is an introduction class. You do not need any prior investment experience. We start from the very beginning with the question: "What Is an Investment?"

Learning Objectives

In this chapter, you will

- Be introduced to the definition of an investment and the basic characteristics of investments – We start from the very beginning! What is an investment?
- Review the major asset investment alternatives – An Overview of the Investment Universe
- Explore the relationship of risk and return
- Identify the differences between an investor and a speculator/trader
- Concentrate and investigate short-term "cash" investment alternatives – A Place to Park Your Money
- Discuss aspects of short-term "cash" investments with your fellow students

By the end of this chapter, you should be able to

- Given a typical investment, identify its characteristics including the cash flow (income) and capital gains (growth) components, and identify the advantages and disadvantages of the investment
- In a brief two- to three-sentence description, succinctly describe the major investment alternatives including stocks, bonds, mutual funds, and short-term "cash" investments
- Explain the historical relationship of risk and return (Do you want to eat well or do you want to sleep well?)
- Research short-term "cash" investment alternatives including demand deposit accounts such as savings accounts, Certificates of Deposits, money market accounts and money market mutual funds, and Treasury Bills
- Describe institutional short-term investment alternatives such as corporate paper and banker's acceptance notes
- Optionally, calculate the future values of a lump sum principal investment and a series of investments

Don't worry if any or all of this sounds scary now. We will learn all these terms and concepts in good time. They really are not as hard as they sound. Again, not for the last time, we want you to remember that this is an Introduction to Investments class. You need no prior investment experience nor training.

Every chapter has a corresponding presentation file and study guide. In BUS-123, Introduction to Investments, we use Google Docs. Please remember that all class material is located on the class website, https://www.wonderprofessor.com/123/. In this first chapter, we have a video presentation that discusses the study guides and also demonstrates how to download documents or make a copies of documents using Google Docs.

1.1: What Is an Investment?
1.2: Investment Characteristics and Attributes
1.3: An Overview of the Investment Universe
1.4: Risk versus Return – The Eternal Struggle of Investing
1.5: Short-Term Investments Revisited – A Place to Park Your Money

1.S: Summary

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1.1: What Is an Investment?



Video - Audio - YouTube - Presentation File - Study Guide

> *"In investing money, the amount of interest you want should depend upon on whether you want to eat well or sleep well."*
> *-- J. Kenfield Morley*

Welcome to Introduction to Investments. Do you want to be a successful investor? You can. You do not need any prior investment experience to take this class. You don't have to be a genius or a technology whiz. There is no advanced math, only simple arithmetic that any 99¢ calculator can perform, addition, subtraction, division, and multiplication. The concepts, techniques, and skills, while extensive at times, are not difficult. The research is relatively painless. As the famed investor, Mr. Warren Buffett, has been quoted as saying, "Investing is simple … but it ain't easy." What? Why? How? Mr. Buffett is referring to the fact that there are two parts to the world of investments. The simple part is the intellectual part, the cognitive part. Read, listen, watch, study the material, spend some time doing the research and the assignments, and you should find that the concepts, techniques, and skills are actually very straightforward. The "ain't easy" part is the emotional part of investing. We will spend a great deal of time doing our best to help you learn techniques, tricks, and tips that should help you succeed with the emotional part, but again, as Mr. Buffett says, "it ain't easy!"

Mr. J. Kenfield Morley encapsulates our predicament perfectly. "In investing money, the amount of interest you want should depend upon on whether you want to eat well or sleep well." If we may be so bold as to suggest a better rendition of this timeless advice, we would ask Mr. Morley to substitute the word *reward* for his choice of the word *interest*. Interest is just one type of investment reward; there are others. Nevertheless, the meaning shines through brilliantly. As we are introduced to the many

investment choices, we are going to see that some of the choices will help us eat well. Some others will allow us to sleep well. However, there aren't any choices that can do both. Take heart! We will learn some techniques that should allow us to eat reasonably well and sleep reasonably well but as we will say over and over and over again, "There ain't no guarantees!"

Investing versus Speculating/Trading

We are going to introduce a distinction here that will run through our journey together. Do you want to be an investor or do you want to be a speculator, also known as a trader? Becoming an investor is something that we can definitely help you with. You will learn the most important and most popular investment alternatives. You will learn the types of rewards we can expect from each and the levels of risks that we will have to accept to receive these rewards. We will also cover some important techniques and skills to help us deal with these risks. We will learn that building wealth through investments is a long-term process; it does not happen overnight. We can help you become a prudent, long-term investor. However, if you want to become a speculator or a trader and earn tremendous amounts of money quickly, then we are sorry to say that you will be very disappointed in this class. We are not able to help you to become a speculator or trader. Our sincerest apologies.

So let's get started. We start from the very beginning with a simple question: What is an investment? There are many definitions available. Here is the definition we will use in our class:

> *An investment is any vehicle into which resources can be placed with the expectation that it will generate positive income, or that its value will be preserved or increased, or both.*

For the vast majority of us, the resources placed will be dollars, typically from our work-related income. There are many investment vehicles and, as mentioned, we will cover the most popular alternatives. We see that there are a few goals that we might seek with regard to our investments. One goal is to generate positive income, also known as cash flow. Another goal is to increase the value of our investment, also known as capital appreciation. At the very least, we want to preserve the value of our investments over the long term. Lastly, we could also seek both goals of cash flow and capital appreciation. As we introduce each investment alternative, we will discuss the goals associated with each investment alternative and the risks that each carries.

Here is another important definition that revisits our distinction of being an investor or a speculator/trader:

> *"An investment operation is one which, upon thorough analysis, promises safety of principal and a satisfactory return. Operations not meeting these requirements are speculative." – Benjamin Graham*

This definition, Dear Readers, is very near and dear to Your Humble Author's heart. This quote is from *The Intelligent Investor*, written by Mr. Benjamin Graham. Mr. Graham was Mr. Warren Buffett's teacher and mentor. Eventually you will want to read *The Intelligent Investor*. (Don't read it as your first book! There are better books to read as your first book on investing. Please see the Bibliography for which books you should read first.) We will return again and again to this definition. If nothing else, we want you to understand the difference between prudent investing for the long term and speculating/trading in the short term.

Mr. Buffett is famous for boiling down Mr. Graham's concepts into very simple sayings. To illustrate this concept, Mr. Buffett famously said, "Rule #1: Don't lose money. Rule #2: Never forget Rule #1." Although we will see that investment values bounce up and down all the time, if you do your research and choose prudent, long-term investments that have done well over time and should continue to do well into the future – and you don't panic when the markets fall – you won't lose money in the long term*. You won't be a speculator/trader. You will be an investor.

We will now discuss various characteristics and attributes of the major investment alternatives.

**Disclaimer*: Please note that investment success is not guaranteed. If technologically based civilization cracks, falls, and dissolves into a pool of tears, then all bets are off. Of course, if that happens, you won't be worrying about your investments. You'll be joining the teeming masses digging for beetle grubs and boiling bark for dinner. Personally, I don't believe this is going to happen any time soon. I am very optimistic. Failure is not an option. But the truth is that nobody knows what the future will bring. Oh, well.

We will now discuss various characteristics and attributes of the major investment alternatives.

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1.2: Investment Characteristics and Attributes



Video - Audio - YouTube - Presentation File *(Material for this section begins on slide 5.)*

As you work through the material in this introductory chapter, remember that this is an Introduction to Investments class. Don't worry about all the jargon and buzzwords and proclamations and sexy graphics and silly antics that you may have heard or seen from the talking heads on the financial media outlets. Please forget anything and everything your brother-in-law, the self-appointed Expert-On-All-Things-Including-How-To-Invest, told you at the Thanksgiving dinner table. What follows is a list of general characteristics and attributes about investments. Study these terms, write them down, print the chapter 1 Study Guide, and watch and listen to the first lecture presentation for chapter 1 on the class website. This is all you need to learn and know for now.

Securities, Property, and Personal Investments

There are three broad categories of investments: securities, property, and personal. According to Wikipedia, a "security is a tradable financial asset." Investopedia goes into more detail and defines a "security as a fungible, negotiable financial instrument that holds some type of monetary value." The fancy words *fungible* and *negotiable* mean that the security can be traded and its value can be negotiated. Another popular definition of security is "an investment that represents debt or ownership or the legal right to acquire or sell an ownership interest." This last definition introduces the three main categories of securities that we will detail later. The word *security* is an unfortunate term. Many people don't have a clear picture of what is meant by the word *security*. Our class used to be titled, "Investments and Securities." Students would say, "I'm not an Administration of Justice major. I don't need to take this class." No, not that type of security! For now, please understand that a security is a financial asset that can be traded and whose value changes over time.

Property investments are sometimes referred to as hard assets or tangible assets. They include gold and other precious metals, art and other collectibles such as cars, commodities such as basic foodstuffs and materials, and real estate. We will discuss property investments toward the end of our journey together. They are important options but for the vast majority of us, securities are the best choice for prudent, long-term investments. This class concentrates on securities.

Finally, personal investments are endeavors we undertake to better ourselves. Examples include education, training, and travel. Many say that their personal investments such as college or traveling the world were often the best investments they ever made. I agree. We will do our best to make our time together one of the best, if not the best, personal investments you will ever make. None other than Benjamin Franklin said, "An investment in education pays the best interest."

Primary Assets versus Derivative Assets

Investments fall into either primary or derivative assets. For the vast majority of our time together, we will be covering primary assets. Primary assets fall into two categories: debt and equity. Debt investments are investments where investors lend their money to someone else. Examples of these include bonds and savings accounts. Equity investments are investments where the investor has full or partial ownership of the entity. Examples include stocks, real estate, and partnerships. Debt investors are loaners. Equity investors are owners.

On the other hand, derivatives are securities that derive their value from other assets. Examples of derivatives are options and futures. With derivatives, you can make a whole lot of money quickly and then lose a whole lot of money quickly. In fact, you can lose the whole value of your derivative investment overnight. Many in the industry do not categorize derivatives as investing. According to Mr. Graham's definition above, derivatives would certainly be regarded as speculative. As we will see, in the investment world, "speculative" is a euphemism for the word "gambling." We will discuss options and futures in detail at the very end of our journey together. Before we impress upon you just how dangerous these speculations are, if anyone tries to entice you with riches beyond your wildest dreams trading in options or futures, please tell them you are waiting until the end of the Introduction to Investments class before you make a decision one way or the other. (Spoiler alert: Unless you enjoy losing money quickly, stay away from derivatives of all forms! They are hazardous to your financial well-being.)

Direct Investments versus Indirect Investments

Direct investments are investments for which you have control of the underlying investment assets. Your name is on the title or the account. You are in control of the asset. Examples of these types of investments include stocks, bonds, real estate, and hard assets. With an indirect investment, someone else is making the decision about what underlying investment will be chosen. You may have some input into the decision but more often than not, you have no control of what assets will be chosen. Examples of these investments are mutual funds, limited partnerships, and Real Estate Investment Trusts (REITs). With indirect investments, you choose the mutual fund or limited partnership or REIT, and the manager or general partner chooses the underlying investments in stocks or bonds or real estate.

Investment Domesticity

Domesticity describes the location of an investment. There are three categories: domestic, global, and international. The first category is easy; a domestic investment is domiciled inside the United States. There is a subtle but important distinction with regard to the second two categories. A global investment means that it could be based anywhere in the world, including the United States. An international investment is based outside the United States. Please pay attention to this important difference. International investments are also often called foreign investment or overseas investments.

Until the 1970's, the differences between these categories were important. However, as globalization has evolved since the 1980's, the differences have become much less pronounced. Greg Ireland, a successful mutual fund manager with over 35 years of experience once said, "The world is a very small place economically." The influential magazine *Forbes* reported that, "Sixty-five percent (by value) of the parts in the Ford Mustang come from the U.S. and Canada. Ninety percent of the parts in the Toyota Sienna – which is built in Indiana – come from the U.S. and Canada." Which is the more American car, a Ford Mustang or a Toyota Sienna?

In the presentation, we list seventeen well-known companies and ask, "Which are domestic and which are foreign?" (Spoiler alert: They are all foreign.) In the United States, the issue of globalization has spilled into the political arena and elicited much

controversy. At times, this controversy has taken the form of anger, fear, and loathing. This is unfortunate from our viewpoint as investors. Nothing is perfect and that includes our efforts to globalize the economy. However, on balance, globalization has been a tremendous positive for investors around the world and has helped bring hundreds of millions of people out of poverty and into the global middle class. The tricky part is ensuring that all enjoy the benefits of the expansion of the global economy.

Next in the presentation, we list the top 18 countries according to per capita gross domestic product. We then ask a simple question: Which country had the best average annual return between 1970 and 2021? (No spoiler here! Please watch or listen to the presentations on the class website.) The world is indeed a very small place economically these days.

Time Horizon

One of the most important, if not the most important, characteristic that we must decide upon before we make an investment decision is our time horizon, also known as our time frame. When will we need to use the funds from our investment? Here are some popular guidelines:

Time Horizons

Time Frame	Financial Industry	Life Insurance Industry
Short-Term	Up to a year or so	1 to 3 years
Intermediate-Term	2 to 5 years	3 to 5, 6, or even 7 years
Long-Term	More than 5 years	More than 7 years

Before you make an investment, we must know our time frame. As we will learn, our time frame will dictate what types of investment we can and cannot use.

Liquidity

No, not how much beer we need for the weekend! Liquidity refers to how easily your investment can be turned into cash. Liquid investments are easily and quickly converted into cash. There is a ready market to purchase the investment and change of ownership happens quickly. Examples include stocks and mutual funds. Go online or call your broker and you will have your money very quickly, usually within a day or two. Illiquid investments are the exact opposite. The market for the investment is small or the change of ownership happens slowly, or both. It usually takes some time – sometimes much time – to convert your investment into cash. The poster child for illiquid investments is real estate. Real estate usually takes at least two or three or more months to sell. Other examples of illiquid investments include limited partnerships, fine art, and collectibles.

Risk versus Return

Do you want to eat well or do you want to sleep well? In the investment world, risk is the chance that your actual investment returns will differ from your expected return. Wait a minute! That is not the typical definition of risk. When most people think of risk, they think of the possibility of suffering harm or loss. They think of danger. When they think of risk with regard to investing, they think of losing their investment. They think of losing all their money. Instead, in the investment world, when we endeavor to measure risk, we calculate the probability that what we receive from our investment will not match what we expect from our investment. It is an imperfect measurement but it can help us to keep a long-term perspective and can even help us to take advantage of the risks inherent in an investment.

In general, the higher the expectation of investment returns, the higher the risk level we will have to accept. There is no way to negate this relationship. If we want high returns, we are going to have to accept high risk. Here is the risk versus return spectrum that we will use:

Risk versus Return Attributes of Investments

Risk Level	Return Expected
Low Risk	2% to 4%
Moderate Risk	4% to 8%
High Risk	8% to 12%
Speculative Risk	Greater than 12%

Unless they are being dishonest, others will use different but ultimately similar spectrums. Please remember that speculation is not considered investing by many in the industry, Your Humble Author included. As mentioned, we are going to do our best to help you learn how to handle the ups and downs of moderate to high-risk investments and at the same time, generate reasonably moderate to high returns over the long term. We want you to eat reasonably well and sleep reasonably well!

It's time for some checking for comprehension. At the end of the presentation, we list six examples of investments. We want you to ascribe the various characteristics and attributes we covered to the six investments. Again, only concern yourself with what we have covered so far. Relax and have fun. Give my regards to Uncle Harry!

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1.3: An Overview of the Investment Universe



Video - Audio - YouTube

Let's become casually acquainted with the major investment asset classes. We will dispense with all the tedious details. Concern yourself with just what we cover here. Don't fret. There will be plenty of time later on to learn the many intricacies of these investments. As we introduce each investment asset class, we will also touch on the risk and return that we can expect from each.

Equity Securities, Also Known as Common Stocks or Stocks

In the investment world, equity refers to ownership. Equity securities, also known as common stocks, represent partial ownership in corporations. Most people just use the term *stocks*. The term *stocks* is a bit unfortunate. Your Humble Author prefers to refer to them as companies or better yet, businesses. You are investing in a business. Why invest in a business? When all goes well, businesses grow and earn money. This creates two great opportunities for investors. When the business grows, your partial ownership of the business should also grow. That's capital appreciation, also known as capital gains. Also, the business can optionally distribute earnings to you in the form of dividends. (You can think of dividends like interest payments even though they are legally two different forms of payments.) We invest in businesses for potential capital appreciation and potential dividends. We invest for growth and income.

Note that we said, "When all goes well." Obviously, all doesn't always go well in this wicked world of ours, does it? Both capital appreciation and dividends are optional and are not guaranteed. Therefore, we find that stocks are high-risk investments. We say that stocks are *volatile*. Stocks exhibit high *volatility*. Volatility is a euphemism for, "I lost a whole lotta' money!" You might ask someone how that stock he or she bought is doing and they may sheepishly say, "Oh, it's been volatile." That means they bought it for $11.88 and sold it for 30¢. Do you know anyone who bought a stock for $11.88 and sold it for 30¢? I do. I have known him all

my life. He's kind of a goofy guy who teaches Introduction to Investments at Southwestern Community College in Chula Vista … Look, it was a really good company and they were going to strike it rich by making artificial blood and there would be no more need for blood banks or calls to the public to donate blood and well, um, it just didn't turn out the way it was supposed to. Ahem. Stocks are volatile. Stocks are risky. In fact, to paraphrase Professor Burton Malkiel from his famous book, *A Random Walk Down Wall Street* discussed in our Bibliography, the 2008 definition of stocks is, "Stocks are equity investment instruments designed to lose value."

However, if we can learn to stomach the volatility that comes along with stock investing, history tells us that we can reasonably expect to receive some of the best long-term returns available from the investment world. We like to say that stocks have an average annual return of 8%, 9%, or even 10% over the long term. The problem is that they almost never return 8% or 9% or 10% in any given year. The returns vary substantially, up and down. For this reason, when we want to invest in stocks, we must think long term. We must give our stock investment enough time to reward us with 8% or 9% or 10% annually. As Warren Buffett is quoted as saying, "If you aren't thinking about owning a stock for ten years, don't even think about owning it for ten minutes." Stocks are long-term investments.

Disclaimers: The real estate fans are most likely jumping up and down and screaming that real estate has given investors better returns than stocks. Calm down and please accept my apologies. In one sense, they are correct. In another, they are not. The problem is how we measure investment returns and how different investments are typically purchased. We will deal with this thorny issue later on. Some stock fans might also be screaming saying that 8%, 9%, 10% is too low. Stocks have done better. This is actually true. Stocks as a whole have done better than 10% over the last 100 years and some stocks have done a whole lot better. However, some have done a whole lot worse. We prefer to keep new investors' expectations muted, especially since there are long periods of time where stocks have done a whole lot worse than 8%, 9%, or 10%. Finally, a scant few stocks can be considered moderate risk and moderate return vehicles. In the presentation for the previous section – You have watched it already, right? – we discussed Nestlé, the world's largest food company. Companies such as Nestlé can be categorized as moderate risk and moderate return investments.

Fixed-Income Securities, Also Known as Bonds

Fixed-income securities are typically referred to as bonds. Bonds are long-term loans to corporations, state and local municipalities, and the Federal government. When you invest in a bond, you get to play the part of a bank. You lend your money to one of these entities. In return, they promise to repay the principal – the money you lent them – and along the way, they will pay you interest. Most people pay their debts to the banks. Likewise, most corporations and state and local governments also pay their debts. The United States Treasury has always paid its debts. Hence, we find that bonds are far less risky than stocks. And subsequently, we find the long term return from bonds is far less than stocks. (Are you starting to see a pattern here, Dear Students?) What can we expect from bonds? Investors used to be accustomed to receiving 3% to 8% in interest from their bond investments. During the years after the Global Financial crisis, many bonds paid 1% to 3%. Greater than 4% is unusual. In 2022, interest rates rose and investors could again find attractive interest rates from many bonds.

Remember that bonds are securities and bond prices change in the marketplace every day just like stocks. At first, it may seem a bit odd that the value of a loan could vary. Yet there are times when the prices of bonds can fall, too. However, as mentioned though, the volatility with regard to bonds is much less than what stocks exhibit. To repeat, the fall will typically be far less than stocks but it can still sting. For example, when some stocks lost well over 50% during the Global Financial Crisis of the late 2000's, many bonds lost between 10% and 20%. A similar decline in bonds was experienced in 2022. We again paraphrase Professor Malkiel by saying the 2008 definition of bonds is, "Bonds are fixed-rate investment instruments designed to lose value."

Short-term Investments, Also Known as "Cash" – A Place to Park Your Money

Short-term investments are often referred to as "cash." We usually see cash put in quotes because these investments are not dollar bills that we stuff under our mattresses. Many of these short-term instruments are tradable securities so again, their prices do change. However, they are vehicles that are typically guaranteed by some governmental organization. And if they are not guaranteed, they are pretty darned close. If you have been paying attention, you should be able to guess correctly that since these choices have very low risk, these investments will not give us much reward. Therefore, we say that short-term investments are a place to park your money. You aren't going to lose your money, but you also aren't going to make much money. That is why we call them short-term investments. If we need the money in the short-term, we don't want to place our funds into the stock market.

Even the bond market might be too risky for us. We need to park our money into a short-term investment so that in three, six, or nine months, we know it will not have lost 10%, 20%, or more of its value. At the end of this introductory chapter, we will cover short-term investments in detail. Our 2008 Definition? “Short-term investments are instruments designed to accept what remains of investors’ money after they have given up on stocks and bonds.”

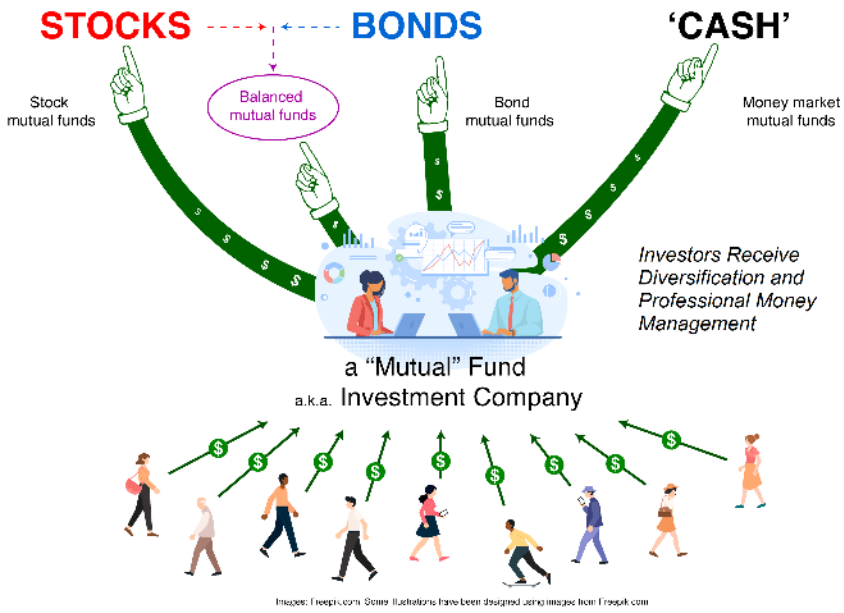
Mutual Funds, Also Known as Investment Companies – Investments for the Masses

Unless you live on a deserted island or somehow effectively have shut out all forms of mass media, you no doubt have been subjected to advertisements for mutual funds. There is a valid reason for this. Mutual funds are investments for the masses. Just as most of us workaday individuals don’t build our own cars, make our own shoes, or grow our own food, most people will not dedicate the time to learn how to invest. (This is most unfortunate. Everyone should take Introduction to Investments, not that I’m biased, of course.) And education is just the beginning! They then need to spend many hours doing the necessary research to identify, choose, and monitor their individual stock and bond investments. You, Dear Readers, are going to make this a fun and profitable labor of love. Many other people are either not interested, too nervous or frightened, or just simply too busy living their lives. This is where mutual funds come into the picture.

The legal term for a mutual fund is an investment company. Now doesn’t that name make more sense? The term investment company tells you what the mutual fund does for you. Do you need a car? You go to a car company. You need shoes? You go to a shoe company. You need investments? You go to an investment company! Mutual funds / investment companies are companies that pool investors’ money and invest in a diversified portfolio of securities, typically stocks, bonds, or a combination of stocks and bonds. Investors receive two valuable benefits, diversification and professional money management. Because of the size of the typical mutual fund, they are not limited to 10 or 20 stocks or bonds as is common with an individual investor. More than 20 stocks and an individual investor often becomes overwhelmed with the necessary research to simply keep track of their holdings. A typical mutual fund will hold 100 or 200 securities. Some hold many more.

So how does the mutual fund keep from becoming overwhelmed? The mutual fund is managed by professional money managers, the second major benefit of investing in mutual funds. The mutual fund portfolio managers are highly skilled and very well-paid professionals whose day-to-day job is to identify, choose, and then monitor the diversified portfolio of investments in the mutual fund. As we shall see, it is not an easy job and there is some controversy over whether these individuals are actually worth the high salaries they demand. We will explore this debate in our chapter dedicated to mutual funds.

Because of these two valuable benefits – diversification and professional money management – mutual funds have become extremely popular. Adding to their popularity are the countless employer-sponsored retirement programs such as 401(k) and 403(b) plans. Mutual funds are the dominant investment choice for employer-sponsored retirement programs. Almost half of all American households own mutual funds. In our next chapter, because of their importance as investments for the masses, we will spend a great deal of time on mutual funds.



Mutual Funds: Investments for the Masses, Graphics courtesy of Ferran Capo: StudioCapo

What kinds of risks and returns can we expect from mutual funds? Mutual funds will exhibit risks and returns similar to their underlying investments. There are many mutual funds that fall into the short-term investment category. These are called money market funds. Low risk, low return. However, most mutual funds are dedicated to stocks or bonds or both and they will exhibit the same risk versus return characteristics of stocks and bonds. Hence, what is their 2008 definition? "Yeah, them too." 2008 was a very difficult year for everyone.

Hybrid Securities – Preferred Stocks and Convertible Securities

Hybrid securities are designed to offer the stability of fixed-income investments (bonds) with the opportunity for capital growth of equity investments (stocks). With these investments, we are trying to get the best of both worlds. The pesky fly in the ointment with this approach is that along with the advantages of both stocks and bonds, you also get the disadvantages of both stocks and bonds. So, we get the best of both worlds … and we get the worst of both worlds.

Other annoying flies buzzing around the hybrid security worlds are the names of the major types of hybrid securities. The two major examples of hybrid investments are preferred stock and convertible securities. Don't they sound enticing? Wouldn't you really rather have "preferred stock" instead of just "common stock?" Well, actually, no, you and I and most individual investors don't really want preferred stock. They are typically owned by corporations. Plus anything that has to do with convertibles must be cool, right? You know, driving down the highway in your convertible car with the wind blowing through your hair? Well, convertible securities are nowhere near as sexy as that, as we shall see. For now, all you need to know is that hybrid securities are an attempt to combine the advantages of stocks and bonds together but they also combine the disadvantages of stocks and bonds. We will postpone discussing these oddities until much later in our class. Finally, they constitute a very small part of the investment universe.

Other Investment Alternatives – Real Estate, Physical Assets

Not everyone wants to invest in just stocks or bonds or mutual funds. For them, they may want to dabble in the world of real estate or try their hand at precious metals, art, collectibles, cars, or even enter the high-stakes world of commodities. Suffice to say, these investments are not for everyone. For many people, just scraping together the resources to purchase a home is enough real estate for a lifetime. Also, as we will see, some alternatives such as gold that get a great deal of attention have not necessarily been very good investments over the long term. At the very end of our journey together, we will touch on these alternatives. By the way, none of these choices were spared during the Global Financial Crisis in 2008.

Derivatives – Options Contracts, Futures Contracts

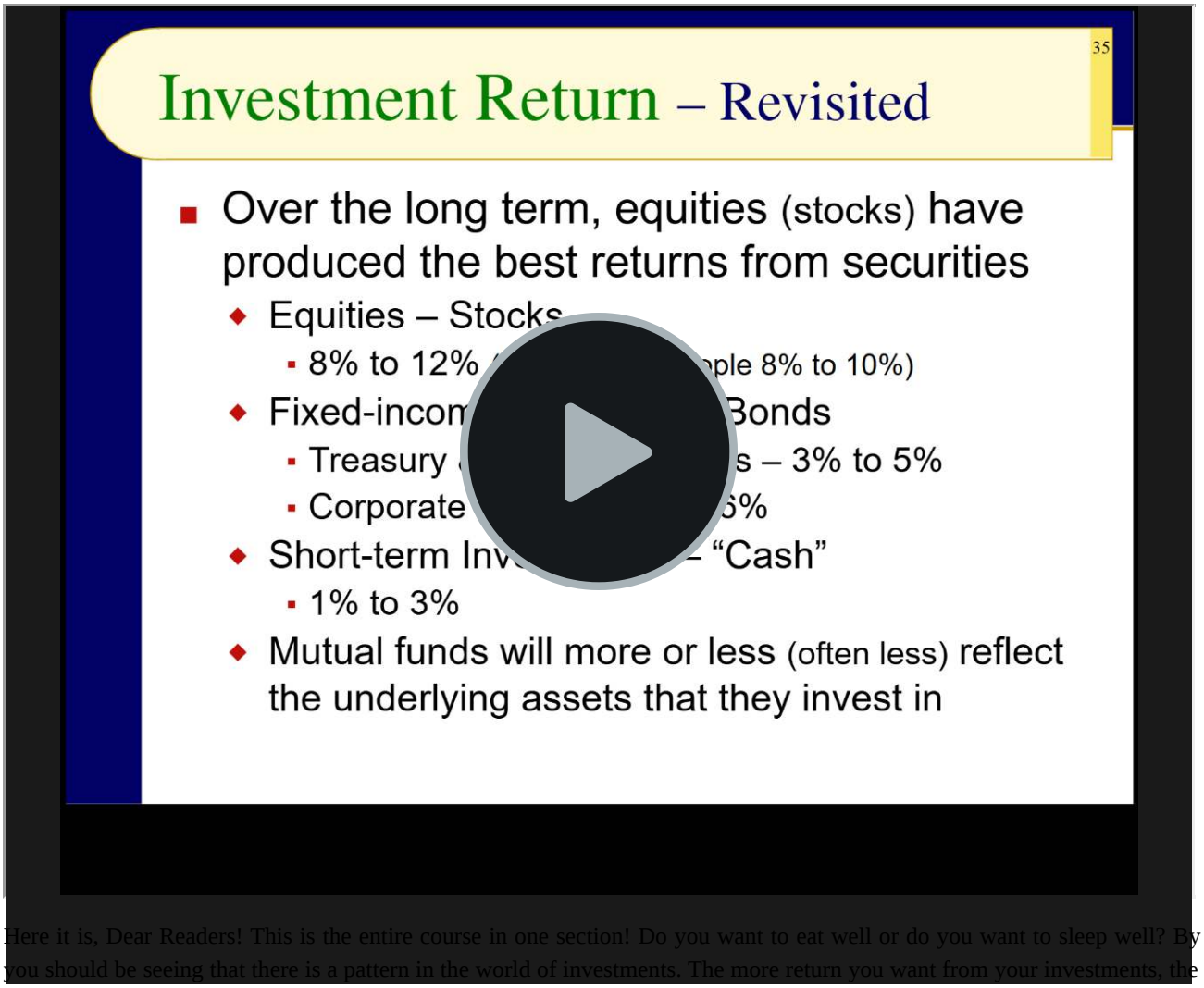
Derivative assets are speculative securities that derive their value from an underlying security or asset such as a stock or bond. "*What? You are not buying the stock or bond?*" No, you are buying a security that depends upon the price movements of a stock or bond. That sounds very confusing. Well, yes, it is. Derivatives are very confusing. More importantly, they are immensely risky. You can make 100% in one day … and then lose it all the next day. For this reason, we do not categorize them as investments. They are speculations. (Throughout the class, when you see the words speculative or speculation, simply substitute the word gambling, okay?)

Two major examples of derivatives are options and futures. Actually, to show you how confusing these things really are, their actual names are options contracts and futures contracts. Try saying those names three times fast. For now, this is all you need to know about derivatives: Derivatives derive their value from another asset, two major examples of derivatives are options and futures, and derivatives are extremely dangerous. In 2008, the derivative speculators did not feel so all alone. Usually, they are the only ones who are proud to have only lost 30%.

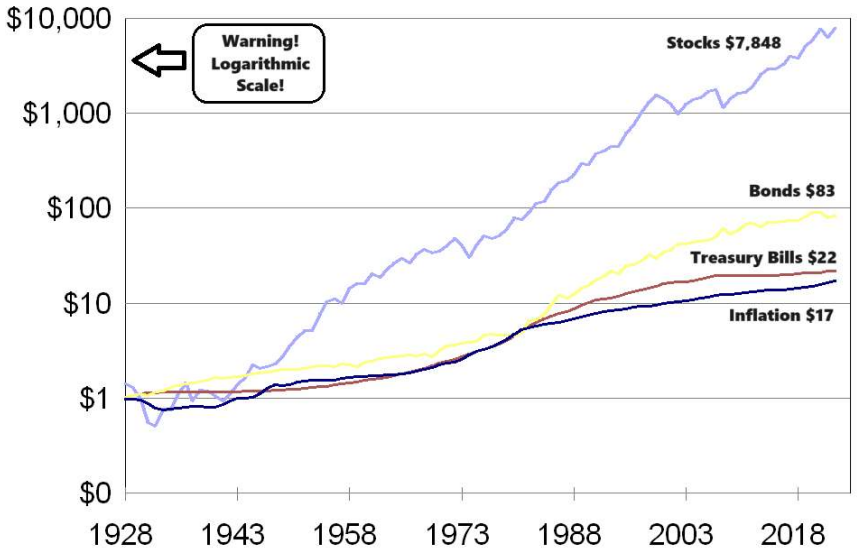
We have completed our Overview of the Investment Universe. Once again, we remind you that, for now, the material in this chapter is all you need to study and learn with regard to the investment alternatives discussed above. As you may have gathered by now, in this class, we will emphasize stocks, bonds, short-term investments, and mutual funds. For the vast majority of us retail investors, these are the most popular and most important financial investment options. It is now time for us to delve deeply into the Eternal Struggle of Investing, Risk versus Return. But before we do that, we want you to review the investment alternatives we have just covered. Please make sure you watch the presentation on the class website. There is a comprehension checking exercise at the very end of the presentation. Also, work through the Security Types Handout. Memorize this document for the first exam. (Hint, hint. Wink, wink. Nudge, nudge.)

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1.4: Risk versus Return – The Eternal Struggle of Investing

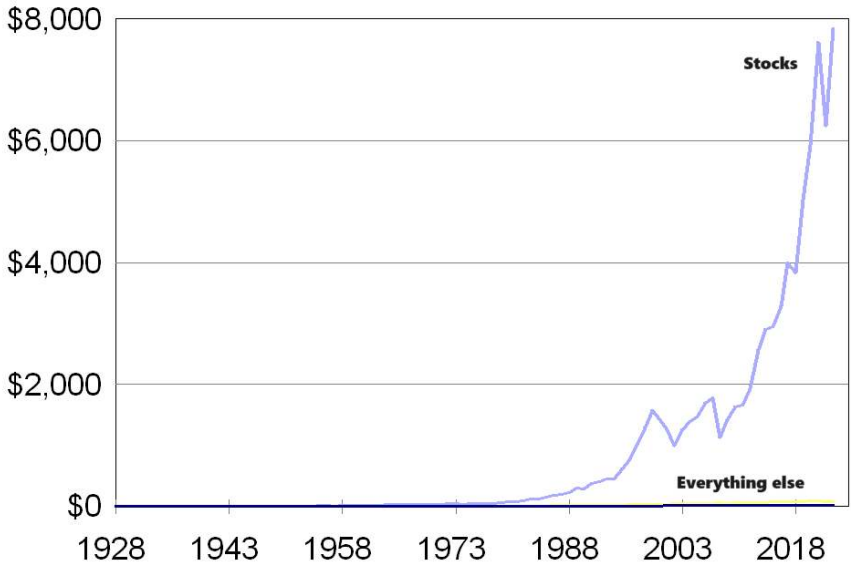


Here it is, Dear Readers! This is the entire course in one section! Do you want to eat well or do you want to sleep well? By now, you should be seeing that there is a pattern in the world of investments. The more return you want from your investments, the more risk you will have to accept. In the previous section, we saw that stocks have given us the best returns over time but have also subjected us to the most risk. Bonds are less risky but give us less return. Short-term investments are risk free or pretty darned close but they pay very little. Mutual funds will more or less reflect the underlying assets that they invest in. In the corresponding presentation on risk versus return, you will see how these various investment asset classes have done over very long periods of time. We see that stocks are the stars! Bonds are a distant second. And short-term investments have barely kept up with inflation and currently are losing to inflation. Take a quick look at this graph that compares stocks (businesses), bonds (loans), Treasury bills (short-term guaranteed investments), and inflation as measured by the Consumer Price Index.



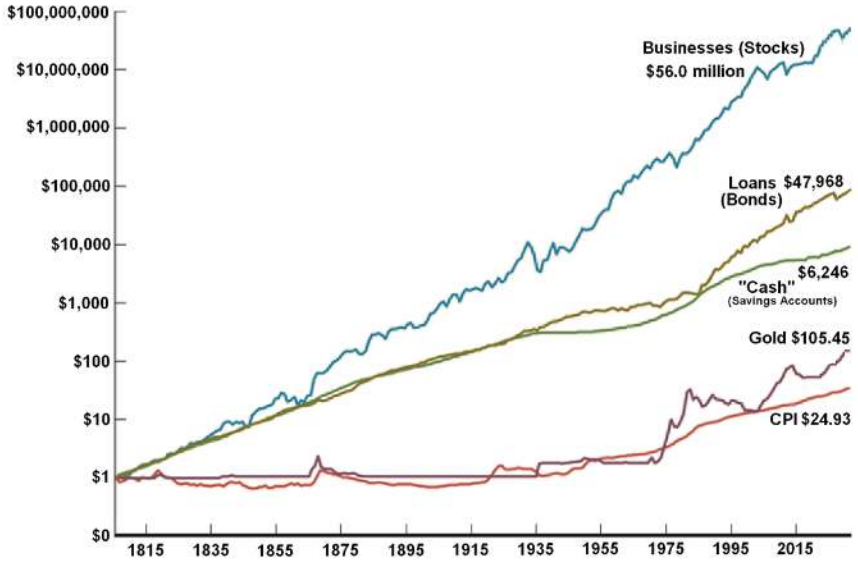
Source: NYU Stern School of Business, Federal Reserve Bank of Minneapolis

We see that the rewards from investing in businesses via stocks have completely overwhelmed the two other choices and have handily beaten inflation. However, what is different about this graph than most graphs we are used to viewing? What is this graph hiding? In this graph and many graphs in the world of investing, we use a logarithmic scale. In the opinion of Your Humble Author, all graphs using a logarithmic scale should have warning labels attached to them since most individuals don't completely understand how they work. Each unit on the left is 10 times bigger than the previous unit. Logarithmic graphs are used when the numbers grow exponentially. The graph is hiding the enormous difference between stocks on the one hand and bonds, Treasury bills, and inflation on the other. It is also minimizing the large downturns that stocks experience from time to time. Here is an arithmetic version of the same graph:



Do you see why we initially used a logarithmic scale? Because of the enormous differences in results, the bonds, Treasury bill, and inflation don't even begin to show any rise in value in the arithmetic graph. Around 1988, the arithmetic graph also begins to show us the exponential curve that stocks exhibit. It also highlights that what we thought were little rises and falls in the price of stocks are actually very dramatic. Stocks are volatile!

What happens if we go back to the dawn of the Industrial Revolution?



The numbers become staggering and we are left with a few takeaways. Bonds and "cash" investments have done admirably; they have beaten inflation. Gold? Not so much. However, stocks are the hands-down best choice, right? Well, yes, but again, let's not be too hasty. We need to look at the other side of investing, risk, as well as the return. We will examine in detail the risks involved with stock investing soon.

It is no accident that stocks and bonds have produced better returns than short-term investments. If that were not the case, why would investors assume the higher risks of stocks and bonds? The answer is they would not. If guaranteed (or pretty darned close to being guaranteed) short-term investments returned the same as stocks or bonds, investors would prefer those guaranteed short-term investments. They would choose an investment for which there is no chance of losing money and they would be happy to accept the risk-free rate of return on their money. In theory, there is no investment with absolute zero risk. However, short-term United States Treasury bills come as close to absolute zero risk as you can get in this world. Therefore, when investors want to know what the current risk-free rate of return is, they often look at the interest rate that three-month United States Treasury Bills are currently paying. (We will cover Treasury Bills in more detail in our next section dedicated to short-term investments.)

To make prudent investment decisions, we investors need to know what the risk premium is for our potential investors. The risk premium is the reward for bearing risk. It is the extra return on a risky asset over the return that we receive from a risk-free rate of return. As we would expect, the risk premium for stocks is the highest at over 8%. The risk premium for large company bonds is a bit less than 4% and less than 2% for government bonds. Here are the risk premiums for large company stocks, large company bonds, government bonds, and Treasury bills (guaranteed short-term "cash" investments).

Investment Risk Premiums from 1928 to 2023

Investment	Average Return	Risk Premium
Large Company Stocks	11.66%	8.30%
Large Company Bonds	6.93%	3.57%
Government Bonds	4.86%	1.50%
Treasury Bills ("Cash")	3.36%	0.00%

Source: NYU Stern School of Business, Federal Reserve Bank of Minneapolis

These risk premiums may not seem like much but over time, the effects of the higher returns are enormous as we saw in the graphics above and in the presentation. Investment returns are very easy to measure. How much did you start with? How much did you end with? How long did it take you to earn this amount? From this information, we can calculate your return. But what about the risks involved. How do we measure risk?

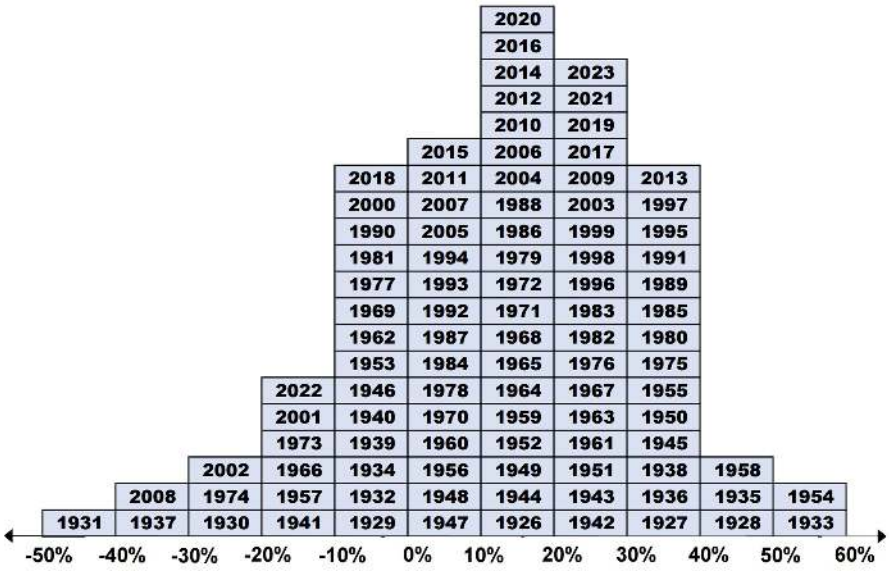
Variance and Standard Deviation – Two Imperfect Measures of Risk

Investment risk, on the other hand, is much more difficult to measure. The reality is that risk is impossible to measure and predict. There is no measurement that accurately reflects the amount of risk that investors must accept when choosing an investment. That does not stop us from trying, though. Each year, the investment community measures the average annual return and the amount of variance from the average return. Using statistics, the resulting measures of risk are called variance and standard deviation. By far, the most popular measure of risk is standard deviation. Standard deviation is the measure we will use for our class.

I already know what you are thinking. "*Aye, this is math! I need to drop this class!*" Relax. Please don't drop the class. We don't do any variance or standard deviation calculations. We leave those calculations for your statistics class. We just do a quick library or Internet search and the investment community readily and happily gives us the results. Please. Don't drop the class. Keep reading.

It is important to understand what the variance and its more popular and important companion, standard deviation, can tell us about a potential investment. In general, **the higher the variance and standard deviation, the riskier the investment.** The higher the variance and standard deviation, the more the investment return will deviate from the average annual return of that investment. In other words, we said that stocks can give us an average annual return of 8%, 9% or even 10% over the long term but we also know that in any one year, the probability is very high that we won't get 8% or 9% or 10%. We might get +17% in one year, -9% the next year, +22% after that, and then -4%. With stocks, the variances and deviations from the annual returns are extreme. A high standard deviation means the volatility is high. The investment is risky.

Please take a close look at the following frequency distribution graph:

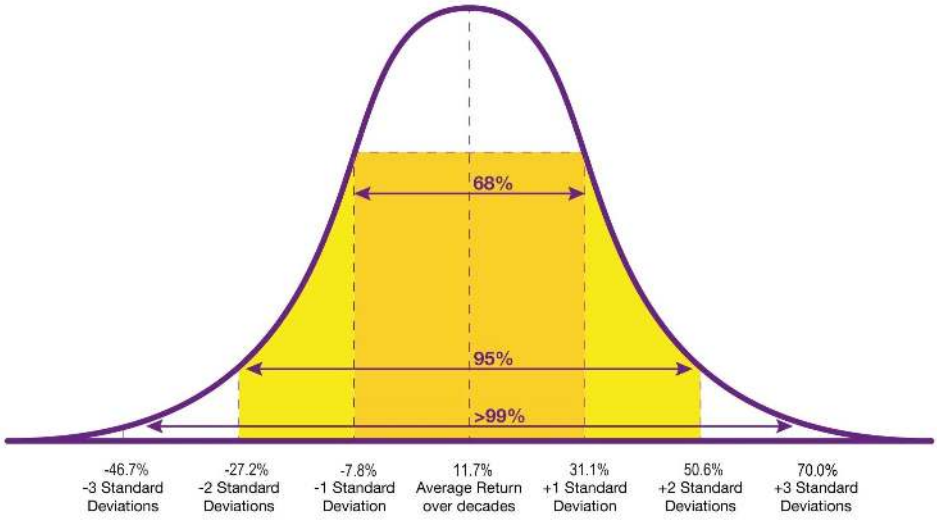


Source: NYU Stern School of Business

How do we interpret this graph? This graph shows us the annual returns from the stock market for every year from 1926 until 2023. Each year is placed in the column that corresponds to the return for that year. For example, in 2020, the return from the stock market was between 10% and 20%. In 2015, the return was between 0% and 10%. In 2018, the return was between -10% and 0%.

From the graph, we see that stocks are similar to Henry Longfellow's little girl with the little curl right in the middle of her forehead. When she was good, she was very, very good, but when she was bad, she was horrid. "*Minus 20% in 2001 and 2022, minus 30% in 2002, minus 40% in 2008!? No way! Not for me! I ain't gettin' involved in investing in stocks,*" is how some people react. Relax. Calm down. We are going to learn how to use this volatility to our advantage. We can make volatility our friend, not our enemy.

Also, does the distribution graph above resemble anything that you are familiar with? Why yes, you may remember it as the normal curve, also known as the normal distribution or the bell curve. Here it is in all its mathematical glory:



Source: NYU Stern School of Business ; Graphics courtesy of Ferran Capo: StudioCapo

If you are allergic to all things mathematical, please feel free to ignore the above graphic and just read on. What this graph is trying to show us is that the returns from the stock market tend to clump around the average return for the past century. What the graph is also telling us is that the probability that we will actually get that market average is quite low. We can't know what the return will be next year but history tells us there is about a two-thirds chance that the return will be between -8.0% and 31.0%. There is a 95% probability that the return will be between -27.5% and 50.5%. And there is a better than 99% chance that the return will be between -47.0% and 70.0%.

Here is another view of risk versus return:

Investment	Average Return	Standard Deviation
Large Company Stocks	11.66%	19.45%
Long-term Corporate Bonds	6.93%	7.72%
Long-term Treasury Bonds	4.86%	7.91%
Treasury Bills	3.36%	3.00%
Consumer Price Index	3.27%	3.75%

Source: NYU Stern School of Business, Federal Reserve Bank of Minneapolis

If we start with Treasury Bills, the least risky investment, and work our way up to stocks, we see the average annual return rise but we also see the standard deviation rise. It is a bit interesting that the corporate bonds gave us more return while actually having a bit less volatility.

*"So, does you'se got's it yet? You'se wants **high returns**? You'se gonna' gets **high risk**! You'se gonna' lose some money, maybe a lot o' money! And if'n anybodies tells you'se differently, de're lying!"*

The lessons from history are that if we want high average annual returns, we are going to have to accept high risk and high volatility. There are going to be times when we lose money, sometimes a lot of money. There will be market downturns, corrections, crashes, etc. It is inevitable. As famed investor Peter Lynch says in his landmark book, *One Up on Wall Street*, "A stock market decline is as routine as a January blizzard in Colorado. If you're prepared, it can't hurt you. A decline is a great opportunity to pick up the bargains left behind by investors who are fleeing the storm in panic." The good news is that history also tells us that the global economy and the stock markets around the world have always come back from those snowstorms.

Please note that there are charlatans and grifters and con artists aplenty in the shadows of the investment industry. They will brazenly – and illegally, by the way – tell you that they can guarantee, for example, a 12% risk-free average annual rate of return. They are lying, pure and simple. There is no such thing as a 12%, risk-free rate of return. It's a blue unicorn, a flying panda; it simply does not exist. Some crooks might even make claims of 300% or 3,000%. Check the class website for some examples. Or

better yet, just type “100% return in 3 days using options” into any Internet search engine and see how many sharks want to separate you from your money.

Investing versus Speculating/Trading – Revisited

“*But isn’t someone doing it? Aren’t there people who make tremendous rates of returns?*” you may rightly ask. The answer is yes. There are individuals who make tremendous rates of return. But those people are not prudent, long-term investors like us. They are speculators, also known as traders. Being a speculator/trader can be very profitable but it is also very stressful and perilous. Furthermore, you are up against the best in the world. Here is a quote from one of the famed speculators of the early 20th century, Jesse Livermore.

> *“The speculator is not an investor. His object is not to secure a steady return on his money at a good rate of interest, but to profit by either a rise or a fall in the price of whatever he may be speculating in.” – Jesse Livermore*

So do you want to be an investor or a speculator/trader? As we mentioned at the beginning, we can help you learn how to become a patient, prudent, successful long-term investor. We cannot help you learn how to become a successful short-term speculator. Sorry. We can’t do it ourselves; how could we possibly teach anyone else to do it? If we have not yet convinced you to renounce any dreams you may have had of making riches quickly by day trading, surrounded by two computers and four monitors while simultaneously on the phone with two different companies, please take some time to listen to the story of John Gutfreund and John Meriweather from the book *Liar’s Poker* by the accomplished investment author Michael Lewis. You never, ever want to play Liar’s Poker with John Meriweather, let alone try to out trade him.

It’s really very simple. When the task is immensely difficult and the competition is ferocious, as it is in speculating/trading or in sports or the arts, for that matter, it is only natural that a select few will rise to the top. Can you throw or hit a fastball at 98 miles per hour? If you successfully can hit a fastball at 98 miles per hour three times out of ten tries, you can snag yourself a contract for tens of millions of dollars each year. Can you dunk a basketball? Can you sing the lead part in a five-act opera? Can you write or direct or act in a movie with a $100+ million dollar budget? Can you hit a tiny white ball 350 yards down the fairway in just three shots? The average person can’t accomplish any of these. But that does not mean there aren’t people who can. There are. Are you going to compete with them in their venue? I think not.

One of the best observations ever about investing versus speculating/trading was made by John Bogle, the founder of the Vanguard Group mutual fund company. He was interviewed by Steve Forbes, the Editor-in-Chief of Forbes magazine, back in 2009. The interview used to be available on the magazine’s website but was taken down long ago. I contacted them and begged them to make it available again. I never got a response. So we put the passage here for you. Read carefully, Dear Students.

> *“Well, the first thing you have to think about is, and this is an issue that I’ve almost never heard discussed, Steve, and that’s the first question you have to ask yourself is: Am I an investor, or am I a speculator? An investor is a person who owns business and holds it forever and enjoys the returns that U.S. businesses, and to some extent global businesses, have earned since the beginning of time. They have capital, they earn a return on their capital and that capital grows over time. It’s not complicated. That’s the business of investing.*
>
> *Speculation is betting on price. I think I can buy this for $10 and sell it for $12 or $14 or $20 or $100. Speculation has no place in the portfolio or the kit of the typical investor. Speculation leads you the wrong way. It allows you to put your emotion first, whereas investment gets emotions out of the picture. You own these businesses, they’re still sound, if the market doesn’t think they’re worth as much as they were, well, pity, the market doesn’t know everything.” – John “Jack” Bogle, Founder and former CEO of the Vanguard Group*

When the video was still available, we would show this segment in the face-to-face class and I would call out, “We do, Mr. Bogle! We do! We emphasize the distinction between investors and speculators/traders in our Introduction to Investments class!” The entire interview is over 30 minutes and highly informative and enterprising. Let’s hope Forbes resurrects it.

Oh, by the way, Jesse Livermore, the famed speculator/trader, wound up heavily in debt and committed suicide. Please do not endeavor to become a speculator/trader. But if you do, we wish you the best of luck. You’ll need it.

Observations about the End of the World

Some readers will ask, “Well, what if stock prices all go to zero? What if the economy and the stock market don’t come back?” This is a very probing question. It speaks to our justifiable fears about investing, especially in stocks. Let’s rephrase the question: What if the world ends? The truth is someday the world is going to end. There are numerous scenarios. For example, we know that in about 1 or 2 billion years, the sun will expand and swallow Mercury and Venus and maybe even the Earth. However, it won’t need to swallow the Earth for our world to end. By the time it gets to Venus, temperatures on the Earth will be hot enough to melt tin and lead and copper. Thankfully, we have a long time to prepare for this scenario. But what about all the other disasters looming on our horizon? Global warming, climate change, income inequality, nuclear war, rising sea levels, pandemics, tsunamis, earthquakes, fires, floods, disco returning!

As we said at the beginning, there will always be proclamations of doom and gloom, especially from charlatans ready to sell you their sure-fire method for surviving the end times. Don’t listen to them! If the world does end, if our technologically based civilization cracks and falls and dissolves into a pool of tears, if there is no food at the grocery store, no gas at the gas station, no clothes at the mall, the cell phones aren’t working, the utility companies are not pumping out electricity or natural gas, the trash isn’t being picked up, the sewers are clogged, the hospitals, schools, fire departments, police stations, banks are all boarded up, etc., your stock portfolio will be the last thought on your mind. You will be digging for beetle grubs and boiling bark for dinner. Let’s meet at the beach. You bring the marshmallows. I’ll bring the vodka. We can get drunk and watch the world burn.

Take heart, Dear Students! This scenario is not going to happen! Failure is not an option! As I have already told you, Your Humble Author is firmly convinced that the next 20, 30, 50 years are going to be the most prosperous years in the history of our civilization. There is no doubt that we have tremendous hurdles to overcome, some might say they are insurmountable. But never underestimate the innovative power of our species. Just look at what we did with Covid in 2020. A vaccine usually takes at least 4 years and often up to 10 years to develop. Multiple groups around the world created safe and effective vaccines in a matter of months! We will overcome climate change. We will phase out fossil fuels. We will have driverless cars and some will be able to fly. We will cure cancer. We will colonize Mars. We will have universal language translators. We will have domestic robots. We will see the day when close to 100% of the citizens of our world are connected to the Internet. We will ensure that never again does disco become the dominant cultural icon of our nation! Economically, I am very confident of this and more. (Politically, I am very scared. Democracy is being attacked in many countries around the world, including the United States. But that discussion is for another class in another department. Thank goodness this isn’t Kindergarten where all the disciplines are taught in the same classroom. Go take up our political woes with your Political Science professor.)

So What Is a Realistic Rate of Return for Me?

After you have taken this course, you will have a strong foundation of the most popular types of securities investments: stocks, bonds, “cash,” and mutual funds. You will also know what levels of returns and what levels of risks you should reasonably expect to receive. And if you are a patient, long-term investor, I believe it is realistic to expect 8% to 10%. I am certainly working on it myself. So far, so good. Of course, as we will reiterate time and time again, there are no guarantees.

You are now most likely thinking, “*But is 8% or 9% or 10% good enough for me?*” It turns out the answer to this question is a resounding, “Yes!” There are some caveats we need to add, though. If you start early, if you invest patiently and consistently, if you do not get cocky or greedy, if you do not chase after every “Next Big Thing” that comes along, and most importantly, ***you do not panic when the market swoons,*** as it inevitably will do from time to time, then – unless the world ends – we believe it is entirely reasonable and realistic to expect 8% or 9% or 10% over the long term. As mentioned, some investors have done better. The trick is to take advantage of the time value of money, also known as the compound annual return or the compound annual growth rate.

The time value of money is the amount to which a sum you invest now will increase based on a specified rate of return and time period. Calculating amounts into the future is called compounding. The result is the future value of money. Future value can be

computed for a single amount, also known as a lump sum, a principal, or a single payment. Future value can also be determined for a series of deposits, also known as a stream of investments or an annuity. (In our class, we usually don't use the term annuity because an annuity is also an insurance product. We discuss annuity insurance products at the end of the class. We do not have kind words for them.)

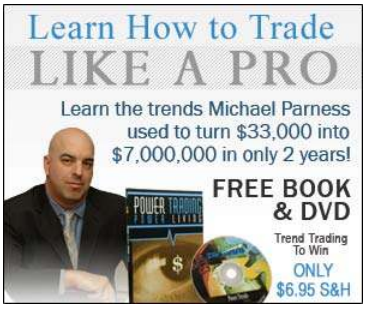
There is a future value handout available on the class website. We leave the calculations to you as an optional exercise. Quite possibly you have already taken our Financial Planning and Money Management, now called Principles of Money Management, class at Southwestern. We spend a good deal of time learning future value calculations in Principles of Money Management. At the very least, please review the answer key and listen to the commentary to see the kinds of wealth that one can reasonably build over the working careers. We will also see some great examples in our next chapter on mutual funds. The news is good!

The future value calculations allow us to move from the present into the future. Later on, when we learn how to assign valuations to stocks and bonds, we will use the inverse of future value, present value, to move from the future back to the present. ("*Huh? What?*" Relax. Study what is in this chapter. We have a long road ahead of us.)

So are you ready to start your journey to become a prudent, long-term investor? Are you excited? I know I am! Well, before we get to the good stuff, we are going to take a small detour. We will now revisit short-term investments, vehicles that we use if we need the money in three, six, or nine months or even a year or two, depending upon the importance of the uses for the short-term funds. Short-term investments aren't very exciting. They aren't supposed to be. We don't want excitement with money that we need in the short term. We want certainty.

"Oh, yeah?! This guy says I can earn 25% per month! Whaddya' say about that, huh?"

Before we move on to short-term investments, we want to warn you again that there are plenty of con artists out there ready to take your money. Dear Students, if you are involved in the investment world for any period of time, eventually you are going to come across an advertisement, flyer, electronic mail or United States mail solicitation that promises eye-popping returns of 25%, 100%, 3,000% per year or even 300% or more per day. Investment scams have been with us forever. They will always be with us. Sadly, many uninformed individuals fall for their snake oil. Here is an example of one such outrageous claim:



This advertisement was found on the Yahoo! Finance web site which is generally considered a reliable and reputable media outlook. Prepare to see far more outlandish and preposterous claims on less reputable locations. This guy is claiming that he was able to generate returns of 25% per month. That is over 1,300% per year. This is total rubbish!

Oh, by the way, these advertisements are against the law. "What?! Huh?! Don't we have freedom of speech in the United States?" you ask. Well, yes, you are correct. We are free to express our viewpoints, opinion, and our understanding of the facts in the marketplace of ideas. But when it comes to investment advice and products, that freedom of speech is severely limited. So how do people get away with this? The Securities and Exchange Commission has a skeletal crew of regulators that can not begin to tackle this problem. They only go after the worst scoundrels. The same kind of illegal behaviors also go on in the world of weight loss supplements. Some even sneak controlled, prescription-only drugs such as Prozac and Viagra into their products and some even put dangerous, banned chemical substances. Be careful out there, Dear Students!

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1.5: Short-Term Investments Revisited – A Place to Park Your Money

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Short-term investments are vehicles that we use when we need the money to be safe because we are going to be using it soon. For example, we are setting aside our financial aid for living expenses for the coming semester. We are building a down payment fund for a car or house. Hence, we often say that a short-term investment is a place to park your money. We don’t want the value to decrease. We don’t want to lose the money. We want the money to be there when we need it. For this reason, short-term investments are typically guaranteed or pretty darned close. Short-term investments are also very liquid; we can get our money very quickly, usually within a day. Some even allow us to write a check. These are the advantages and benefits of short-term investments.

What are the disadvantages of short-term investments? As we have seen, the returns from short-term investments are very low. Low risk? Low return! In fact, for many years since the 2008 Global Financial Crisis, many short-term investments were paying almost nothing. Short-term interest rates started to climb very slowly starting in 2015 and were actually approaching respectable amounts in 2019 as the economy was finally shaking off the lingering effects of the economic devastation a decade earlier. And then Covid hit and short-term rates again fell close to zero. (Darned, stupid microbe!) In 2022, the Federal Reserve Bank started raising short-term rates and as of this writing, they are once again paying typical returns of between 1% to 4%.

Stated Rate of Interest versus Discount Basis

As we explore the various short-term investment alternatives, we will see that some offer the stated rate of interest method of paying interest and some offer the discount basis method. The stated rate of interest is the method that we are already familiar with if we have ever opened a savings account. The bank will tell us that they will pay us 1% on our money. If we deposit $100, after one year, we will earn 1% of $100 or $1. This is very straightforward.

The discount basis is a bit trickier. This method of earning interest entails purchasing the security at a price below its redemption value, also known as the par value, maturity value, or face value. The difference between the purchase price and redemption value is the interest earned. Since the securities are negotiable, the value of the investment grows as it approaches its maturity date. We say the interest "accrues" on the short-term investment. On the date of maturity, the current owner of the security receives the maturity value. An example: You purchase a security now for $4,800 that will be redeemed for $5,000 in ten months. Your interest would be $200. If you were to sell the security in five months, – one half the time until maturity – the value would likely have accrued to $4,900. One half of the $200 would be $100 of interest and that would be added to the price of the security.

Risks of Short-Term Investments

"*Risks of short-term investments!? Wait a minute! You told me that these investments were risk-free!*" Yes, short-term investments are risk-free regarding the loss of principal, also known as the risk of default. We are not going to lose our money. However, there are other risks when investing. There is the risk that we may lose purchasing power. Over time, short-term investments have barely kept up with inflation. Currently, they are losing to inflation. There is also the risk of lost opportunity cost. Opportunity cost is an annoyingly nebulous concept that you would discuss in detail in your ECON 101 class. It is real, though. Whenever we make a choice, we must think about the opportunities that we forego by making that choice. What else could we have done with our money? If we choose short-term investments for money that we won't need for the long term, we will almost certainly have done much worse than by carefully researching and choosing prudent, long-term investments. You first saw this in the graphics discussing the returns of stocks versus bonds versus short-term investments in the previous presentation and we will see examples of this throughout the semester.

Sadly, you will sometimes come across individuals who have placed all their investable savings into short-term "cash" investments. This is usually money that they are saving for long-term goals such as retirement. These people need to take Introduction to Investments! In time, Dear Readers, you will be the Investment Gurus for your friends, family, and colleagues. You will gently but firmly educate and guide them in choosing prudent, long-term oriented investments that will clobber the meager returns they were getting from their short-term investments. You will speak with authority. They will thank you profusely. We will be proud of you. You may even decide that you want to pursue a career in the investment services industry.

That's just the first of many pep talks. Stay tuned for more because the industry needs you. For now, it is time to run through the various types of short-term investments. Don't do this before bedtime … unless you are prone to insomnia. Again, these choices are not very exciting but then again, they are not meant to be exciting. They are meant to ensure safety of principal. With short-term money, boring is good.

Demand Deposit Accounts

Demand deposit accounts are offered by commercial banks and credit unions. The name comes from the fact that depositors can withdraw the funds at any time; the funds are available upon demand. However, there are sometimes certain restrictions upon this ability such as when you want to withdraw a large amount of money in cash. Demand deposit accounts at banks and credit unions have a very important benefit: They are typically guaranteed by an agency of the Federal government. You may have heard of the Federal Deposit Insurance Corporation (FDIC) or the National Credit Union Administration (NCUA). Your money is safe. Practically all banks and credit unions belong to these entities. If you are unsure if your bank or credit union belongs, just ask. For each account at each bank or credit union, you are currently insured up to $250,000. If you have more than $250,000, you can simply distribute that amount into separate banks or credit unions. (If you have more than $250,000 and this is not short-term money, you need to take Introduction to Investments and learn where to allocate your investable assets more effectively and prudently for long-term growth of capital and income. My apologies if you have heard this before but it bears repeating. The opportunity cost of keeping long-term money in short-term investments is very high.)

Common examples of demand deposit accounts are checking accounts and savings accounts at banks and share-draft accounts and share accounts at credit unions. Those of you who use credit unions have probably never heard of share-draft or share accounts. That is because no one at the credit union uses those terms; they just use the same terms that the banks use, checking and savings. Even though there are legal differences, as far as we retail customers are concerned, there are no differences. They both work the same way. For many years, the regulators would not allow checking accounts to pay interest. For this reason, banks and credit unions offered Negotiable Order of Withdrawal (NOW) accounts. Again, no one called them that; they just called them checking accounts that paid interest. That restriction was removed in 2010 so now, NOW accounts are not as popular as they once were. (And no, that is not a double word typo.) Lastly, banks and credit unions can offer money market accounts, also known as money market demand accounts. Money market accounts typically pay more than checking and savings accounts. These accounts are very similar to the money market mutual funds. In fact, the banks and credit unions simply copied the concept from the mutual fund industry. The main difference between money market accounts and money market mutual funds is that the money market accounts at banks and credit unions have the same $250,000 guarantee as other demand deposit accounts; money market mutual funds at mutual fund companies do not have this guarantee. We will discuss money market mutual funds a bit later on.

We mentioned that there may be some restrictions on your ability to withdraw your funds upon demand. An example of this would be if you were to walk into your neighborhood bank and ask to withdraw the entire $187,000 in your savings account – in cash! The bank would most likely ask you to wait until tomorrow because they simply don't keep that much cash on hand. (There's over $250,000 in the ATM next door, though. Shows you how safe and secure the banks believe their ATMs are.) The bank would also contact the FBI and report a "suspicious transaction." This is courtesy of the Patriot Act, hurried through Congress within a month after the attacks on the World Trade Towers on September 11th, 2001. Some people will tell you that a deposit or withdrawal of $5,000 or $10,000 constitutes a "suspicious transaction." This is not true. There is no specific dollar amount. The bank or credit union must determine what is a "suspicious transaction," depending upon the circumstances. Kinda' creepy, huh? The FBI will check up on you for carrying around your own money.

Certificates of Deposits (CDs)

Certificates of Deposits (CDs) are also offered by banks and credit unions and have the same guarantees as demand deposit accounts, namely the $250,000 deposit insurance guarantee. Unlike demand deposit accounts, though, CDs are time deposit accounts, also known as term deposits. They have a maturity date. You agree to keep your money on deposit for a certain time, anywhere from seven days to several years. Typically, the longer the time period, the higher the rate of interest a CD investor will receive. The rate of return is usually better than demand deposit accounts such as savings accounts or money market accounts. What are the disadvantages? If you need to withdraw the money before the maturity date, there will be a penalty. Also, your rate of return is fixed and typically does not change. If interest rates rise, your CD will not rise with them. For this reason, many banks and credit unions offer Bump-Up CDs. If interest rates have risen, the Bump-Up CD allows an investor to "bump up" their initial interest to the current interest rate. CD investors need to be aware of the rollover or renewal provision of some CDs. Some banks or credit unions will automatically renew your CD at the end of the time period. The bank or credit union is required to notify you of the upcoming renewal. You typically have the option of requesting that the funds be automatically deposited into your savings or checking account. It definitely pays to shop around for the best CD interest rates. CD rates vary widely and as long as your bank or credit union belongs to the FDIC or NCUA, you can do business with institutions in the United States and its territories and have the same guarantee of principal.

Some brokerage firms and some banks offer Brokered CDs. The brokerage firm has invested a great deal of money with a bank and that generates more income than a typical retail investor will receive. The brokerage firm then can offer these higher rates to their customers. Also, unlike typical CDs, they can be bought and sold on the open market as are other securities. An investor does not have to wait until the maturity to receive their principal. The downside is that Brokered CDs are not FDIC-insured. For this reason, it is important that Brokered CD investors deal with a reputable brokerage firm.

Money Market Mutual Funds

Money market mutual funds are short-term investments offered by mutual fund companies. Recall that a mutual fund is a company that pools the capital of a large number of investors. A money market mutual fund uses their investors' capital to invest exclusively in short-term securities. They are also known as mutual money funds, or more simply and more typically, money markets. Because they are offered by mutual fund companies and not banks or credit unions, they do not have the same protections that money

market accounts at banks and credit unions have, namely the $250,000 principal protection guarantee. However, in practice, they are considered essentially as safe as their counterparts at banks and credit unions. Why? There is a long history of the government and the industry doing their parts to ensure that money market clients do not lose a penny! In practice, that is exactly what can happen. Your money market fund can "break the buck." When that happens, the whole world sits up and takes notice. Just type "breaking the buck" into any Internet search engine and see how many millions of results you get. There are tremendous forces allied against any money market ever breaking the buck.

Money markets are very versatile and popular. Virtually every mutual fund company offers one or sometimes several different types of money market funds. Many money markets allow you to write checks, although in practice, most investors simply link their money market funds to their checking and savings accounts at their banks and credit unions and electronically withdraw funds as needed. Money markets allow you to easily exchange funds to and from your stock and bond mutual funds at your mutual fund company. Money market funds typically pay interest rates higher than checking and savings accounts and only a bit less than CDs. However, unlike CDs, the interest rates on money market funds change daily. Therefore, if interest rates rise, your money market interest rate will rise with them. There is much to like about money market mutual funds.

Series EE, HH, and I Savings Bonds

Savings bonds are short-term investments that are offered by the United States Treasury. The Treasury currently offers both Series EE and Series I savings bonds. The Series HH bonds were discontinued in 2004 and will all mature and disappear by 2024. The Series EE savings bonds use the discount basis of accruing interest. In other words, for example, you might buy a Series EE savings bond for $50 and it will pay its maturity value of $100 in 20 years. Currently, though, Series EE bonds purchased online electronically are purchased at face value and earn interest in the stated rate of interest manner. Savings bonds are exempt from state income taxes. (We will discuss more about the tax relationship of the Federal government and the state and local governments later in the class.) If you use the proceeds from your savings bond for qualified higher education expenses, then the interest is also exempt from Federal income taxes.

The "I" in Series I savings bonds stands for Inflation. Series I bonds were introduced in 1998 to cater to those investors worried about inflation. Like Series EE savings bonds, Series I bonds do come with a fixed rate of return but that rate of return is far less than other types of short-term investments, including Series EE bonds. Instead, Series I bonds add an inflation-adjusted interest amount every six months that varies with the rate of inflation. Hence, Series I bonds are guaranteed to keep pace with inflation. Series I bonds became immensely popular with the investing public in 2022 when inflation spiked.

The yearly purchase limits are currently $10,000 for Series EE bonds Series I bonds. For decades, United States savings bonds were popular gifts to newborns. Grandparents and aunts and uncles would buy them at their local bank for the new arrival to the family. The bonds would be tucked away in a drawer somewhere and promptly forgotten about until the parents passed away and the adult kids and adult grandkids were tasked with clearing everything out of the house. The Treasury has done away with paper savings bonds for Series EE bonds and are phasing out paper savings bonds for Series I bonds. All bonds are now available for purchase and safekeeping at www.TreasuryDirect.gov. TreasuryDirect.gov is the subject of one of your chapter 1 assignments.

Treasury Bills

Treasury Bills are short-term investments that are also offered by the United States Treasury. They are often informally referred to as T-Bills. T-Bills all have maturities that are less than one year. The most typical periods are one month (4-week), three months (13-week), and six months (26-week), although two months (8-week) and twelve months (52-week) are also available. Treasury Bills are often considered the safest of all investments. As mentioned, when the investment community wants to report the current risk-free rate of return, they often use the rate for three-month Treasury Bills.

T-Bills are usually sold in $1,000 increments and use the discount basis method for paying interest. For example, you may purchase a six-month $1,000 Treasury Bill for $990 that will mature at $1,000. The $10 difference would be your interest received. Along the way to the six-month maturity date, because these are securities, you could sell your Treasury Bill, again, at a discount to the $1,000 maturity value. As the date of maturity becomes nearer, your Treasury Bill will increase in value. The price would depend upon the prevailing market rates but any volatility would be close to zero. Remember, Treasury Bills are very safe. At the date of maturity, the T-Bill would be redeemed for the full $1,000 face value.

Like the Series EE and I savings bonds, interest from Treasury Bonds is tax-exempt at the state and local level. Unlike Series EE and I savings, though, the interest is not tax-exempt if used for the qualified higher education expenses.

Also like the Series EE and I savings bonds, Treasury Bills are available for purchase at www.TreasuryDirect.gov. TreasuryDirect.gov offers you and me, the common retail investors, the same prices as the big boys and girls on Wall Street. It is a very well done website and, as mentioned, the subject of one of your chapter 1 assignments. The Mexican government has a website very similar to TreasuryDirect.gov. It is called Cetes Directo. Your Humble Author had the good fortune to meet the project manager during a visit to Mexico City. He acknowledged that they essentially copied TreasuryDirect.gov verbatim. We love to complain when our government screws up. Hence, we should rightly praise them when they do something well. Thanks, United States Treasury!

Commercial Paper and Banker's Acceptance Notes

Commercial paper investments are short-term, unsecured promissory notes (IOUs) issued by corporations with very high credit standings. Corporations typically use these vehicles when they need a very short-term loan for payroll or maybe for the large purchase of goods in anticipation of a coming increase in business activity such as major retailers preparing for the Christmas surge. Instead of going to a bank, the corporation can go to the investment community and get a much better rate than the bank would charge. Like Treasury Bills, commercial paper investments use the discount basis and are sold at a discount to their maturity face value and have short-term maturity periods of one, three, six, and nine months. Unlike Treasury Bills, commercial paper investments are typically denominated in $100,000 increments and commercial paper dealers normally want you to buy many of them at one time. Hence, they are usually purchased by financial institutions such as life insurance companies and pension funds. Money market mutual funds are also eager buyers of commercial paper. You and I are not going to buy commercial paper except indirectly through our investments in money markets. (If you are indeed in the market for commercial paper and can afford multiples of $100,000 denominations, then congratulations but I have a sneaking suspicion that you have your own private broker.)

Banker's acceptance notes are cousins to commercial paper investments. They, too, are sold at a discount, are tradable securities, are typically denominated in $100,000 increments, and mature quickly. Banker's acceptance notes usually mature in 90 days but the maturity date can be up to 180 days. They are often used to facilitate domestic and international trade for companies that do not have the prestige and financial wherewithal to issue their own commercial paper in the marketplace. The company petitions the bank for help and the bank issues the acceptance notes which the company can sell on the open market. The company then uses the proceeds to facilitate the trade. The company must pay the bank the face value at the maturity date so that ultimate holders of the notes can be paid. If the company defaults, the bank must make good on the notes.

By keeping the maturity periods to less than one year, the issuers of corporate paper and banker's acceptance notes are not required to register their securities with the Securities and Exchange Commission. This helps keep the fees associated with these short-term investments low.

Which Short-Term Investment Is Right for Me?

We have explored the various short-term investment alternatives. It is time for you to answer the question, "Which short-term investment is right for me?" Everyone is different and so that question can only be answered by you. Here are our observations: Because of their costs, commercial paper and banker's acceptance notes are usually only suitable for institutional investors. Savings bonds used to make cute gifts for newborns in paper form but now that they are all electronic, will the proud new parents still coo and awe when the card is opened only to say that their newborn's savings bond is safely tucked away at TreasuryDirect.gov? Many savvy investors purchase Treasury Bills directly from the Treasury at www.TreasuryDirect.gov. Certificates of Deposit are okay for those that are sure that they will not need the money until maturity. In our opinion, their flexibility and ease of use make money market mutual funds and money market deposit accounts the preferred choice of most investors, especially since every bank, credit union, brokerage firm, and mutual fund company offers them. Sadly, many uninformed savers still use a passbook savings account from a bank or credit union. (They have not taken this course yet. Such a shame!)

Emergency Fund Debate

If you watch the financial media outlets and listen to any of the talking heads with their perfect hair and immaculate dental implants, they will vehemently insist that you have an emergency fund. An emergency fund is essentially a liquid, short-term investment in which you place three, six, nine, or even twelve or more months of income. This is a self-insurance program in case of losing your source of income or another costly emergency arises. Some experts, most notably David Chilton, author of *The Wealthy Barber*, do not agree with this strategy. Of course, no one is advocating that you have $17.87 in your rainy day savings account; some substantial amount socked away for that rainy day is obviously a great benefit to your financial well-being. However, for those still working, assuming you have a marketable skill that would allow you to find gainful employment in a reasonable amount of time, there can be better uses for that money. You can use those funds to pay down expensive debt or increase your monthly retirement or investment contributions. There are exceptions, though. Anyone who works in sales or has their own business or works in a seasonal industry definitely needs a substantial emergency fund. We would be remiss if we forgot to ask one last thing: You do have proper and adequate insurance, yes? For more discussion about emergency funds and insurance and all topics related to personal finance, please consider taking BUS-121, Principles of Money Management, at Southwestern Community College.

The Federal Reserve Bank and Short-Term Interest Rates

We mentioned that short-term interest rates change over time. You may be wondering, “Well, who sets these short-term interest rates?” For a more thorough investigation, you will want to take an Introduction to Economics class. The short answer, though, is that the Federal Reserve Bank is responsible for setting short-term interest rates in the United States. It is often referred to as the Fed. They are the nation’s central bank and are often called the bankers’ bank since the banks of our nation use the Fed as their bank. The Fed has major two objectives. They are charged with keeping the nation’s economy at full employment while at the same time, keeping inflation under control. These two objectives are often at odds with one another. The Fed has tremendous power and the Chairperson of the Federal Reserve Bank is often called, “the second most powerful person in the nation.” (The most powerful person, of course, is the President, who is the Commander in Chief of the military.) The Federal Reserve Bank was designed to be independent and not subject to political pressures. That does not stop politicians and other high-profile individuals from criticizing their actions. In fact, many vocal critics even claim that the Federal Reserve Bank is unconstitutional. Suffice to say that no system we humans have ever created is perfect, and that includes the Fed. However, for over 100 years, the Fed has bumbled along and sometimes has executed brilliantly and sometimes has failed miserably. We don’t call Economics the “Dismal Science” for nothing, Dear Students.

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1.S: Summary

Congratulations – You Have Finished Chapter 1 – Introduction, Overview, and Risk versus Return

You have reached the end of chapter 1, Introduction, Overview, and Risk versus Return. In this chapter, you have:

- Been introduced to the definition of an investment and the basic characteristics of investments – You now know what a prudent investment is! An investment is any vehicle that we can place resources into with the reasonable expectation of income, aka cash flow, or growth, aka capital gains, or both
- Reviewed the major asset investment alternatives – Overview of the Investment Universe
- Explored the relationship of risk and return – Do you want to eat well or do you want to sleep well?
- Identified the differences between an investor and a speculator/trader
- Investigated short-term "cash" investment alternatives – A Place to Park Your Money
- Discussed aspects of short-term "cash" investments with your fellow students

You should now be able to:

1. Given a typical investment, identify its characteristics including the cash flow (income) and capital gains (growth) components, and identify the advantages and disadvantages of the investment
2. In a brief two- to three-sentence description, succinctly describe the major investment alternatives including stocks, bonds, mutual funds, and short-term "cash" investments
3. Explain the historical relationship of risk and return – Do you want to eat well or do you want to sleep well?
4. Research short-term "cash" investment alternatives including demand deposit accounts such as savings accounts, Certificates of Deposits, money market accounts and money market mutual funds, and Treasury Bills
5. Describe institutional short-term investment alternatives such as corporate paper and banker's acceptance notes
6. Optionally, calculate the future values of a lump sum principal investment and a series of investments

We told you not to worry, right? It was not that hard, was it? If you are still a bit fuzzy on some topics, that is okay. Go back and read the text and listen and watch the presentations again. Much of the task of learning about investments is just getting past the odd and strange names that we hear all the time on the television but don't really know what they are talking about. Well, now you know more about what they are talking about, don't you?

Your Feedback, Please

Are you getting an education about investments? We hope so! Our goal is for this class to be one of the few classes that you remember 10 or 20 or more years from now. We hope that you can say to yourself, "Ya' know, that Introduction to Investments class really helped me." There is also a free chat group consisting of individuals who are using the concepts, techniques, and skills we learn in our class. Come join us! Perhaps you might want to start your own journal to help you organize your learning process using your computer or mobile device. We welcome any and all questions, comments, criticisms, suggestions, complaints, etc. We want you to be the best investors the world has ever seen!

In our next chapter, we will investigate Mutual Funds: Investments for the Masses. The chances are very high that you will have a job with a company that offers you some kind of employer-sponsored retirement plan. That plan will almost certainly have mutual funds as the investment alternatives. As we will see, there are more mutual funds in the investment universe than visible stars in the night sky. (There are about 9,000 visible stars in the sky. There are approximately 12,000 mutual funds.) Choosing a mutual fund is extremely difficult, especially for those who have had no training or experience whatsoever. You, Dear Students, are going to be the Investment Gurus for your family, friends, and fellow co-workers. You Can't Let Them Down! Thank you so very much for being in our class and we will see you in our next chapter.

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CHAPTER OVERVIEW

Chapter 2: Mutual Funds: Investments for the Masses

> *"Mutual funds will bore you to wealth."*
> *-- Industry saying*

Learning Objectives

In this chapter, you will

- Be introduced to the definition of a mutual fund, aka an investment company, and review the growth of the mutual fund industry
- Investigate major mutual fund share classes and how mutual funds charge their investors for the services of the mutual funds
- Explore the major mutual fund categories from the most risky to the least risky
- Compare and contrast active versus passive portfolio management of mutual fund assets
- Examine a few mutual fund families and concentrate on a sample mutual fund with decades of investing experience

By the end of this chapter, you should be able to

- Describe the various components, characteristics, benefits, advantages, and disadvantages of mutual funds
- Identify and describe the various ways in which mutual funds charge their investors for their services and explain the actual costs borne by the investor
- Outline the major mutual fund categories and their risk/return profiles
- Discuss the advantages and disadvantages of active versus passive portfolio management of mutual fund assets
- Identify a sampling of mutual fund families and the services available to mutual fund investors
- Describe the benefits of long-term, prudent, consistent mutual fund investing and the pitfalls of short-term, uniformed, impatient mutual fund investing

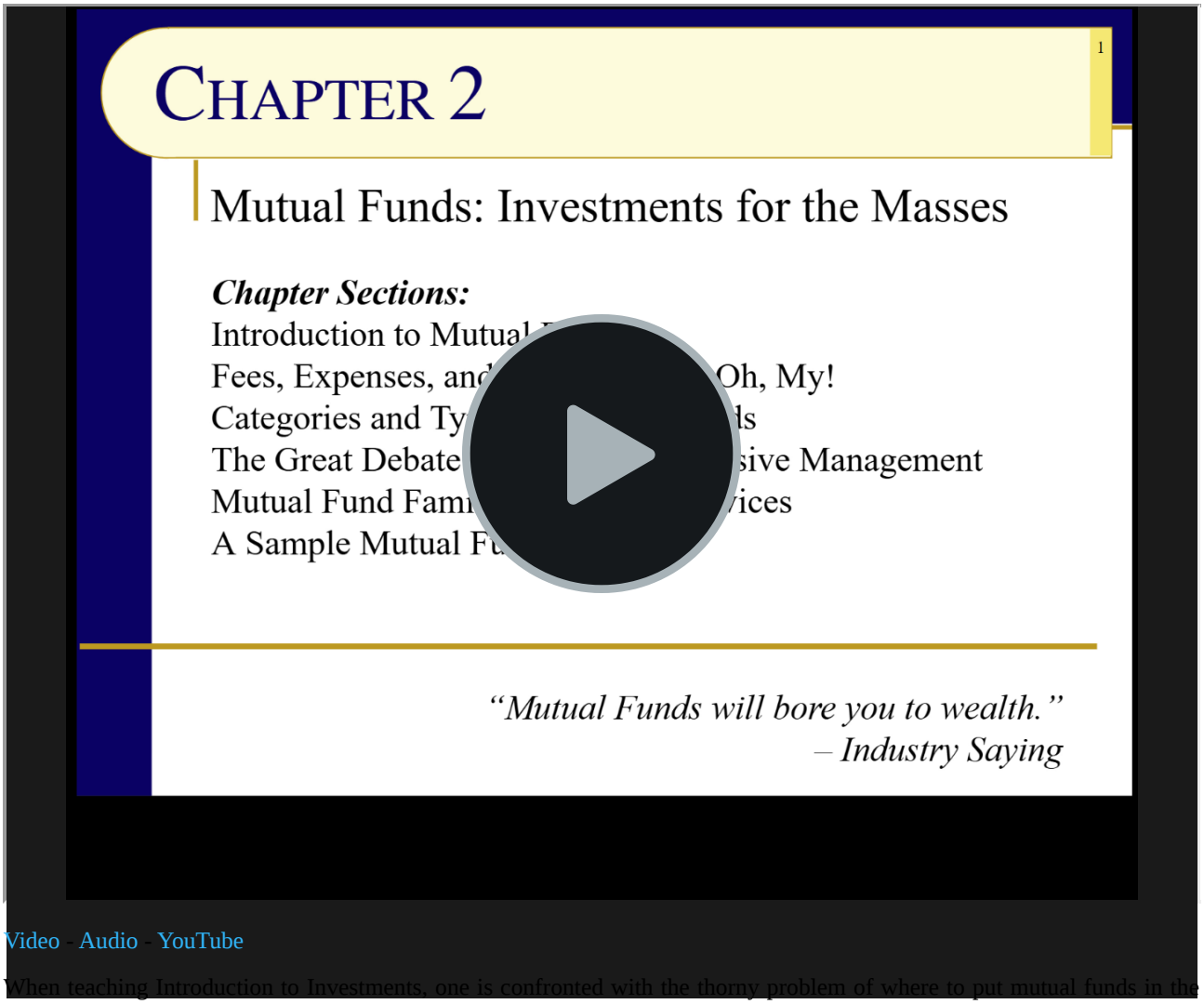
Mutual funds are truly Investments for the Masses. The probability is very high that at some time in your future, your employer will offer you an employer-sponsored retirement plan. That plan will almost assuredly have mutual funds as their primary investment vehicles. Your friends and family and co-workers will also likely be investing in mutual funds and they will need your help. As the Investment Guru for your family, friends, and colleagues, you need to know and understand mutual funds thoroughly. That includes knowing the major categories of mutual funds and the ways that investors are charged for mutual fund services. As you will see, both are complicated. You will help your family, friends, and colleagues. You will speak with authority. Dear Students, study hard and bring honor and glory to Southwestern Community College when you tell them where you learned everything you know!

2.1: Introduction to Mutual Funds
2.2: Growth of the Mutual Fund Industry
2.3: Advantages and Disadvantages of Mutual Funds
2.4: Open-end, Closed-end, and Exchange-Traded Funds (ETFs)
2.5: Regulation and Organization of Mutual Funds
2.6: Fees, Expenses, and Share Classes, Oh, My!
2.7: Categories and Types of Mutual Funds
2.8: The Great Debate – Active Management versus Passive Management
2.9: Mutual Fund Families and Fund Services
2.10: A Sample Mutual Fund

2.S: Summary

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2.1: Introduction to Mutual Funds



Video - Audio - YouTube

When teaching Introduction to Investments, one is confronted with the thorny problem of where to put mutual funds in the class. There are advantages to having mutual funds taught after stocks and bonds. Since almost all mutual funds rely on stocks and bonds as their underlying investments, it helps to have become acquainted with the ins and outs of stock and bond investments before tackling mutual funds. However, the advantages of teaching mutual funds before stocks and bonds are tempting. First, since investing in mutual funds is almost certainly to be in almost everyone's future via individual and employer-sponsored retirement plans, it pays to be introduced to them as soon as possible, especially since for whatever reasons, many students will drop the class within the first few weeks. Also, as we slog through the copious amount of concepts, definitions, attributes, calculations, etc. of stocks and bonds, inevitably several students will decide, "Ya' know, this stuff just ain't for me." That is fine! That is something we hope you will be able to decide for yourself as we progress through the semester. Not everyone will have the time, inclination, aptitude, and most importantly, receive enjoyment from doing the detailed research necessary to identify, choose, and continuously monitor individual stock and bond purchases. If you are one of those who decides that investing in individual stocks and bonds is not for you, no problem! That's why mutual funds exist! But whether you are an Investment Guru that relies upon mutual funds or one who chooses your own individual stocks and bonds, or both, it is important that you know and understand mutual funds thoroughly. Mutual funds are in your future. And remember that your friends, family members, and colleagues are counting on you. So let's get started!

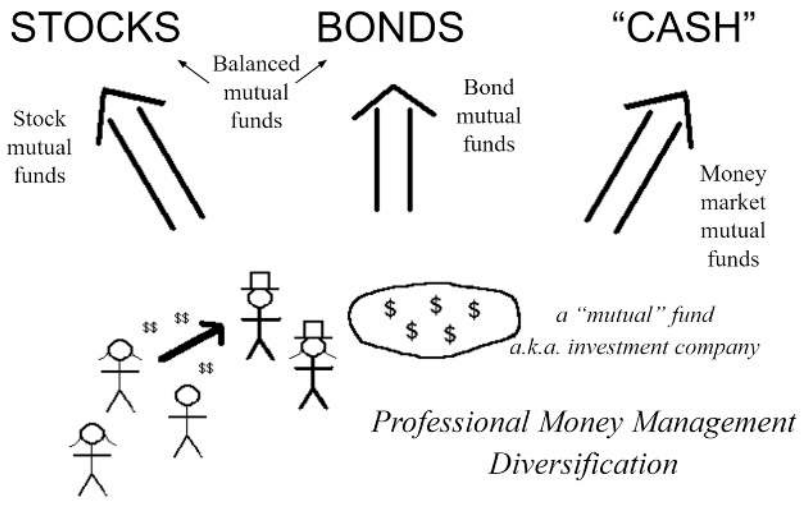
What is a Mutual Fund? An Investment Company!

A mutual fund is an investment company that invests its shareholders' money in a diversified portfolio of securities. Investment company is the legal term; mutual fund is the popular term. Mutual funds are one type of investment company; there are others. By far, though, the most popular investment companies are mutual funds. Although the term mutual fund does connote that investors are getting together to invest with one another, the term investment company more accurately describes the work of the mutual fund. The mutual fund will invest on your behalf.

The mutual fund industry is immense. There are approximately 12,000 mutual funds available in the United States. How could this be? Are there 12,000 different types of breakfast cereals in the grocery stores? Are there 12,000 different types of cars or mobile phones available for purchase? Why and how has the number of mutual funds grown to such an unwieldy number? The mutual fund industry is also very lucrative. The competition is ferocious. As we shall see, the number of categories and numbers of mutual funds has exploded as companies have been competing for business for the past several decades. Also, as mentioned, mutual funds are very popular with employer-sponsored and individual retirement plans. We find that this is the most difficult issue with mutual funds: How do you choose the best mutual fund for you?! The answer: It ain't easy! However, once you have chosen a mutual fund or maybe two or three mutual funds, your work is done. The rest is up to the mutual fund.

The graphic below is a very rudimentary representation of how mutual funds work. The people on the lower left are we, the Little Folk. We contribute $25 or $50 or $100 or whatever we can comfortably afford per month to the people in the top hats. These individuals are the mutual fund managers, also known as portfolio managers, portfolio counselors, and money managers. The mutual fund managers are highly skilled and well-paid professionals whose job it is to identify, choose, and monitor the underlying investments in the mutual fund. If the mutual fund managers purchase stocks for the mutual fund, it is called a stock mutual fund. If they purchase bonds, it is called a bond mutual fund. If the mutual fund concentrates on the short-term "cash" vehicles that we discussed in chapter 1, the mutual fund is called a money market mutual fund but is usually just referred to as a money market or money market fund. We also can see that a mutual fund that invests in both stocks and bonds is called a balanced mutual fund. This is just the beginning of the many categories and types of mutual funds. There are literally dozens of other categories. We will learn about a dozen as the rest are variations on the categories that we will cover.

Every month, there are millions of us Little Folk giving billions of dollars to the folks in the top hats. They create huge pools of money, hence the term "mutual funds." Because this is their career and their full-time job, the mutual fund managers can afford to identify many choices of their underlying investments. The mutual fund managers don't just purchase 10 or 20 stocks or bonds, which is typical for an individual investor. They purchase 100 or 200 or many hundreds of stocks or bonds. Therefore, we find that the two major advantages of mutual funds over individual stock and bond investments are **professional money management** and **diversification**.

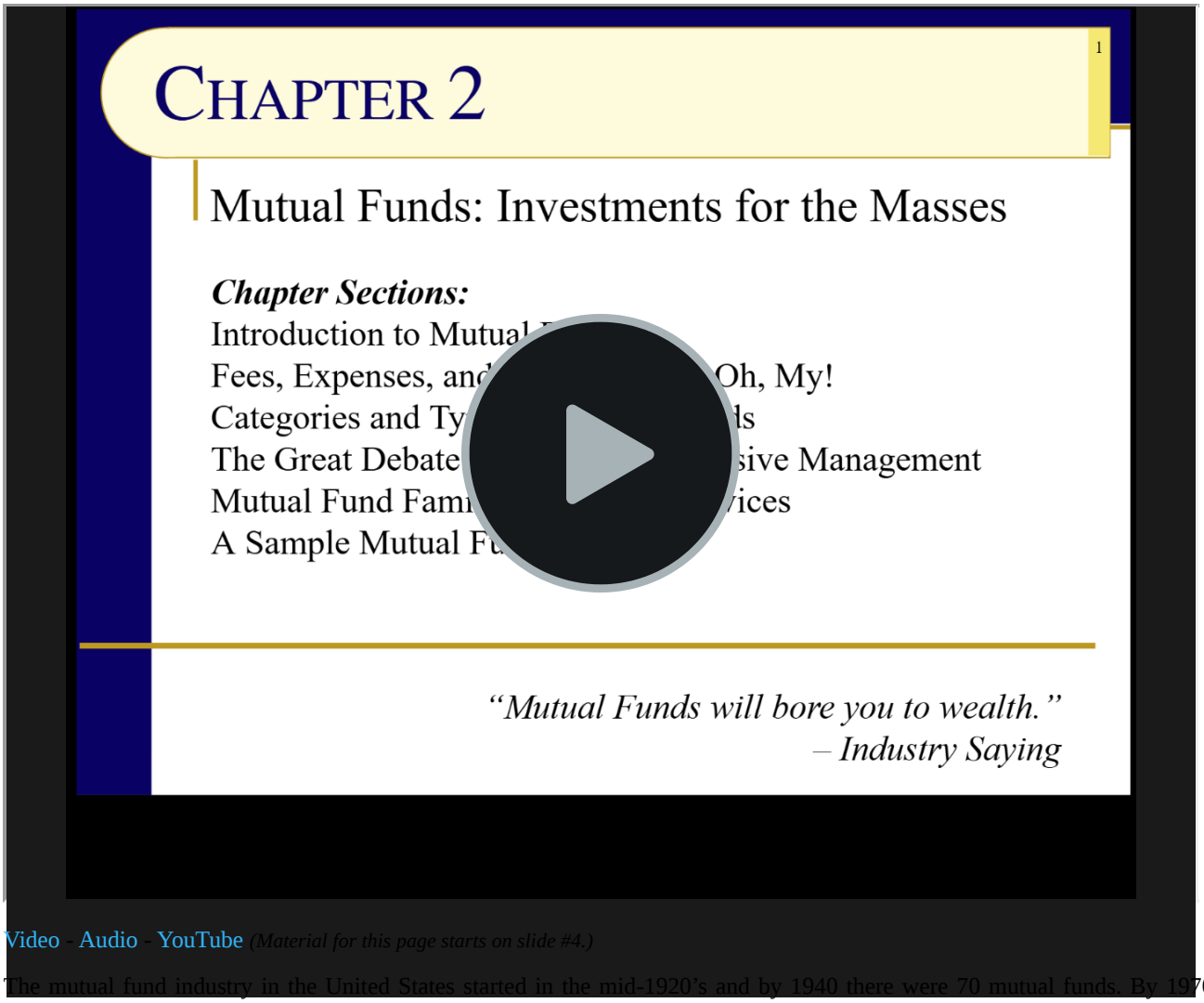


Professional money management is sometimes the subject of some controversy. There are some in the industry and the public who question whether or not the mutual fund managers are really worth the high salaries they earn. For now, suffice to say that some are and some aren't. We will discuss this controversy throughout our coverage of mutual funds. However, most investors do not

question the advantage of managing the risks inherent in investing through diversification. Having a wide range of stocks or bonds across the various categories of each will help us eliminate much but not all of the risks of choosing individual stocks and bonds. You have heard the saying, “Don’t put all your eggs in one basket.” With a mutual fund, you are putting your eggs into hundreds of baskets. There are some who shun and even mock diversification but they are not investors. They are the short-term speculators and traders. They most likely put down this book before reaching the end of chapter 1 since we are catering to prudent, patient, long-term investors. Dear Students, for us investors, diversification is a good thing.

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2.2: Growth of the Mutual Fund Industry



Video - Audio - YouTube *(Material for this page starts on slide #4.)*

The mutual fund industry in the United States started in the mid-1920's and by 1940 there were 70 mutual funds. By 1970, the number had grown to 350 and by 1980, it was 600. The exponential growth started in the 1980's and 1990's and by the year 2000, there were over 9,000 mutual funds. This unbridled growth coincided with the great bull market that started in 1982 and ended in March of 2000. Since then, the growth has moderated but still, as of December 2022, we have approximately 12,000 mutual funds, each with its own investment objective.

Growth of Mutual Fund Industry

Year	Number of Mutual Funds
1940	70
1970	350
1980	600
1990	2,000
2000	8,000
2022	12,193

Source: Investment Company Institute, ici.org

How and why did this aggressive growth occur? As mentioned, the mutual fund industry is very profitable and has engendered tremendous competition. So when one company creates a new category or type of mutual fund, many other companies follow suit. We will do our best to internalize the broadest categories.

Likewise, the growth in the assets of mutual funds and number of investors have been equally stupendous. According to the Investment Company Institute, the trade group for the investment company industry, in 1980, five million Americans owned funds, holding 3% of their household financial assets. As of December 2022, 120.5 million Americans in 71.7 million households owned mutual funds. That is 54.7% of all U. S. households. In the table below, we see that as of December 2002, mutual fund assets totaled $29.6 trillion dollars. That is approximately 20.7% of the financial assets of United States households. Mutual funds are now the nation's largest financial intermediary followed by commercial banks and life insurance companies.

Growth of Assets in the Mutual Fund Industry

Year	Assets
2007	$13.0 trillion
2008	10.4
2009	12.2
2010	13.1
2011	13.0
2012	14.7
2013	17.1
2014	18.2
2015	18.1
2016	19.2
2017	22.4
2018	21.4
2019	26.0
2020	29.6
2021	34.5
2022	$28.9 trillion

Source: Investment Company Institute, ici.org

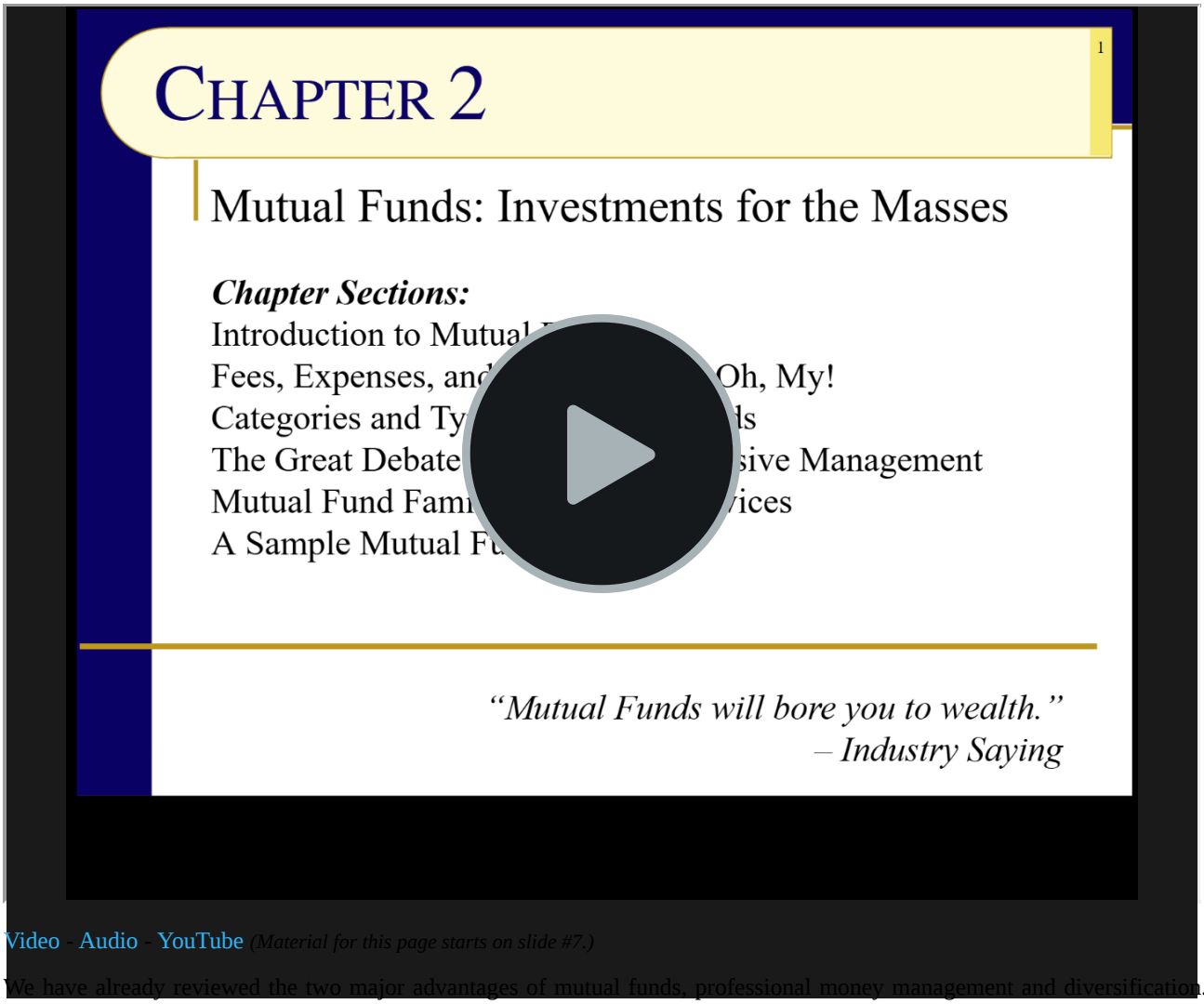
Notice the pronounced dip in 2008. "Wait a minute," you ask, "Didn't the stock market and many stock mutual funds lose over 50% during the Global Financial Crisis?" The answer is yes and some lost even more. However, the bond market and bond funds only lost 10% to 15% and the money market mutual funds didn't lose a penny. Hence, the mutual fund industry only saw about a 20% decline in their assets. Also, many stock and bond investors simply moved their assets from stock and bond funds into money market funds when the turmoil hit. Therefore, much of the assets were just shifted around within the industry. (Actually, two money market mutual funds did lose a penny or three in 2008 but again, for those of you interested, type "breaking the buck" into any Internet search engine or contact your local librarian. It's a nail-baiting story for you Rising Investment Gurus.)

After growing fairly slowly throughout the 2010's, take note of the slight dip in 2018. At the end of 2018, the stock market lost almost 20%. Christmas Eve was a seriously down day that year. No doubt, many hapless individuals gave up and pulled their money out of their stock mutual funds – only to see tremendous gains in 2019, 2020, and 2021. From $21.4 trillion, the industry saw their assets balloon to $26 trillion in 2019, $29.6 trillion in 2020, and then $34.5 trillion in 2021. That's trillion with a T. This

is typical of market movements. Of course, 2022 saw losses in both stocks and bonds. We hope that those ill-fated investors didn't finally decide to move their money back into mutual funds in early 2022 – just in time for the next major downturn. Keep a long-term perspective, Dear Students.

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2.3: Advantages and Disadvantages of Mutual Funds



Video - Audio - YouTube *(Material for this page starts on slide #7.)*

We have already reviewed the two major advantages of mutual funds, professional money management and diversification. As a Rising Investment Guru, you must internalize these two important characteristics of mutual funds. If someone were to call you at 2:00 am in the morning and ask, "What are the two principal advantages of mutual funds for investors?" you should be able to be woken out of deep sleep and answer without hesitation, "professional money management and diversification." With a mutual fund, your investments are diversified instantly. Your $50 monthly contribution buys 20¢ of Nike, 15¢ of Visa, and 25¢ of Home Depot. This diversification provides some reduction of risk that is difficult for an individual investor to obtain on their own. In addition, the professional money managers are working diligently to identify, choose, and monitor the stocks and bonds that populate your mutual fund. They better be working diligently as you are paying them very well to do so.

Another benefit of mutual funds is the initial low outlay of capital. This is a fancy way of saying that you don't need $500 or $5,000 or $50,000 to invest in a mutual fund. You can start with $25 or $50 per month. Until recently, it was not advantageous to buy individual stocks with less than $500 or more. (Technology is changing this but at a hidden cost. More about this movement later on when we get to stocks.) There are some mutual funds that have minimum investment amounts of $1,000 or $5,000 or $25,000. In general, these are more exotic, sometimes called "boutique" funds, catering to very wealthy investors willing and able to sustain large losses. These are normally funds that we retail investors avoid.

The last major benefit of mutual funds is the PITA factor. PITA stands for "pain in the a**." With mutual funds, once you have chosen your one or two or three mutual funds, the PITA factor is extremely low. (This gem comes to us courtesy of David Chilton, the author of *The Wealthy Barber*. I sure wish I had thought of it. Read *The Wealthy Barber*!) Once you have chosen your mutual

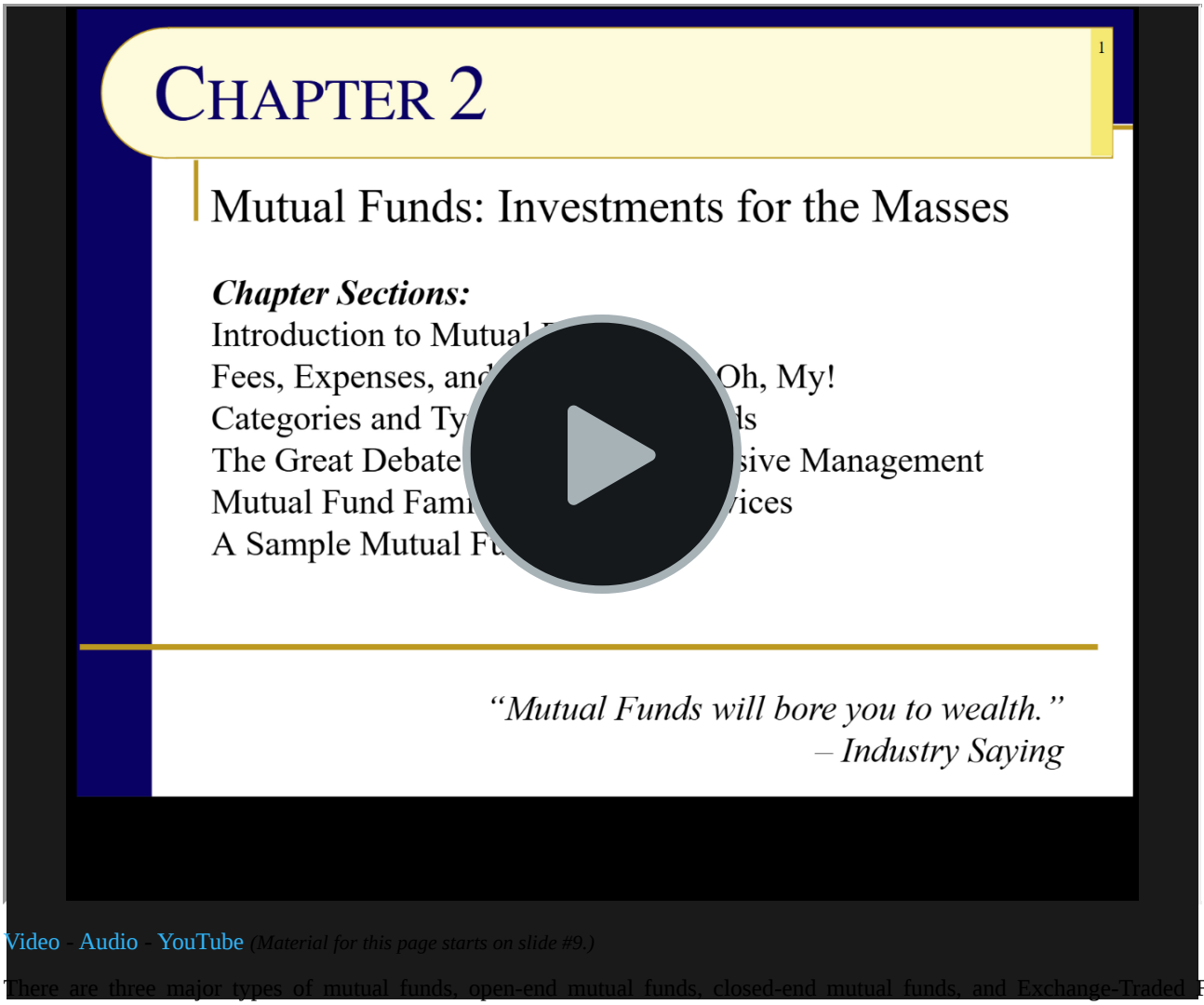
fund, there is almost nothing for us investors to do except check them over every six or twelve months. Yes, Dear Students, mutual funds are boring. And not for the last time will we emphasize that in the investment world, boring is good.

What are the disadvantages of mutual funds? As mentioned, one problem is that there literally are too many of them. It is very difficult to choose from the dizzying array of options. However, there is a more significant disadvantage of mutual funds. You may not be surprised to learn that they are not charities, doling out their services for free. Mutual funds are private enterprises that must charge fees and have earnings to survive, just as any other company must do. A more subtle problem associated with the fees that mutual funds charge is the manner in which they are charged. Few investors understand thoroughly how they are being charged. This is very important. We will cover fees in detail in our next section.

The last potential disadvantage relates to the controversy over whether or not the mutual fund money managers are worth the money that we investors pay them. Some critics are damning of the whole industry and state that no mutual fund managers are worth what we pay for them. Others counter that the criticism has been too broadly applied and there are indeed mutual fund managers who earn their salaries. This topic is covered in detail in a later section.

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2.4: Open-end, Closed-end, and Exchange-Traded Funds (ETFs)



Video - Audio - YouTube *(Material for this page starts on slide #9.)*

There are three major types of mutual funds, open-end mutual funds, closed-end mutual funds, and Exchange-Traded Funds, commonly referred to as ETFs. Please don't ask me why the name is capitalized but it is while the first two are not. Also, sometimes you will see Exchange-Traded Fund with a hyphen and sometimes you will see it without a hyphen. The investment world is full of these types of ambiguities. It is one of the reasons why the general public often throws up its hands and gives up trying to understand investments. That is why you need to study hard, Dear Rising Investment Gurus, to help your family, friends, and colleagues.

By far, the largest number of mutual funds are open-end mutual funds. When people refer to mutual funds without any qualifier, they are invariably referring to open-end mutual funds. An open-end mutual fund is a type of investment company in which investors buy shares from, and sell them back to, the mutual fund itself. There is no limit on the number of shares the fund can issue. Shares are issued and redeemed by the investment company at the request of investors. Investors can buy shares from (purchase) and sell shares to (redeem) the investment company at any time. As of December 2022, there were 8,763 open-end mutual funds totaling $22.110 trillion dollars in assets. They make up approximately 72% of all mutual funds.

The second major fund category consists of closed-end mutual funds. A closed-end mutual fund is a type of investment company that operates with a fixed number of shares outstanding. Shares are issued by an investment company only when the fund is organized. After all original shares are sold you can only purchase shares from another investor. In this way, closed-end mutual funds are bought and sold like stocks and bonds on the open market. The investor will incur brokerage commissions. Closed-end mutual funds are a much smaller part of the mutual fund universe. As of December 2022, there were only 441 closed-end mutual

funds holding only $252 billion dollars in assets. That number represents only 3.6% of the available mutual funds. In recent years, both numbers have been steadily shrinking.

The current underlying worth of any mutual fund is represented by the Net Asset Value (NAV). At the end of every day that the stock market in the United States is open, all mutual funds are required to compute the Net Asset Value of a single share. The mutual fund staff sum the value of the securities in the mutual fund and subtracts any liabilities. The securities are quoted as of 4 pm New York time. The liabilities consist of pending redemptions to be sent to investors, pending purchases of new securities, and any other day-to-day costs of running the mutual fund. The liabilities are typically very low compared to the value of the securities. The result of the value of the securities minus the liabilities is then divided by the number of mutual fund shares. This is the Net Asset Value. This is the number you will see when you investigate your mutual fund. Although it is good to understand what the Net Asset Value represents, there is really no need to perform the calculation for yourself; each day, it is computed for you automatically and all you need to do is run to your nearest Internet-enabled device and ask for it.

Open-end mutual funds are bought or sold at Net Asset Value. Some open-end mutual funds may add a sales commission, also known as sales charge or sales load. If a sales commission is added, the resulting price is called the Maximum Offering Price (MOP) or just the Offering Price. The NAV or MOP is the price that the investor will pay when the fund is purchased. The NAV is the price the investor will receive when the fund is redeemed. Since closed-end mutual funds are bought and sold on the open market, their price usually either reflects a premium or discount to the Net Asset Value. They are very rarely priced at their Net Asset Value. Closed-end funds more often than not will sell at a discount to the Net Asset Value. The investor will pay the current market price when purchasing closed-end mutual funds and receive the current market price when redeeming closed-end mutual funds.

What are the advantages and disadvantages of open-end versus closed-end mutual funds? Open-end mutual funds are much more popular than closed-end mutual funds and therefore offer the investor a much wider range of options. With open-end mutual funds, there are no market forces so the investor does not pay any brokerage commissions and does not have to worry about any supply and demand market forces.

One downside of open-end mutual funds is something that the investor has no control over. Invariably, if an open-end mutual fund becomes very successful, it will become very popular. Floods of new contributions will inundate the fund. At first, this may sound like a great boon to the company. However, too much money flowing into a mutual fund can create serious challenges for the mutual fund managers. They must put this money to use and that can be problematic. Will they choose to purchase more of the same securities that they already have in the portfolio? Will they decide to invest in new securities? Both have their pitfalls. Purchasing more of an existing security that is already in the mutual fund may bump the mutual fund up against the 5% rule discussed in the next section. It also could be difficult for the fund to purchase more shares without adversely affecting the price of the security, especially if the security is a smaller issue such as small company stock. Also, identifying, choosing, and monitoring new securities places more burden upon the mutual fund company. Too much diversification can be too much of a good thing. How many resources will the mutual fund company devote to the 250th stock in their portfolio? For this reason, many open-end mutual funds will decide to close the fund. Other mutual funds handle this problem by adding more mutual fund managers, essentially creating multiple portfolios within the overall portfolio. Again, this is an issue that the mutual fund company must handle but it is important for us investors to be aware of.

In addition to the problem of a flood of contributions into the open-end mutual fund, if an open-end mutual fund experiences a flood of withdrawals from the fund, the exact same problem happens in reverse. Now, the mutual fund managers might be forced to sell securities to pay for redemptions. This may occur at precisely the worst time, namely when the market is experiencing a major downturn and ill-informed investors are running for the exits. Or it may occur when a very successful and popular money manager leaves a fund after many years. Too many contributions and too many withdrawals are both uncommon events but they are something that investors need to be aware of.

Closed-end mutual funds have the issue that the investor must pay a broker's commission just as they would when they bought or sold a stock or a bond. (You may be saying to yourself, "My brokerage firm doesn't charge commissions. I am not paying anything for my trades!" Ah, Dear Student, please know that you are being charged, one way or another. We will tackle the industry's current sleight of hand in our next chapter.) Closed-end funds must be bought and sold in the marketplace so the forces of supply and demand are at work. Hence, there is sometimes a premium or, more often than not, a discount to the Net Asset Value. However, one advantage of closed-end funds is that it is much easier for the mutual fund investment advisors to manage the underlying assets.

Recall that the number of shares is set when the closed-end mutual fund is established. The closed-end mutual fund managers do not have to worry about a flood of purchases or redemptions as do the open-end mutual fund managers.

A third type of mutual fund has emerged in the past few decades. Exchange-Traded Funds (ETFs) are hybrids of open-end and closed-end mutual funds. Exchange-Traded Funds are open-end mutual funds that have no limit to the number of shares. The mutual fund company issues new shares as needed. However, they trade on the stock exchanges like closed-end mutual funds. Therefore, the investor must purchase the fund using a brokerage account, incurring brokerage transaction fees as would a closed-end mutual fund. Competition and innovation have led some mutual fund companies to find a way to eliminate the brokerage transaction fees. Some mutual fund companies have opened their own brokerage firms and if you purchase their Exchange-Traded Funds through their brokerage firm, they waive the commission.

Exchange-Traded Funds were introduced in the early 1990's. Starting in the 2000's, their popularity began a meteoric rise, as shown in the table below. This has led many in the industry, especially the financial media talking heads doing their best to attract your attention by making profound revelations, to confidently predict that ETFs will supplant all other mutual funds. To steal from Mark Twain, the reports of the death of open-end and closed-end mutual funds are greatly exaggerated. Even given their spectacular growth, ETFs still only account for about 24.5% of the total number of mutual funds.

Growth of Exchange-Traded Funds

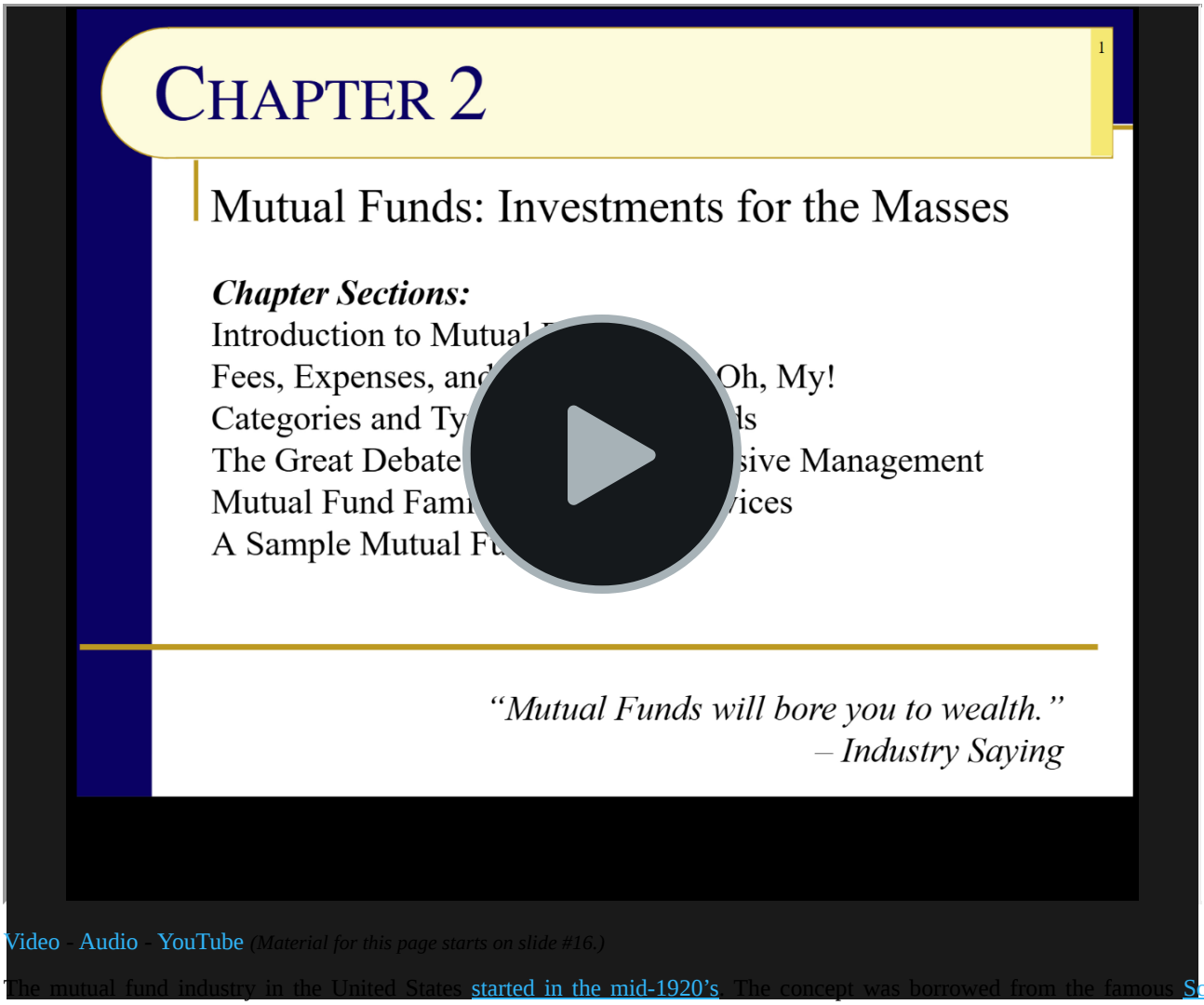
Year	Number of Funds	Assets ($US)
2006	359	$423 billion
2007	629	$608
2008	743	$531
2009	820	$777
2010	950	$992
2011	1,168	$1,048 ($1.048 trillion)
2012	1,239	$1,337
2013	1,332	$1,675
2014	1,451	$1,974
2015	1,644	$2,100
2016	1,744	$2,500
2017	1,900	$3,401
2018	2,057	$3,371
2019	2,175	$4,396
2020	2,296	$5,449
2021	2,690	7,191
2022	2,989	$6,477 billion ($6.477 trillion)

Source: Investment Company Institute, ici.org

There is some confusion surrounding the underlying investments in Exchange-Traded Funds that we will discuss when we discuss the various types of mutual fund strategies and objectives. Furthermore, because of the ability to buy and sell Exchange-Traded Funds throughout the trading day, many speculators and traders have begun to use ETFs as trading vehicles. Many in the industry including John "Jack" Bogle, founder of The Vanguard Group, have lamented the use of ETFs as trading vehicles as mutual funds were originally designed to be long-term investments.

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2.5: Regulation and Organization of Mutual Funds



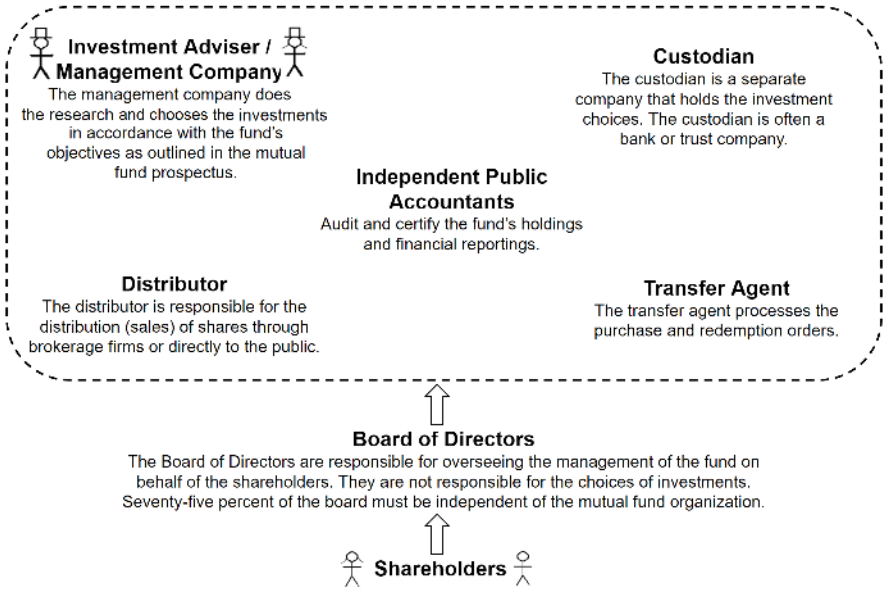
Video - Audio - YouTube *(Material for this page starts on slide #16.)*

The mutual fund industry in the United States started in the mid-1920's. The concept was borrowed from the famous Scottish Investment Trust that has been in operation since the 1880's. The idea was to be able to bring professional money management and diversification to the masses. At first, some regulators were very skeptical about these new investment alternatives and some states had conflicting rules and regulations. Especially troublesome from the governments' viewpoints was how these entities should be taxed. That all changed with the Investment Company Act of 1940. This legislation is the foundation of the modern mutual fund industry. The Investment Company Act defined a "regulated investment company," also known as a "pass-through" investment vehicle. The mutual fund does not pay taxes on the interest, dividends, and capital gains from the underlying investments. Instead, the mutual fund "passes through" the rewards to the investors and the investors are responsible for any subsequent taxes. (The mutual fund earns its money from the fees charged to the investors and must pay any taxes on those earnings.)

There are several rules, regulations, and guidelines that must be adhered to for a company to qualify as an investment company. The entity must hold almost all its assets as investments in stocks, bonds, and other traditional securities. It has a very limited ability to use derivatives and other risky strategies. Also, the mutual fund may use no more than 5% of its assets when acquiring a particular security. This rule is crucial. By limiting the amount of assets to 5% to any one particular stock or bond, the mutual fund is guaranteed to have at least 20 securities. Obviously, most mutual funds have far more investments in their portfolio but there are some mutual funds that do limit their portfolios to the bare minimum. One such fund was the infamous Janus 20 mutual fund. Where did the name come from? Again, a mutual fund must have at least 20 different stocks, bonds, or other securities. The strategy of the Janus 20 fund was to have a portfolio of only 20 stocks. This anti-diversification strategy works great – if you choose 20 great stocks. Of course, if even one or two of your choices don't work out as expected, it can quickly sour the long-term

results of a mutual fund. If you investigate the history of the Janus 20 fund, you will find that this is exactly what happened. Janus 20 was a high-flying and very popular mutual fund – until 2008. Janus finally merged the fund into another mutual fund – Janus 40! This is an example of what is called in the industry "burying the evidence." It happens far more often than it should.

Another important provision of the Investment Company Act of 1940 is that mutual funds must create an organization with "checks and balances." This is the exact same concept that is embedded into the Constitution of the United States and is taught in high school Civics and United States History classes. In the case of mutual funds, the idea was to help ensure that the investors' assets would be protected by separating the various tasks among several different entities. In truth, a mutual fund is not just one company; it consists of a group of companies.



The mutual fund is a corporation run by a Board of Directors for the benefit of the investors who are shareholders in the corporation. The Board of Directors is voted in by shareholders and are charged with overseeing the fund operations on behalf of the shareholding investors. In the past, some Boards of Directors were criticized for not exercising the highest standards in fiduciary oversight. This is a fancy way of saying that they were asleep at the wheel. Some Board Members are paid handsomely for their services. Critics contend that this creates a conflict of interest and question whether Board Members would be fearful of jeopardizing their positions by being too critical of the mutual fund management.

By far, the most important component of the mutual fund structure is the Investment Manager, also known as the Management Company or simply the Fund Manager. This is the company that is charged with researching, identifying, choosing, and then monitoring the securities that will populate the mutual fund. Many mutual fund companies use what is sometimes referred to as the "star manager" approach where one individual is responsible for all the final decisions of what investments will be included in the fund. This person is assisted by many research analysts who cover specific sectors and industries such as energy, technology, and health care. Other companies use a committee that must come to a consensus about which securities to buy. An approach that is a hybrid of these two strategies is to have several money managers responsible for the investment decisions. The group does their research as a team but the individual money managers make their own decisions. This approach is gaining popularity as it has some advantages over the "star manager" approach. It allows the portfolio managers to focus on fewer investment choices, ones in which they have the most conviction. It also allows for a smoother transition when a money manager leaves the firm. This is in stark contrast to the problem a "star manager" mutual fund has when their individual retires or joins another firm.

The custodian is the company that actually holds the securities. This company is often a bank or trust company. The investment manager makes the decisions, the custodian company holds the investments. This is done to reduce the risk of any financial misconduct and is part of the "checks and balances" that is built into the mutual fund. As their name suggests, the distributors distribute the shares to the public or to other financial professionals dealers who then deal with their own clients. The transfer agent keeps track of purchase and redemption requests from shareholders, not the most glamorous of tasks in the investment industry but very important, nonetheless. Lastly, the independent public accounting firm certifies the fund's financial operations and reports.

They are the watchdog that ensures that the investments are safe and sound and that there is no financial fraud. Normally the independent public accounting firm is one of the Big Four public accounting firms. (Note: In the case of the fraud perpetrated by Bernie Madoff, the accounting firm that he was using was some guy out in Connecticut working who worked out of his garage.)

Why the large diversification of tasks and companies? Mutual funds are highly regulated in order to protect shareholders' investment from fraud and collapse. How often have you heard of a scandal at a mutual fund company? Until 2003, never.

"Wait a minute, Paiano! Did you just say, 'Mutual Fund Scandals?!' You want me to invest in an industry that is plagued with scandal?!" Well, as a matter of fact, yes, I do. I want you to invest in mutual funds. But on the contrary, the industry is not nor has it ever been plagued with scandal. Since 1940, the mutual fund industry has been regulated and for decades escaped any but the slightest hints of impropriety. In 2003, some practices that were not quite illegal but obviously unethical were uncovered. Only a handful of mutual fund companies and people in the firms were affected such as Strong, Janus, Bank of America, Putnam, and Alliance. The vast majority of companies never engaged in any of the shenanigans. Two individuals at Alliance were guilty of these improper actions and the entire company was unfairly tarred and feathered. The worst example was the sad story of Strong Funds where the CEO, Richard Strong, who built the company from scratch, supposedly earned $600,000 in ill-gotten gains. This was a man who was worth a reported $800 million dollars at the time of the ruse. What causes a titan in the industry to risk their most important asset, their good name and reputation, for what to him was essentially pocket change? Mr. Strong was barred from life from the securities industries, paid a $60 million fine, and publicly apologized for his actions. Strong Funds paid $115 million in penalties and $80 million to investors. And unlike most such settlements, the firm admitted wrongdoing and apologized to its investors. The assets of Strong Funds were eventually sold to Wells Fargo and, once again, the evidence was buried.

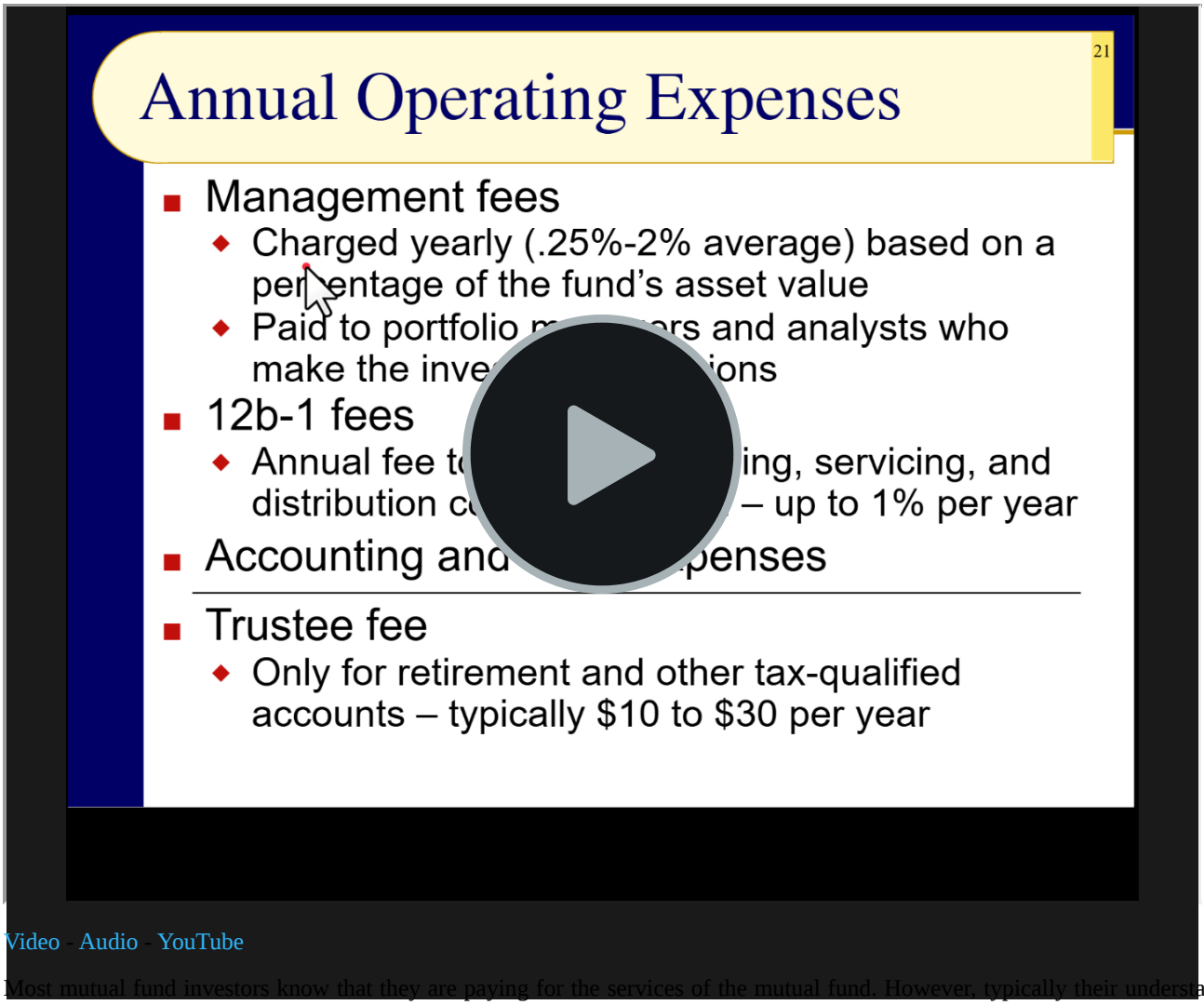
What were these terrible things that these few rascals were guilty of? We won't get into the gory details of mutual fund late trading and market timing. Although these actions were certainly dishonest and corrupt, the effect upon the average mutual fund investor was essentially unnoticeable. Those who invested heavily in Enron, WorldCom, or Bernie Madoff lost $99,999 on a $100,000 investment. In contrast, the investors of the affected mutual funds typically lost less than a penny on a $100,000 account. The offenders were stealing hundredths of pennies from their fellow mutual fund investors. There just happened to be millions of said fellow mutual fund investors to steal a few hundredths of a penny from every few days or so. Even though the harm was negligible to the typical mutual fund investor, these actions were counter to the honest and principled operation of a mutual fund. Again, only a handful of culprits were guilty. As usual, it is the very few who give all the hard-working, honest professionals a bad name.

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2.6: Fees, Expenses, and Share Classes, Oh, My!

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Most mutual fund investors know that they are paying for the services of the mutual fund. However, typically their understanding of how they are being charged is vague at best. My apologies on behalf of our industry because as you will see, we have done our best to make sure that the vast majority of mutual fund investors do not fully understand the costs associated with mutual fund investing. And for the most part, the industry has succeeded. As Rising Investment Gurus, it is your duty to understand thoroughly the fees and expenses of mutual funds. Study this section over and over. Your friends and family and colleagues are depending upon you.

Annual Operating Expenses

Every mutual fund has annual operating expenses. These expenses are reported as a percentage of the assets under management. Understanding the percentage of assets under management is only the first hurdle for most potential mutual fund investors with regard to expenses. There is much more to understand and internalize about mutual fund fees. Sadly, understanding the costs resulting from the percentage expense of assets under management is also often the last hurdle for puzzled would-be investors. Subsequent explanations of fees and expenses often elicit only glassy-eyed stares. Our intrepid future mutual fund investor then

decides quickly to banish from their mind any further thought of the costs of mutual fund investing and to concentrate on the other juicier aspects of mutual funds such as the investment returns touted in the slick marketing material their representative sent them.

This dynamic is unfortunate because understanding the costs as a percentage of assets under management is not difficult once it is explained adequately. For example, if the annual operating expenses are 1% of assets under management, then for every $100 in the account, the mutual fund will charge 1% of $100 or $1 each year to operate the mutual fund. If the assets under management were $1,000, 1% would be $10 yearly. $100,000 would mean an expense of $1,000, and so on. It is typical to see annual operating expenses range from 0.05% or less to up to 2% and sometimes even more. Although the difference between, for example, 0.5% and 2% might seem small at first, the difference in absolute expenses can be substantial, especially when the investment amount becomes considerable.

Mutual funds have up to four annual operating expenses. Normally, the most costly annual operating expense is the management fee. This fee goes to the professional money managers who are identifying, choosing, and monitoring the securities that populate the mutual fund. Management fees range from 0.2% up to 2% yearly. Proper securities research is not inexpensive. If the money managers are doing the serious work necessary to actively manage the underlying choices in the mutual fund, the costs will be significant. As we have discussed, the world is a very small place economically and money managers must have a global outlook. Doing research across the globe is costly and the management fee reflects this cost. However, we shall see an important exception to this rule as we progress through our discussion of fees.

A second annual operating expense is the 12b-1 fee. Where did this comically baffling name come from? The 12b-1 fee's name comes from Rule 12b-1 of the Investment Company Act of 1940. This annual fee is used to defray advertising, servicing, and distribution costs of the fund. Mutual fund companies are required to report what they pay for these costs. Are banks or life insurers, or beverage companies or car companies, for that matter, required to tell the general public what they pay for advertising? No, but according to the Investment Company Act of 1940, mutual funds companies must. Over the past two decades, 12-b fees have gotten a bad reputation because of some abuses which will be discussed soon. The 12-b fees are usually 0.25% but can be as high as 1.0%.

The third category of annual operating expenses consists of the accounting and other expenses. This is a broad category that consists of all the other expenses of operating a mutual fund such as the rent, utilities, communications, and, very importantly, the accounting. This expense ratio is usually less than 0.2%.

A last category of mutual fund annual operating expenses usually only applies to accounts that the IRS has deemed tax-advantaged accounts, also known as tax-qualified accounts. Examples of these are retirement accounts such as Traditional and Roth IRAs, health savings accounts, and educational accounts. With these accounts, the IRS requires the funds to be held by a separate trustee. Unlike the first three expenses, instead of a percentage of assets under management, the trustee typically charges a set fee of between $10 and $35 per year per account. Also, unlike the previous three fees which are paid automatically from the proceeds of the account, this fee can be paid separately outside the account by the investor. In practice, very few investors bother to write a check each year for $10 and send it to the mutual fund trustee.

Disclaimer: Because of the intense competition in the mutual fund industry, there are now a few funds that do not charge any annual operating expenses. Fidelity Investments was the first to offer a few of their funds with no annual operating expense. In marketing, this is often referred to as a loss leader. Fidelity is courting new customers with a few free mutual funds and anticipating that once they are loyal clients, Fidelity will be able to sell them other for-pay services. Obviously, no company can exist indefinitely without revenue so we will see if this marketing gambit is successful over the long term for Fidelity. If it is, we can expect other companies to follow Fidelity's lead.

According to the Investment Company Act of 1940, all the previous fees and expenses, along with much other information about the mutual fund, must be reported in the funds' prospectus. No doubt you have heard or seen in advertisements about mutual funds and other types of investments, "Be sure to read this and other important information about the investment in the prospectus." Ha, ha, ha, ha, ha! This is one of our industry's little jokes. No one reads the prospectus. Before the revolution in digital communication, every investor was required to have been given or sent to them the prospectus in writing. Now, as with other online services, you simply, "Click or tap here to acknowledge that you have read the prospectus."

As Rising Investment Gurus, it is important for you to at least slog through one or two prospectuses. (No, the plural of prospectus is sadly not prospecti.) There are various links on the class website for you to follow. The truth is the prospectus can be very useful.

If you ever suffer from insomnia, simply start reading a mutual fund prospectus. Your insomnia will be a distant memory. When Your Humble Author was first introduced to mutual funds, the representative gave me the required prospectus in writing along with the marketing material. Although I skimmed quickly through some of the material, I read every page. When I saw her again to discuss the potential investments, I asked for the prospectus of the second mutual fund that she was also thinking of recommending. She looked at me oddly and said, "You read the prospectus?" I replied that I had and was eager to read the other one. She was dumbfounded. This was a woman who had over 20 years of experience in the industry at the time and she replied, "I don't know anyone who has read a prospectus. I've never read a prospectus!" At the time, I thought that this was odd since if you are going to trust your money with this company, shouldn't you know everything you can about them? Since then, I believe that only one of my clients has ever actually read the prospectus. Also in recent years, the Securities and Exchange Commission has allowed the mutual fund companies to issue a summary prospectus which is about ¼ of the size of the full prospectuses. It is still written in such a way to put the average person asleep within one or two pages.

Before the advent of pervasive digital communications, there was a saying in the industry. "The more important the information, the cheaper the paper. The less important the information, the more expensive the paper." This was a comment on the fact that the prospectuses were printed on drab, inexpensive paper. On the other hand, the slick marketing materials were always printed on luxurious paper in full color.

One operating expense that is often overlooked is the cost related to trading. The trading costs are not required to be reported in the prospectus. So how does one know how much the mutual fund is paying in trading costs. A quick guide is to look at the mutual fund's turnover ratio. This is a measure of how much of the portfolio "turns over" in one year. If the turnover ratio is 100%, the mutual fund will have bought and sold the entire portfolio in one year. If it is 50%, it will take two years to turn over the portfolio. The higher the turnover ratio, the more trading costs the mutual fund will incur.

What is an optimal turnover ratio for a mutual fund? The answer depends as some mutual funds will have a high turnover ratio simply by the nature of the underlying investments. Examples of this type of mutual fund are money market mutual funds that hold short-term securities that mature in three, six, or nine months. Therefore, it is typical to see 300% or more turnover in money market mutual funds. However, with stock mutual funds, a high turnover ratio implies that the mutual fund managers are acting more along the lines of speculators and traders instead of investors. We will see when we discuss stock valuations that a turnover ratio of 20% to 30% for stock mutual funds is a respectable turnover ratio. The mutual fund managers are holding onto their stocks for an average of 3 to 5 years. A turnover ratio of 200% or more for a stock mutual fund means the managers are only holding onto their stocks for an average of six months or less. A stock turnover over 200% is not long-term investing; it is short-term speculating/trading, better known as gambling.

Load Funds versus No-load Funds

Along with the annual operating expenses, some mutual funds have a commission. The commission goes by various names including the sales commission, the sales charge and, historically, the sales load. Hence, mutual funds that come with a commission are called load funds. Mutual funds that do not have sales commissions are called no-load funds. During the first few decades of the mutual fund industry, mutual funds were sold by financial representatives such as stockbrokers and came with a sales load. The commission was used to compensate the financial representative along with the fund distributor. Eventually, enterprising new mutual fund companies began to offer no-load mutual funds without commissions that bypassed the financial representatives. The investor would deal directly with the mutual fund company via 800 toll-free phone numbers and then eventually, the Internet and other digital communications. The incessant drumbeat from the financial media will tell you that you should never buy a load fund and should only purchase no-load funds. There are two problems with this. First, along with the sales load, you need to compare the annual operating expenses. Over the long term, a no-load fund with higher annual operating expenses may wind up costing you far more than a load fund with lower annual operating expenses. Secondly, if an investor believes that they need the services of a financial representative, they should be expected to pay for these services. We will see that traditional load fund sales commission can wind up costing orders of magnitude less than the current system that has evolved to replace the traditional sales load.

In addition, as you nose about the financial media, you will invariably see something along these lines, "If you invest $100,000 into a mutual fund with a 5% sales load, at the time you invest, $5,000 will be taken out of your account and used to pay the broker and other distributors that helped get you to choose that investment. If your mutual fund grew by 8% compounded for 50 years, a $5,000 sales load charge would result in you having $234,508 less in wealth." The problem with this assertion is that the writers are

assuming that the load fund and the no-load fund will have the exact same investment returns. This would almost always never be the case. No two funds are exactly the same. The other problem with this example is that a mutual fund with a 5% sales load typically has reduced commissions for amounts over $25,000 or $50,000. We will look at so-called sales charge breakpoints below.

How did the investment services industry respond to the challenge of charging clients for their services in the face of no-load funds? The industry introduced various mutual fund share classes. As we work through the next discussions of the various types of share classes, their non-descriptive names, their sales loads and other fees and expenses, we will see yet another reason why mutual fund investors would rather not concentrate on how they are being charged. Again, it is up to you, Dear Rising Investment Gurus, to study these share classes thoroughly and internalize them so that you will be able to help your friends, family, and colleagues make sense of the fees they are paying for their funds.

Share Classes – Alphabet Soup, Anyone?

The first mutual funds had a front-end sales load. The sales commission was subtracted from the purchases of the mutual fund shares. These mutual funds shares are typically now referred to as Class A shares. They would traditionally have the lowest annual operating expenses of load funds. Also, as mentioned, the sales load is typically reduced as the contributions or the amount of the investment reaches certain sales charge breakpoints. For example, the maximum sales load on a mutual fund's A shares may be 5%. However, once the contribution or the amount in the account reaches $25,000, the sales load would be reduced to 4.5%. At $50,000, it might be reduced to 4%, and so on. Typically, once the contributions or the amount in the account reaches $1,000,000, the sales load is waived entirely. (Does this give you an idea of how much the industry simply adores high net worth individuals, often called sophisticated investors or accredited investors?) As no-load funds became more popular, many in the general public soured on the idea of sales commissions. If nothing else, the investment services industry is very good at marketing. For those individuals who did not want to pay a front-end Class A sales load, the industry created Class B shares. Class B shares have a back-end sales load. The investor paid a commission when they sold the shares. Savvy investors would respond, *"Ms. Financial Representative, what difference does it make if I pay a front-end load or a back-end load? I don't want to pay any sales commission!"* The industry was already one step ahead of them.

"No problem, Mr. and Mrs. John Q. Investor! Our Class B shares have a Contingent Deferred Sales Change (CDSC). You only pay the back-end sales charge if you don't hold on to the shares for 4 years. After that, there is no sales charge." The representative is correct but she and her cohorts were often withholding an important piece of information. The Contingent Deferred Sales Charge does indeed reduce over 4 or 5 or 6 years. The first year, it may be 4%, the second year, 3%, and so on until the back-end sales charge disappears. However, what the sales representative did not divulge – *"But Ms. Jane Q. Investor, it was all contained in the prospectus that you read!"* – is that the Class B shares typically charge higher annual operating expenses over 6 or 8 years. Much of those higher annual operating expenses are going to compensate the advisor and their firm.

Where did the higher annual operating expenses come from? They came from the 12b-1 fees, of course! Doesn't everyone know that? Class B shares typically had 12b-1 fees that were four times higher than Class A 12b-1 fees. Over time, the Class B shares can wind up costing an investor more than the Class A shares. Plus, there is a point at which the sales charge breakpoint makes the Class A shares a much better deal for the investor than the Class B shares. This and a few other abuses of the Class B shares perpetrated by a number of financial representatives gave the Class B shares a less-than-stellar reputation. Many mutual fund companies have already done away with their Class B shares.

"Mr. Ron Q. Investor, you say you don't want a front-end load nor a back-end load? No problem! We have the shares for you! They are called Broker No-load Funds." The next attempt by the industry to counter the challenges of the no-load funds was the invention of the Class C shares. At the time, many representatives referred to them as Broker No-load Funds. That name is no longer allowed by the regulators. Class C shares have no front-end load and no back-end load except for a typical 1% back-end load that is charged if the investor withdraws the funds within one year. *"But you are not going to withdraw your money within a year, Señorita Juana Q. Inversionista, right? Mutual funds are long-term investments."* However, like the Class B shares, the Class C shares have much higher 12b-1 fees for typically 8 or 10 years and therefore, they, too, can wind up costing far more than the front-load Class A shares. As with the Class B shares, most of those higher 12b-1 fees are used to compensate the client's advisor.

As mentioned, the term Broker No-load Funds is no longer permitted to be used by investment representatives. Why is this? The Securities and Exchange Commission has ruled that Class C shares are a type of load fund. The only difference is that instead of front-end or back-end load, the mutual fund is charging the sales load yearly over time on an amortized basis.

So you go to your broker and you say, *"I don't want to pay a front-end load nor a back-end load and I want lower annual expenses."* What do you think your broker is going to say? Are you starting to see a pattern here? Can you guess what the first words out of the advisor's mouth will be?

"No problem! For you, we have the new and improved Class F shares! And by the way, we are not your brokers anymore. Oh, no, no, no! We are your wealth managers, your investment advisors, your trusted personal financial consultants. We don't charge commissions anymore!" The Class F shares go by various designations, Class FI, Class I, Advisor Class, and now, clean shares. These shares have no front-end load, no back-end load, typically no 12b-1 fees, and overall, have much lower annual operating expenses than the Class A, B, and C shares. If you are wondering where the funds to compensate the advisor are coming from, then you have been paying attention and are a good candidate for entering our industry as a professional. What has the sales representative left out of the conversation?

With the Class F shares, the advisors and their firms are tacking on an additional annual operating expense separate from the mutual fund expenses. Currently, it is typical for a brokerage firm to add an additional 1% or even 2% on top of the mutual fund annual operating expenses. With this additional charge, over time, the potential fees that a mutual fund investor pays dwarf the fees of the corresponding front-end load Class A shares, especially for those who can take advantage of the sales charge breakpoints available to Class A share investors. However, this is not the investment world of the 1960's. If you seek the services of a personal investment advisor, chances are that they will want to pony up the additional 1% or 2% "wealth management fee."

In addition, the wealth managers normally don't want us, the Little Folk, who are putting $50 or $100 per month away into our Roth IRA. For example, one such firm, Fisher Investments wants you to have at least $500,000. With your $500,000 or more, you get charged 1.25% for the privilege of having them manage your money. According to a report from Investopedia, the average fee as of 2019 was 1.02%. As of this writing, larger firms are experimenting with more automated, less personalized, services and are offering lower annual operating expenses. One example of this is a company called Betterment that offers wealth management services for a fee that is between 0.25% and 0.40% of assets depending upon the size of the account.

The A, B, C, and F/I/FI/Advisor/Clean shares classes are only the beginning. Depending upon the mutual fund company, there may be many more share classes. Take heart. All of them are variations on one of the four share classes described above.

The very last share class consists of no-load funds. The financial media often refers to them as "true" no-load funds. This unofficial designation was meant to distinguish these funds from the so-called "broker no-load" Class C mutual fund shares. (Recall that the SEC now prohibits Class C shares from being called no-load funds.) The debate between load funds in all their many permutations and no-load funds will continue unabated for years to come. Remember that no two mutual funds are the same and some load funds have done better than some no-load funds over significant periods of time. Also recall that if you want the benefits of a financial professional, you should be expected to pay for it. One way is to pay of paying your financial professional is through sales loads, whether through Class A front-end shares, Class B back-end shares with a contingent deferred sales charge (CDSC), Class C shares with the load spread out of several years, or Class F/I/FI/Advisor/Clean shares with the additional wealth management, also known as the assets under management (AUM) fee.

A last word on paying for professional financial services is needed here. Some financial professionals are "fee-only." This has added yet another option into the debate. Some in the industry argue that fee-only professionals do not have the same potential for a conflict of interest since the professionals are not being paid on commissions. However, there are various types of fee-only professionals and some do indeed earn a commission or an assets under management fee or both. Added to this confusion is that often the fees for fee-only advisors can be more expensive than paying the commissions on Class A front-end mutual fund shares.

Breakpoint Sales Charge Reductions and Contingent Deferred Sales Charges

The sales charge breakpoints for Class A shares are often overlooked as a potential powerful method to lower an investor's costs over time. Below is a typical sales breakpoint schedule for Class A shares.

Table 2.6.1: Sales Charge Breakpoints Example

Investment (either purchased or accumulated)	Sales Charge
Less than $25,000	5.75%
$25,000 but less than $50,000	5.00%
$50,000 but less than $100,000	4.50%
$100,000 but less than $250,000	3.50%
$250,000 but less than $500,000	2.50%
$500,000 but less than $750,000	2.00%
$750,000 but less than $1,000,000	1.50%
$1,000,000 or more	None

As we can see from the table above, as we contribute more or as our account reaches higher levels, the sales charge on future purchases is reduced. Investors can even sign a Statement of Intention with their mutual fund company, agreeing to invest a sufficient amount to qualify for a certain breakpoint. The investor has 13 months to satisfy the statement. This allows the investor to pay fewer dollars of sales commission on their initial investments. For example, an investor might know that they will be able to invest at least $100,000 over the next 13 months. After signing the Statement of Intention, the investor could initially invest $10,000 now and only pay a 3.50% commission instead of the 5.75% maximum commission. If they fail to satisfy the statement of intention and the 13-month period expires, the mutual fund company will charge the commission that was waived.

In the past, some unscrupulous brokers would fail to mention the sales charge breakpoints provision to their clients. As the client reached a breakpoint, the broker would recommend that the client contribute to a different fund. Today, any broker that attempted this breach of fiduciary trust with their clients would have their license revoked as well as be liable for fines and restitution to be paid to the clients. Once again, we apologize on behalf of our industry and once again, it is the few bad apples that give all investment professionals a very bad name. By the way, “breach of fiduciary trust” is the investment industry’s gently ambiguous euphemism for, “fraud and theft.”

As mentioned, the Class B shares typically have a Contingent Deferred Sales Charge that is reduced over time until it disappears entirely. Below is a typical Contingent Deferred Sales Charge schedule. This type of schedule is also common with annuity investments in the insurance industry. However, the annuity schedules often last upwards of 20 years and can start at up to a 20% or 25% back-end fee.

Table 2.6.2: Contingent Deferred Sales Change Example

Year of Redemption	Contingent Deferred Sales Charge
1	4.0%
2	3.0%
3	2.0%
4	1.0%

Fees and Expenses of Several Example Mutual Funds

It is now time to take an in-depth look at the fees and expenses of several sample mutual funds. If you have not done so, please listen or watch the second presentation of chapter 2 on the class website or on YouTube. Stick around for the denouement where we compare not only the fees but the investment results for four different mutual funds and compare them to an industry standard.

Pay special attention to the “checking for comprehension” slides at the end of the presentation. You need to be able to explain the subtle and obtuse differences between the various mutual fund share classes. Last, note that the share classes that we have described above and describe in the presentation are just the major share classes. There are many, many more! Luckily, all the other mutual fund share classes are simply variations on the themes that we cover here. Study and learn these thoroughly. Memorize them.

In the presentation, we see that there is a strong difference in the fees charged by actively managed mutual funds and passively managed index mutual funds. The simple reason a passively managed index mutual fund costs much less than an actively managed mutual fund is that the passively managed index mutual fund is doing absolutely no research and is not identifying, choosing, and monitoring the securities that populate the mutual fund. The index fund is simply reading from a list of stocks or bonds and buying them; if the stocks or bonds are not on the list; they don’t buy them. It’s that simple. On the other hand, the actively managed mutual funds have entire staffs of multilingual, multicultural portfolio managers and research analysts that need to span the globe to identify, choose, and monitor their investments. If done well, this is an expensive undertaking.

There is one exception to the rule about low-cost passively managed index funds. As your family’s, friends’, and most importantly, your colleagues’ Future Financial Wizard, you must be aware of this exception. Some employer-sponsored plans will try to sneak index funds into the plan with high fees. This is typical when the plan administrator is an insurance company. You may ask, “Who would do that to their employees?” One example is Southwestern Community College, the folks sponsoring this class. When the representatives from the new insurance company – We won’t name any names ... Nationwide! – came to tell us how wonderful our new employer-sponsored plan was, they didn’t plan on Your Humble Author being at the meeting. In the fund, they had snuck index funds with fees almost 10 times as much as index funds from other companies. I asked them why the index funds had such high fees and they were gob smacked and started stumbling and mumbling something about how they were working to find lower fee funds. They didn’t lie. They did replace the obscenely high-priced index funds with funds that were only very high priced, their own Nationwide brand funds. For several years, I complained and complained to my colleagues in our Human Resources and Benefits Department. It wasn’t that they didn’t care. They simply did not understand what the problem was. Finally, one of the women in the department took this class and exclaimed to me, “You are right! They are screwing us!” Soon after that, we moved to another insurance company that is screwing us much less. Dear Readers, never trust an insurance company with your investments. When we get to annuities, we will see how insurance companies are not always on your side." (Disclaimer: I am also a licensed insurance agent in the State of California.)Dear Readers, never trust an insurance company with your investments. When we get to annuities at the end of our journey together, we will see that when it comes to investments, insurance companies are usually not “on your side.” (Disclaimer: As well as a registered representative, aka stockbroker, I am also a licensed insurance agent in the State of California.)

This is where you come into the picture. When that slick financial representative in the three-piece silk suit with a $5,000 watch on his wrist tries to sell you on how wonderful your 401(k) plan is, you are going to ask him, “Why do we have a Nationwide index fund that costs 10 times more than a Vanguard or Fidelity index fund?” He will start to stammer and hem and haw and your colleagues will look at you with awe and admiration. And hopefully, your company will realize what absolute scoundrels these people are. When your colleagues are amazed and ask you how you became an Investment Guru, don’t forget to tell them about Introduction to Investments at Southwestern Community College. You’re welcome, by the way.

Comparison of Commissions versus Assets Under Management (AUM) Fees

In the presentation, we saw how a front-end load fund using Class A shares can cost an investor less in fees and expenses than the other share classes including the financial advisor “wealth management” shares. This difference can become enormous if the potential investor is eligible for the sales charge breakpoints. Later on in the chapter, we will discuss mutual fund illustrations, also called hypothetical illustrations or just hypotheticals. These are examples of the investment returns that mutual funds have produced in the past. We will run long-term hypotheticals for the same mutual fund at the $500,000 level, one using the traditional Class A shares and paying the front-end load, the other using the Class F shares without sales commissions but paying a typical 1.25% annual wealth management fee for assets under management. The differences in the final resulting amounts over 20 and 25 years are eye-opening.

Some investment professionals may cry foul here. We must acknowledge that we are making a major assumption here. We are assuming that the investor has a very long-term time horizon and does not plan to move their investments around often. If that is

not true, then switching your Class A share investments every one, two, or three years would quickly generate large front-end load fees. We again reiterate that mutual funds should be considered long-term investments.

The same investment professionals might be quick to say, “Well, we don’t use the mutual fund in the example your class used. We use different investments.” If that is the case, then we would need to run hypothetical illustrations of their chosen investments, one with the front-end commissions and one with the annual wealth management fee. Again, if the investor has a long-term perspective and intends to buy and hold their investments, the commission fee structure will normally be less costly than the annual wealth management fee.

The Bottom Line on Fees

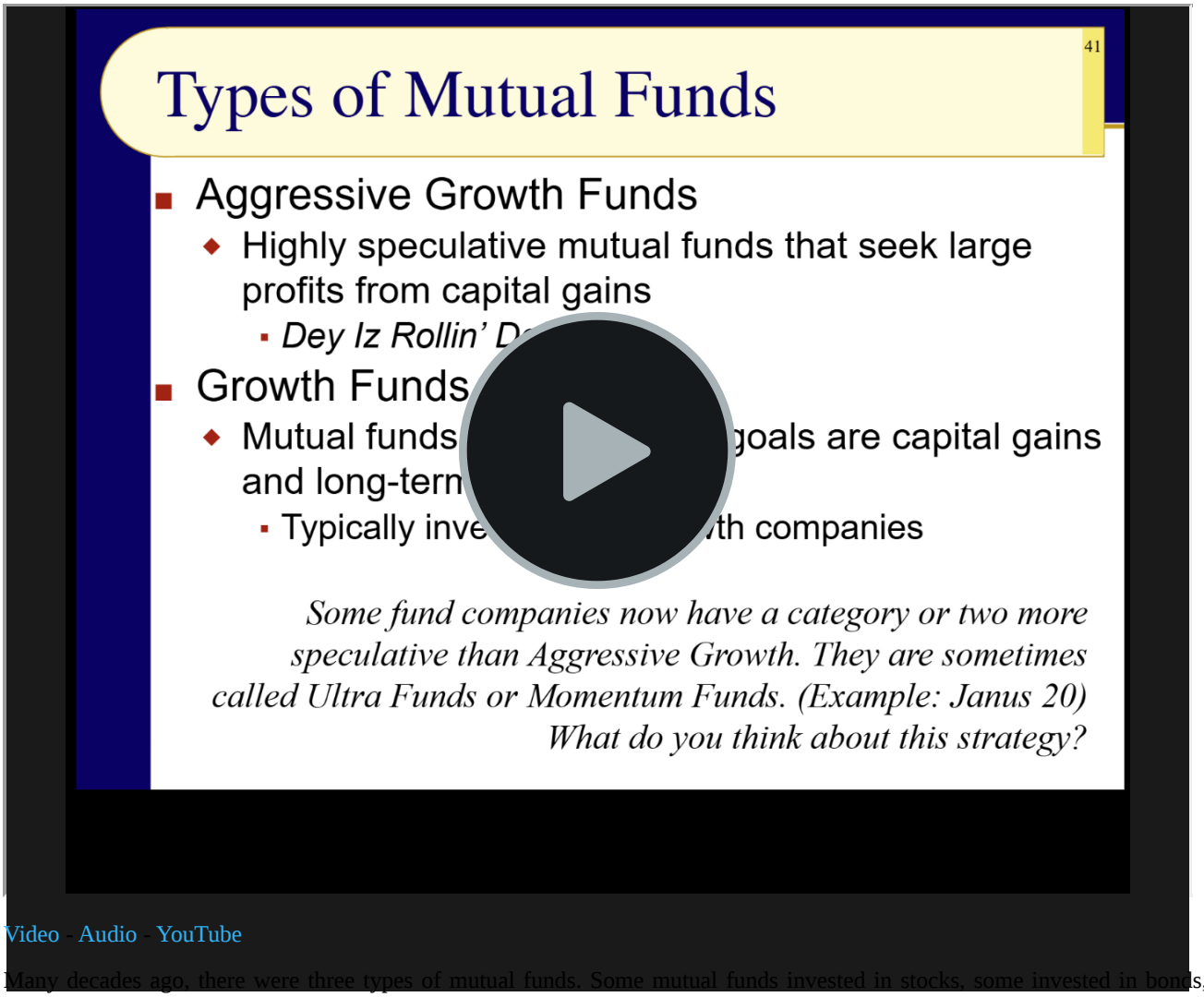
Fees and expenses are very important, but they certainly do not tell you the whole story about a mutual fund. When comparing mutual funds, you must look at many attributes, not the least of which are the rates of return, preferably over long, statistically significant time periods. Many financial advisors will say that a 10-year period is far more than enough to evaluate mutual funds. However, even 10 years might not be a long enough time period to evaluate your potential mutual funds. There are 10-year periods where some types of mutual funds do very well while others languish. Those times are often followed by a subsequent 10-year where the reverse is true. Look for companies with track records of 20, 30, or even 50 or more years of successful investing. We will do this as an assignment in a later chapter. In our next section, we will try our best to do the impossible. We are going to try to get our arms around the mutual fund industry and identify the major categories of mutual funds. Wish us luck. It’s not easy!

This page titled 2.6: Fees, Expenses, and Share Classes, Oh, My! is shared under a CC BY-NC-SA 4.0 license and was authored, remixed, and/or curated by Frank Paiano.

2.7: Categories and Types of Mutual Funds

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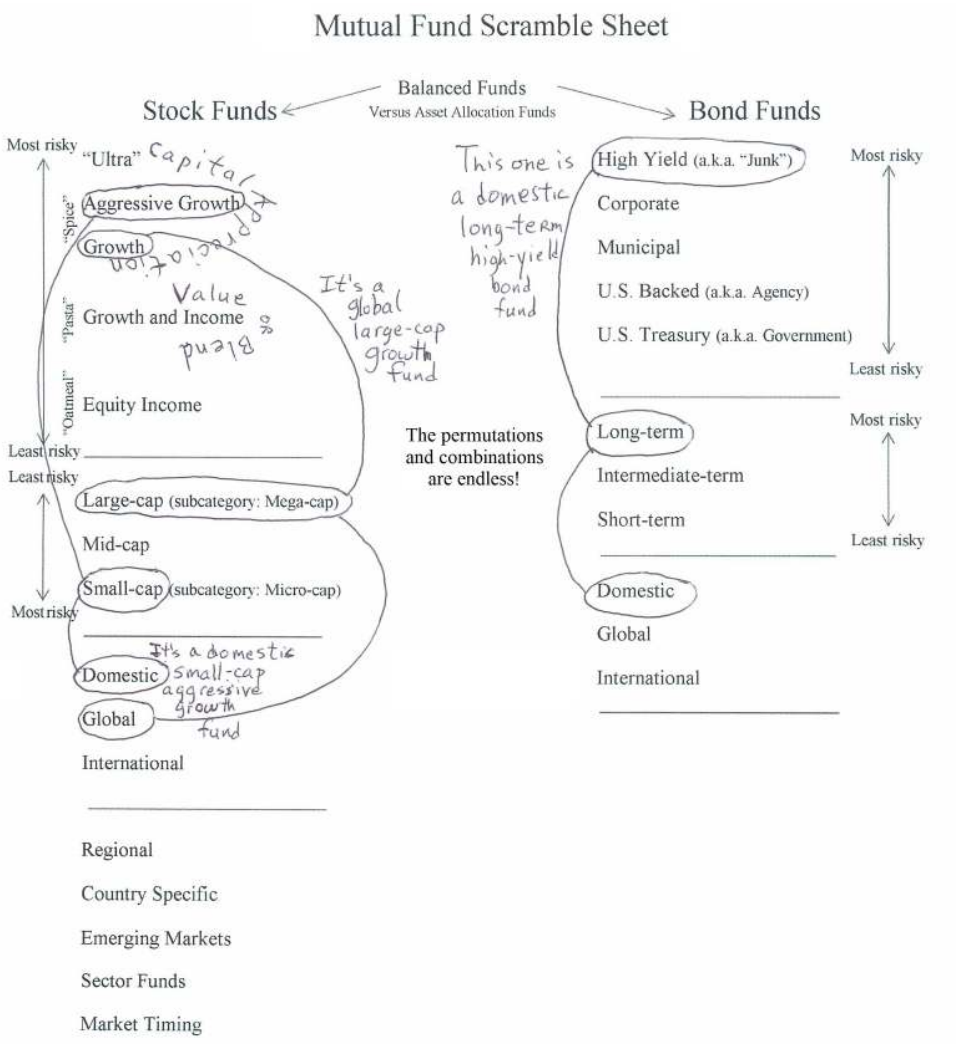


Video - Audio - YouTube

Many decades ago, there were three types of mutual funds. Some mutual funds invested in stocks, some invested in bonds, and some invested in a balance of stocks and bonds. The mutual funds that invested in stocks were called stock mutual funds. The mutual funds that invested in bonds were called bond mutual funds. And the mutual funds that invested in a blend of stocks and bonds were called balanced mutual funds. Life was simple.

Life ain't so simple anymore.

What follows is a catalog of the broadest categories of mutual funds. There are many, many more. Study and learn and memorize these major categories and know that all the others are variations on these major themes. You will want to have the attached Mutual Fund Types Scramble Sheet available to help. We recommend that you print a copy for your reference while reading and watching the presentation.



Stock Mutual Funds

In our discussion of stock mutual funds, we are going to use an analogy that may or may not help you. If it helps, great. If it doesn't help please accept our apologies and just ignore it. We will liken the choices of stock mutual funds to a buffet table and we will start with the riskiest stock mutual funds – the spiciest offerings – and move to the least risky stock mutual funds – the most boring, often ignored, items on the buffet table.

The riskiest stock mutual funds are called aggressive growth funds. These funds seek outsized capital gains by investing primarily in companies that are experiencing the strongest growth in the markets. They also often engage in extensive trading to attempt to offer eye-popping short-term results. Although the funds often report excellent returns in some years, as one would expect, they also are the funds that will fall the fastest and furthest when the markets stumble. These funds are the spicy jalapeño and habanero peppers of the mutual fund world. When we visit the buffet table, do we fill our plates with just the spiciest foods? No, most of us put a little bit of spice on our dishes, maybe 10% or even 20%. So it should be with aggressive growth mutual funds.

However, some adventurous folks may decide to fill their plates with the spiciest mutual fund alternatives. Hence, they must also be prepared for the inevitable downturns. Herein lies the danger with aggressive growth funds. Someone just starting out in the world of investing might take a look at the long-term results of the funds in their employer-sponsored 401k plan at work and say, "Look at this! The Getritch, Quik, and Retyre Aggressive Fund has the highest returns of all the choices. That's what I want!" Does this person understand the risks they are taking? Are they emotionally prepared for the rollercoaster-like plunges that are in their future? Will they pull their money from the fund at the worst possible time, after a 30% or 40% or 50% or more decline?

To make matters worse, there are one or two categories of mutual funds that are riskier than aggressive growth funds. They often have “Ultra” or “Pro” in their names. They use exotic strategies to enhance the positive returns of the fund. As you would expect, those exotic strategies also can enhance the negative returns. Do you remember the Janus 20 fund that only had 20 stocks to decrease the diversification to the least amount allowable by law? Do you also remember that the Janus 20 mutual fund was merged into another mutual fund to bury the evidence of unsatisfactory returns for the investors? Aggressive mutual funds will exhibit severe volatility. And if you remember, volatility is our industry euphemism for, “Aye, I lost a whole lotta’ money!”

Our second category consists of growth mutual funds. Like their aggressive growth siblings, growth mutual funds will primarily invest in companies with growth prospects higher than the economy and most all stocks. Unlike their aggressive growth siblings, they typically do not take the same level of risk as their aggressive growth siblings. However, they will still demonstrate strong volatility. They are still spicy! Prudent, long-term investors would do well to temper their enthusiasm and limit their allocations of growth mutual funds to 20% to 40% of their overall portfolio.

Here is where it starts to get tricky and you will see how complicated categorizing mutual funds can be. A third category of mutual funds consists of capital appreciation funds. Capital appreciation is just a generic term that describes a rise in the value of an investment. Therefore, capital appreciation funds seek long-term growth of capital. They seek to increase the value of your investment. So how does that differ from a growth or aggressive growth fund? The differences are very subtle. Most growth funds and aggressive growth funds will have a provision in their prospectus that states they will invest primarily in growth stocks, usually staying between 80% and 100% invested in these types of companies. Capital appreciation funds can invest in anything they like and anywhere they like. They can invest in slow growing companies or out-of-favor companies if the investment managers deem that there is the opportunity for the value of the company to rise for whatever reason. Another analogy that we may use is that capital appreciation funds paint with a broad brush and can invest in any type of company whereas growth and aggressive growth funds paint with a narrow brush and primarily choose growing companies.

If you refer to the mutual fund scramble sheet, you will see that we show capital appreciation funds wrapping around the aggressive growth and growth funds. They are normally associated with aggressive growth and growth funds but they are technically not the same. In general, they tend to be as risky as growth and aggressive growth funds although not always. The well-known Fidelity Magellan Fund is a capital appreciation fund. It was managed by famed investor Peter Lynch from 1977 to 1990 and returned an astonishing 29% annual yearly return. Mr. Lynch was very good at choosing all types of companies, growth and non-growth, that had capital appreciation potential.

Yet another example of the confusion inherent in the mutual fund industry is the fact that one of the nation’s oldest and largest capital appreciation funds is called The Growth Fund of America. If you accosted the fund managers of The Growth Fund of America and asked them how they account for the apparent inconsistency with regard to the name of their fund, they would counter, “Excuse us. The Growth Fund of America was named long before the category of capital appreciation fund emerged in the industry.” This is common when researching and investing in mutual funds. The industry can’t even decide upon how best to categorize the thousands of funds available.

The next category of stock mutual funds is called growth and income. These funds primarily invest in stocks for growth of capital and income from dividends. Most funds emphasize capital gains while some may emphasize growth of income from dividends. The fund manager may also sometimes own bonds to augment the income when they believe the opportunity for income is lacking from stocks. They are also sometimes referred to as blend funds. We shall see that some in the industry use the term blend fund to designate another category that we will cover later on. To further complicate the categorization of mutual funds, some will refer to growth and income funds as value funds. Referring to the mutual fund scramble sheet, we see that we have wrapped the terms blend and value around the term growth and income. We will discuss the subtle difference and uses of the terms blend and value in the investment world later on.

Where will we find the growth and income funds on our buffet table? These funds are the main entrees. They are the pasta dishes, the meat and potatoes, the lasagna. Most people will have from 50% up to 75% or even 100% of their plate filled with the main entree and so it is with growth and income funds, especially younger adults up into their late 30’s. These funds will exhibit less volatility than their riskier brethren described above. However, they often have returns very close or on par with growth and aggressive growth funds. A well-run growth and income stock mutual fund is an excellent choice for what is sometimes called a core mutual fund for your portfolio. None other than Sir John Templeton, founder of The Templeton Funds (now merged with

FranklinTempleton), believed that if you were to own just one fund during your working years, it should be a global growth and income stock mutual fund.

The last category of stock mutual funds is equity income. Recall that equity is another term for stocks and that income from stocks is in the form of dividends. These are mutual funds that primarily are seeking income from stocks. The investment manager can also use bonds to augment the income. Equity income funds are the least riskiest of stock mutual funds. They primarily invest in slow-growing companies that are paying generous dividends. These funds will not participate in the festivities when the markets are rocketing upward. On the other hand, they will typically hold up very well when there is a market downturn or a crash. They are still stock mutual funds; they will go down in a panic but they will not fall anywhere near as far as the stock funds described above.

Would it not be more descriptive to use the term stock dividends funds? Once again, we apologize on behalf of our industry. We often use very confusing, vague, and obtuse terms to describe an investment in place of more common-sense descriptions. This is why we need you, Dear Students, to become the Investment Gurus for your friends, family, and colleagues. They need your help and guidance! Stick with us, Rising Investment Gurus!

In our buffet analogy, equity income funds are the oatmeal, the broccoli, the lima beans, the stuff your mother always told you to eat when you were a child. Equity income funds are not exciting but they are very good for us, especially as we enter our late 40's, our 50's, and beyond. A 30% decline in an equity income fund is much easier to stomach for middle-aged investors than a 70% decline in an aggressive growth mutual fund. This is exactly what happened during the late 1990's Internet mania when equity income funds lagged the market badly and were derided as stodgy, boring, out-of-touch investments that invested in "Old Economy" companies. In the subsequent Internet meltdown bear market of 2000 to 2002, equity income funds did very well, some even went up as many aggressive growth funds lost 70%, 80%, and even 90% of their value. And in 2022, many equity income funds lost less than many bond funds, no small feat!

We have gone from the most riskiest to the least riskiest stock mutual funds. It is now time to add two other types of categories, market capitalization and domesticity. Market capitalization refers to the size of the companies. We will discuss this concept in detail in our next chapter. There are three broad categories of market capitalization, usually referred to as large-cap, mid-cap, and small-cap. They refer to large companies, mid-sized companies, and small companies. In general, large company stock mutual funds exhibit the least risk while small company stock mutual funds exhibit the most risk. Of course, mid-sized company mutual funds find themselves somewhere in between but are normally closer to their small company cousins with regard to risk.

The domesticity of a mutual fund refers to where the stock investments are based. The three broad categories are domestic, global, and international, also called overseas or foreign. Recall that the term domestic refers to investments that are based in the United States, global refers to investments based anywhere around the world, and international describes investments based outside the United States. Decades ago, the conventional wisdom was that domestic funds were the least riskiest, international funds were the most riskiest, and global funds were somewhere in between. Also recall from our discussion in the first chapter that these distinctions are not as important and pronounced as they once were. The world is indeed a very small place economically these days.

What the industry did is overlay these two types of categories on top of the first type of category. Refer to the mutual fund scramble sheet. In their efforts to be more competitive, a mutual fund company would offer a global, large-cap growth fund or a domestic, small-cap aggressive growth fund. Pick one from column A, one from column B, and one from column C. And of course, if one mutual fund company does it, many others believe they need to follow suit. Do you see how the industry wound up with approximately 12,000 different mutual funds? Ask your statistics professor to help you compute how many permutations there are for all the possible combinations.

Wait! There is more! There are regional stock mutual funds that invest in a certain region of the world such as Latin America, the Nordic countries, Canada, Japan, and the Far East. There are emerging market stock mutual funds that invest in developing countries such as India, Brazil, the Philippines, Russia, and China. There used to be a mutual fund that invested only in companies based in California but that fund seems to have vanished. Upon analysis, this actually was not such an eccentric idea. California by itself ranks as the fifth largest world economy, ahead of India and behind Germany. (If anyone can uncover what happened to this fund, please contact us.)

There are also stock mutual funds that invest in companies based in just a certain sector of the economy such as energy or real estate or wireless communications. These are called sector funds. Both regional mutual funds and sector funds are an attempt to enhance returns by concentrating the portfolio of the investor. Some investors may have some intimate knowledge of the region or the sector of the economy. If that is so, then, just like the aggressive growth funds, placing 10% or maybe even up to 20% of your portfolio may be a decent choice providing you are aware of the risks. However, we investors use mutual funds to diversify, not concentrate, our portfolios. Regional and sector funds should generally be avoided by prudent, long-term oriented investors.

One last category of stock mutual funds consists of mutual funds that use market timing as their primary strategy. We will discuss market timing as a strategy in our next chapter on stocks. Suffice to say that only speculators and traders should ever consider market timing. Prudent, long-term oriented investors should never mention market timing in polite company.

We have spanned the world of stock mutual funds. Study these categories thoroughly. It is time to turn our attention to bond mutual funds.

Bond Mutual Funds

Bond mutual funds primarily invest in fixed-income bond securities. Recall that bonds are essentially loans to corporations, state and local municipalities, and the Federal government. Bond investors lend their money to the bond issuer, the corporation, the state or local municipality, or the Federal government. In return, the bond issuer agrees to pay interest to the bond investor and eventually repay the principal. Bonds, and therefore bond mutual funds, are far less risky than stock funds. We will see later on that bonds often move in the opposite direction of stocks. When stocks are experiencing a market downturn, bonds often move up, or at least keep their value. Hence, many investors use bond mutual funds for stability and preservation of capital. In the following discussion, as we did with the stock mutual funds, we will start with the riskiest bond mutual funds and then move to the least riskiest.

The riskiest bond mutual funds are high-yield bond funds. This is the polite name. Usually these funds are referred to as “junk” bond funds. High-yield bonds are also known as junk bonds, speculative bonds, distressed bonds, and non-investment grade bonds. They pay much higher rates of interest. By now, you obviously understand why. These bonds are issued by entities that have low credit standing and, in many cases, are in danger of default. Default is another polite term we use in the industry for an individual or entity who cannot make good on the financial promises they made. High-yield bond funds typically invest in the bonds of corporations that are in distress but there are also high-yield municipal bond funds that invest in state and local governments and entities that are also in distress.

High-yield “junk” bond mutual funds also have a characteristic unlike other bond funds; they tend to follow the stock market up and down. This is counter to most other bond funds. However, when investigated further, it makes sense. Often, the stock market falls in response to falling economic conditions. When economic conditions are falling, companies that are in distress are in far more danger of defaulting. Therefore, the high-yield “junk” bonds that populate the high-yield “junk” bond mutual funds become more likely to default and the high-yield “junk” bond mutual funds suffer along with the stock market and stock mutual funds. When economic conditions improve, the stocks and the stock market typically rebound and so do the high-yield “junk” bonds. We say that high-yield “junk” bond mutual funds are positively correlated with the stock market and the stock mutual funds. We will discuss correlation in more detail later on in our journey together.

The next bond fund category consists of corporate bond mutual funds. Corporations borrow money for many of the same reasons that you and I borrow money; the difference is just that the numbers are orders of magnitude greater. Most individuals repay their debts and that is true of most corporations. With the exception of the high-yield “junk” bond funds described above, most corporate bond mutual funds have a long track record of earning interest income and returning principal repayments to bond fund investors.

There is a caveat that needs to be addressed here. Since the Global Financial Crisis of 2008, interest rates for many bonds have fallen to levels not seen since the Great Depression. Bond mutual fund investors were accustomed to 5% or 6% or higher annual returns over decades. They became unhappy with the 2% or 3% or lower returns that their corporate bond funds were now returning. In response, many corporate bond mutual fund money managers began to incorporate corporate bonds of lower credit quality, including some that would be categorized as high-yield, distressed “junk” bonds. In the industry, this is referred to as stretching for yield. This led Morningstar, the mutual fund research and reporting company, to create separate bond funds into two new categories, core and core-plus. The term core-plus is misleading as it might tempt potential bond mutual fund investors to

believe that core-plus funds are somehow higher quality or better quality than core funds. In reality, the exact opposite is the case. The core-plus funds are the funds incorporating higher yield but lower quality bonds into their portfolios.

Sliding down the risk versus reward spectrum to our next category, we find municipal bond mutual funds. These funds invest in the bonds issued by state and local municipalities, such as states, cities, counties, school districts, bridge and water authorities, and other local governmental entities. In general, these governments and institutions will suffer default far fewer times than corporations. Some municipal bond mutual funds will even invest in municipal bonds that are insured to further reduce the risk of default.

One of the major benefits of investing in municipal bond mutual funds is that interest from municipal bonds is tax-exempt at the Federal level. This makes municipal bonds and municipal bond mutual funds very popular with high net worth investors in higher tax brackets. In addition, if an investor chooses a municipal bond fund that invests in municipal bonds domiciled in their state of residence, the interest from the municipal bond will also be tax-exempt at the state and local level. Hence, state-specific municipal bond funds are often called double tax-exempt. Because of this tax advantage, it is difficult to compare the returns from municipal bond funds to other bond funds. Later on, we will learn how to compute the taxable-equivalent yield of municipal bonds and municipal bond funds. The taxable-equivalent yield will allow us to compare municipal bond funds with other bond funds.

The next two categories consist of bonds that are either issued by the United States Treasury or an organization that is somehow backed by or associated with the United States government. Over the decades, the United States government chartered various private institutions such as Fannie Mae and Freddie Mac and other such entities. Their purposes were to issue bonds to raise funds for such worthy goals as increased home ownership and offering student loans. The representatives in the United States Legislative branch of government, the Congress, and the Executive branch of government, the White House, always maintained that these institutions were separate from the United States government. No way would the United States taxpayer ever be asked to bail them out of default. Over the years, the investment community never believed these assertions. The bonds issued by the organizations were normally considered to be as safe as those from the United States Treasury.

In the Global Financial Crisis of 2008, the investment community's belief was borne out. When Fannie Mae and Freddie Mac and others were in danger of default, none other than the United States Treasury came to the rescue. As of this writing, these companies are still under the protection of the United States Treasury. Thankfully, they have come back from the brink of disaster and now add billions of dollars of earnings to the Treasury each year. Although there is often much talk about how important it is for the government to extricate itself from these institutions, there is very little agreement about how it should be done. Consult your Political Science professor for more discussion of this vexing situation.

The last category consists of United States Treasury bond mutual funds. They are also often referred to as government bond funds. These carry the least amount of risk of default. The United States Treasury has never defaulted and it is safe to say that it will never default in our lifetimes. Over the past few decades, the issue of raising the debt ceiling has come into the news. There have been times when rabble-rousing politicians have threatened default by not allowing the debt ceiling to be raised. This is pure political theater. The United States government will pay its debts. In fact, there are constitutional experts who argue that the debt ceiling is a ruse and can be ignored by the Treasury. The 14th Amendment of the Constitution states, "the validity of the public debt of the United States, authorized by law...shall not be questioned." This is yet another delicate matter for your long-suffering Political Science professor.

One often overlooked aspect of Treasury bond mutual funds is that the interest from Treasury bonds is exempt from state and local taxes. Hence, the interest from Treasury bond funds is also exempt from state and local taxes. This is an important benefit for those investors in higher tax states such as California and New York.

As we did with stock mutual funds, we will overlay two additional types of categories, the domesticity and the maturity of the bond funds. The categories of domesticity are identical to the stock mutual fund categories, namely domestic, global, and international, as is the risk versus reward profile. The second type of category refers to the bond maturity within the bond mutual fund. When will the bonds repay their principal? There are three broad categories, long-term, intermediate-term, and short-term. Long-term bond funds typically have bonds that will mature in 7, 10, 20, and up to 30 years. Intermediate-term bond funds favor bonds that mature in approximately 3 to 5 years. And short-term bond funds will populate their funds with bonds maturity in 1 to 2 to 3 years.

With regard to the risk versus reward profiles, one might be tempted to liken these categories to the large-cap, mid-cap, and small-cap categories of stock mutual funds. Large and long both start with the letter L, small and short both start with the letter S, and the

terms mid and intermediate are very similar, right? The reality is that they are exactly the opposite of one another. Long-term bond funds are the riskiest and offer the greatest returns, short-term bond funds are the least riskiest and offer the least returns, and intermediate-term bond funds fall somewhere in between the two. Upon further investigation, this scenario fits with the facts. With regard to lending your money to others, the longer the time frame, the more opportunities there are for adverse events. Hence, investors would require a higher rate of return. The opposite is true for shorter time frames. In fact, short-term bond funds start to resemble short-term securities such as money market mutual funds as the maturities get closer and closer to short-term time horizons such as three, six, or nine months.

As they did in the stock mutual fund world, the mutual fund industry is guilty of the same fragmentation in the bond mutual fund world. According to the industry, more options is obviously better and so we experienced the same explosion of permutations and combinations of bond mutual funds as we saw with stock mutual funds. Referring again to the mutual fund scramble sheet, we randomly chose one category from column A, one from column B, and one from column C and, lo and behold, we brought forth a mythical domestic, long-term, high-yield bond fund, just one of dozens and dozens of variations. The mutual fund industry did likewise, but their creations are factual funds that contribute to the further bewilderment that is choosing a mutual fund.

Balanced Funds

The next category of mutual funds is balanced funds. Balanced funds traditionally offer a balance of stocks and bonds and are one of the original categories of mutual funds. Indeed, the nation's oldest balanced fund has been around since 1929 so the idea of blending stocks and bonds together is not new. Since we said that we would be moving from the most riskiest to the least riskiest, one might be tempted to exclaim, "Wait a minute! If you blend stocks and bonds together, wouldn't the resulting investment be less risky than stocks but more risky than bonds?" The answer is no. Balanced funds often exhibit less risk than either stock mutual funds or bond mutual funds. The reason has to do with the history of stock and bond price movements. Although every market downturn is different, in the past, often when the stock market fell, the bond market rose or at least stayed relatively stable. We will discuss this phenomenon in more detail much later on. It has to do with the aforementioned negative correlation of stock and bond prices. Note: In 2022, both stocks and bonds fell significantly in tandem. The last year this happened was 1969. It is a rare occurrence.

Typically, balanced funds will have an approximate allocation of 60% stocks and 40% bonds. The investment advisor can adjust the allocation as conditions in the economy and the stock and bond markets warrant, but in general, responsible money managers strive to stay balanced. One of the nation's oldest and largest balanced funds states in its prospectus that the fund is "managed as the complete U. S. investment program of a prudent investor." They can never be more than 75% stocks, 25% bonds or less than 50% stocks, 50% bonds.

Balanced funds are not immune to the confusion and puzzlement endemic in the mutual fund industry. A category of mutual fund that is closely associated with balanced funds is asset allocation funds. Asset allocation funds spread their investors' money across stocks, bonds, and money market securities. They are similar to balanced funds, however, the investment advisor often more diligently tries to "fine-tune" the allocation as market conditions change. Whereas a balanced fund usually stays around 60% stocks and 40% bonds, an asset allocation fund might try to move money into cash when they thought the stock and bond markets might fall. Or they might move all the assets into stocks if they believed the stock market was ready to surge ahead. Critics at times accuse some asset allocation fund managers of being stealth market timers. For all their hype, the returns of many asset allocation funds are very close to balanced funds. Some asset allocation funds trail balanced funds considerably because they "timed the market" badly.

Adding to the befuddlement with regard to balanced funds comes from the tendency of some in the industry to also describe balanced funds as blend funds. Recall that the term blend funds was also used to describe growth and income stock mutual funds. However, even with all the accompanying unsettling distractions, well-managed balanced funds are a prudent choice for investors, especially for those who are nervous about investing in the stock market alone. They also become excellent options for those in retirement who are in good health with statistically many years of life ahead of them. Balanced funds allow us to eat reasonably well and sleep reasonably well.

Money Market Mutual Funds

The mutual fund category with the least amount of risk is money market mutual funds. We covered money market mutual funds, usually just referred to as money markets, in detail in chapter 1 in the section on short-term securities. To review, although money market mutual funds are not guaranteed by an entity of the Federal government, they are very secure. And we now understand that low-risk investments are accompanied by low returns. Currently, at the time of this writing, money market mutual funds are paying close to zero percent interest. Money market mutual funds are a place to park your money in the short term.

We have run through the major categories of mutual funds, from the riskiest to the least risky. It is now time to turn our attention to a few other categories of interest.

Mutual Funds of Mutual Funds

It was inevitable. You know it had to happen. There are now mutual funds that invest in other mutual funds. Some might throw up their hands in frustration and exclaim that the industry has simply gone mad. However, upon further investigation, we find that there are legitimate reasons for these so-called funds of funds. Many employers offer employer-sponsored retirement plans such as 401k or 403b plans to their employees. In an effort to promote their employees to save for their retirement, employers would often automatically place 3% or 4% or 5% of the employees' salaries into the plan. The employee always has the option to "opt-out" of the plan but empirical evidence has shown that employees tend to allow inertia to take its course and the retirement savings continue with interruption. There was, however, a serious problem with this system that concerned the choice of investments.

Whenever an investment choice is recommended, whether explicitly or implicitly, if the investor is not happy with the choice, there is always the possibility that the investor may sue the individual or organization that made the recommendation. The investor may claim that the investment was not suitable to their circumstances, especially if the investor experienced unsatisfactory results. To guard themselves from these legal actions, employers would typically automatically place the savings into short-term investments such as money market mutual funds. These are very safe but also very low yielding. For someone just starting out in their careers, short-term investments are certainly not the most desirable long-term choices. Something needed to be done.

The Pension Protection Act of 2006 gave employers legal protection from lawsuits if the employer used an appropriate fund of funds for their employees. These funds are often called target-date mutual funds. They also go by the names target-retirement or lifecycle. The mutual fund manager then appends a year to the name. This year corresponds roughly to the approximate year that an employee plans to retire. For example, the Federal employees' Thrift Savings Plan offers their so-called Lifecycle funds from Lifecycle 2025, Lifecycle 2030, on up to Lifecycle 2065. The Thrift Savings Plan uses the employee's year of birth and chooses the appropriate Lifecycle fund. For the underlying investments in the funds, the manager chooses a mixture of other mutual funds that are appropriate for the year that the employee plans to retire. When the year of retirement is in the distant future, the investments are more growth oriented. As the year of retirement approaches, the underlying investments become more and more risk averse. Of course, the employee has full control over their contributions and the investments in their account but as mentioned, often employees simply allow the system to make the choices for them. The Thrift Saving Plan is the subject of one of your chapter 2 assignments. Enjoy!

Funds of funds are also popular for investors saving for a child's education with names like College 2030 and College 2035. They are often paired with tax-qualified educational savings accounts such as 529 plans. The tax advantages of these plans are often skewed toward high net worth and high income families. For many others, a Roth IRA or other account might be a better alternative.

Specialty "Boutique" Funds

The mutual funds categories above constitute the majority of mutual funds available and hold the vast majority of investors' assets. However, there are numerous specialty funds available. They are sometimes referred to as "boutique" mutual funds. The competition in the mutual fund industry is ferocious and new companies must do their best to differentiate themselves from other funds to attract investors. It is not hard to argue that many of these attempts have resulted in outlandish and laughable results. There was the StockCar Stocks fund that invested in companies that sponsored NASCAR races. There was the Pauze Tombstone mutual fund that invested in cemeteries, mortuaries, and casket makers. The investment manager of The Timothy Funds, "avoids investing in companies that are involved in practices contrary to Judeo-Christian principles," and that it tries to, "recapture traditional

American values." Not to be outdone, The Amana Funds invest with Islamic principles foremost in mind which include avoiding interest, gambling, pornography, liquor, and pork. But the silliest of all attempts must certainly be The Chicken Little Growth Fund for investors who were afraid that the sky is falling. Fact is always stranger than fiction, Dear Readers.

Obviously, such gimmicks and grandstanding should be met with more than a skeptical eye by prudent, long-term oriented investors. However, there have been some specialty funds that may deserve attention. Some investors want to invest in more than just stocks and bonds and there are mutual funds that will allow them to do so. Some sector mutual funds invest in real estate, typically through Real Estate Investment Trusts (REITs). Also worthy of attention for a select group of aggressive investors are commodities funds that invest in hard assets such as foodstuffs and basic materials. Again, the prudent, long-term oriented investor would only choose this type of fund as a small percentage of their overall investment portfolio.

ESG - Environmental, Social, and Governance Funds

Every decade or so, a new theme emerges in investing. The typical response in the mutual fund industry is to create brand new funds that have the theme somewhere in the name of the mutual fund. So it is with the new theme of ESG – Environmental, Social, and Governance. The belief is that companies that adhere to these three attributes will outpace all other companies going into the future. Since 2019, the inflows into these funds have been substantial. It is in the order of tens of billions of dollars. And in the mutual fund world, nothing succeeds like success. Depending upon the source, there are anywhere from approximately 400 to over 700 mutual funds touting themselves as ESG funds as of mid-2021. They have names such as Social Index Fund, USA ESG Select ETF, Green Alpha Fund, and Sustainable Future Fund 2025.

ESG is not a fad. These qualities are important and investors ignore them at their peril. The problem is that ESG is complex and multi-dimensional. Trying to marry climate change with human rights with executive compensation and a whole other host of issues and characteristics can make for some strange outcomes. There are two third-party analysis groups that monitor the ESG world and give grades to companies based on their research, Morgan Stanley Capital International (MSCI) and Sustainalytics. Sustainalytics is owned by Morningstar, the popular mutual fund research company that we will use in our chapter assignments. For an example of the contradictory outcomes, consider that MSCI gives Dollar General a high-risk rating while Sustainalytics gives Dollar General a low-risk rating. MSCI then gives 3M a low-risk rating while Sustainalytics gives 3M a high-risk rating. Who is right? Who do you trust?

ESG qualities need to be examined in the context of all the other components, aspects, and properties of a potential investment. The well-run mutual funds with decades of successful results already have incorporated ESG into their day-to-day research operations. These companies do not need to create new mutual funds simply to sop up inflows from uninformed investors who just saw on the Internet that ESG is the Next Big Thing and they had better get in now while the gettin' is good. If history is any gauge, many of these new funds will have mediocre – or worse – returns and then will have their names changed or be merged into other funds. Burying the evidence in the mutual fund industry is a fad that never goes out of style.

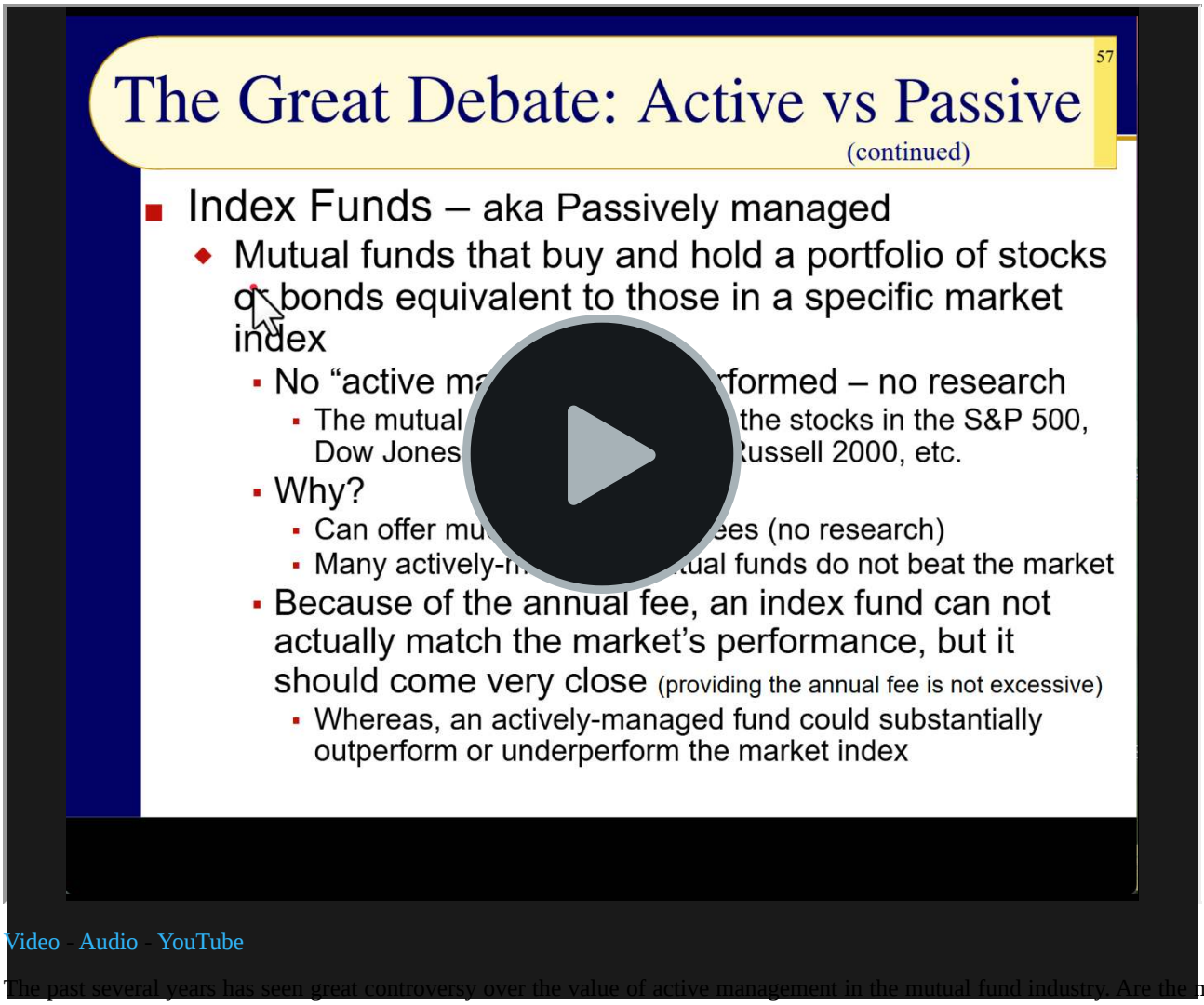
Going back further into the history of mutual funds, we find that ESG was predated by the emergence of Socially Responsible Funds. Some Socially Responsible Funds go back many decades. These first took the form of mutual funds that would not invest in companies that produced alcohol or tobacco. Then starting in the 1970's and beyond, Socially Responsible Funds began to avoid companies that polluted, built weapons systems or nuclear power plants, destroyed the rainforests, exploited their employees, etc. It was surprising that there were any companies left to invest in! Silliness aside, many Socially Responsible Funds did quite well for their investors and led to the current ESG movement. Possibly as a backlash to socially responsible funds and their perceived political overtones, there is a mutual fund called The Vice Fund. Yep! You guessed it! They invest in tobacco and alcohol and all the other corporate nasties you can think of such as gambling and military defense firms. Who said the investment world was dry and uninteresting?

We have covered the broadest mutual fund categories. There are many, many more. Luckily, most of the other categories are sub-categories or sub-sub categories of the broad categories discussed above. Memorize the categories above that we have covered, using the Mutual Fund Types Scramble Sheet as your study guide. In the meantime, peruse the following list of the mutual fund categories as defined by Morningstar as of January 2024. No, Dear Students, no one will ever ask you to remember them all.

U.S. Stock	Sector Stock	International Stock	Balanced
Large Value	Communications	Foreign Large Value	Convertibles
Large Blend	Consumer Cyclical	Foreign Large Blend	Conservative Allocation
Large Growth	Consumer Defensive	Foreign Large Growth	Moderate Allocation
Mid-Cap Value	Equity Energy	Foreign Small/Mid Value	Aggressive Allocation
Mid-Cap Blend	Equity Precious Metals	Foreign Small/Mid Blend	Target Date 2000-2010
Mid-Cap Growth	Financial	Foreign Small/Mid Growth	Target Date 2011-2015
Small Value	Global Real Estate	World Stock	Target Date 2016-2020
Small Blend	Health	Diversified Emerging Markets	Target Date 2021-2025
Small Growth	Industrials	Diversified Pacific/Asia	Target Date 2026-2030
Leveraged Net Long	Natural Resources	Europe Stock	Target Date 2031-2035
	Real Estate	Latin America Stock	Target Date 2036-2040
	Technology	Pacific/Asia ex. Japan Stock	Target Date 2041-2045
	Utilities	China Region	Target Date 2046-2050
	Miscellaneous Sector	India Equity	Target Date 2051+
		Japan Stock	Retirement Income
Alternative	**Commodities**	**Bonds**	**Municipal Bond**
Bear Market	Commodities Agriculture	Long Government	Muni National Long
Currency	Commodities Broad Basket	Intermediate Government	Muni National Intermediate
Long/Short Equity	Commodities Energy	Short Government	Muni National Short
Market Neutral	Commodities Industrial Metals	Long-Term Bond	High-Yield Muni
Multialternative	Commodities Miscellaneous	Intermediate-Term Bond	Muni Single State Long
Managed Futures	Commodities Precious Metals	Short-Term Bond	Muni Single State Intermediate
Volatility		Ultrashort Bond	Muni Single State Short
Trading-Leveraged Commodities		Bank Loan	Muni California Long
Trading-Inverse Commodities		High-Yield Bond	Muni California Intermediate/Short
Trading-Leveraged Debt		Multisector Bond	Muni Florida
Trading-Inverse Debt		World Bond	Muni Massachusetts
Trading-Leveraged Equity		Emerging-Markets Bond	Muni Minnesota
Trading-Inverse Equity		Nontraditional Bond	Muni New Jersey
Trading-Miscellaneous		Inflation-Protected Bond	Muni New York Long
	Money Market		Muni New York Intermediate/Short
	Taxable Money Market		Muni Ohio
	Tax-Free Money Market		Muni Pennsylvania

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2.8: The Great Debate – Active Management versus Passive Management



Video - Audio - YouTube

The past several years has seen great controversy over the value of active management in the mutual fund industry. Are the mutual fund investment managers who research, identify, choose, and monitor the investments in their mutual funds actually worth the high salaries they are paid? Should investors instead solely concentrate on low-cost, passively managed index mutual funds? We now explore the debate.

The History of Passive Management

The history of passive investment management, also known as index investing, goes back to the late 1960's. Before that time, all mutual funds were actively managed. The mutual fund managers researched, identified, chose, and monitored the investments in the mutual fund portfolio. Some individuals in the industry and some in the world of academia began to question the value of the average mutual fund manager. They conducted studies that compared the average mutual fund manager with a randomly selected portfolio. They "had a monkey throw darts at a dartboard" and chose those stocks. They then compared this random portfolio to the portfolios of mutual funds. The monkeys won! The average mutual fund portfolio manager did not beat the random portfolio.

Index Funds

In the early 1970's, some companies decided to put this research into practice. They experimented with setting aside a percentage of their portfolio for non-active management. They created funds that were purely passively managed which were not available to the general public. Instead of a random group of stocks, though, they choose a popular stock index. A stock index is simply a list of stocks. We will cover stock indexes in detail in our next chapter. One of the most popular indexes is the Standard & Poor's 500,

also known as the S&P 500. In 1975, John Bogle of The Vanguard Group started the first retail index mutual fund available to the public, the Vanguard Index 500. The success of this mutual fund and their other index funds has made The Vanguard Group the largest mutual fund company in the world. Many mutual fund companies now offer index funds.

As discussed in the section on fees, index funds generally have very low operating expenses. There is a simple reason for this: They do no research. You or I could manage an index fund. All you need to do is look at the list of stocks or bonds in the index. You then purchase the items on that list and you avoid any choices that are not on the list. When an item is added to the list, you buy it. When an item is removed from the list, you sell it.

As we warned back in the section on fees, the would-be index fund investor must be vigilant. There are many index funds that have high fees. Many are furtively slipped into employer-sponsored retirement plans such as 401k's, especially by insurance companies. Be on your guard! You are the last line of defense for your fellow colleagues.

Exchange-Traded Funds (ETFs)

The success of index funds led to the emergence of Exchange-Traded Funds (ETFs). The first ETFs were passively managed and like their index fund cousins, had very low operating expenses. To review, ETFs are bought and sold on the open market so you need a brokerage account to invest in them and you incur brokerage commissions. However, some enterprising mutual fund companies started their own brokerage firms and allow investors to buy and sell ETFs without commissions. Also, several brokerage firms now offer no-commission trades to their clients. (We will discuss how the clients are being charged in our next chapter. No-commission transactions does not mean free transactions.)

The subsequent success of ETFs has led the industry to create ETFs that are actively managed. Since these newer ETFs are actively managed, they will have higher annual operating expenses since doing the research necessary to actively manage a portfolio is costly. The industry is nothing if not complex. You are going to have to explain to your family, friends, and colleagues that not all ETFs are index funds.

The Financial Media Orthodoxy versus Not So Common-Sense Heresy

The financial media has made up its collective mind. The incessant drumbeat is that actively managed funds can't beat passively managed funds. The drumbeat goes something like this: "You are better off investing in a passively managed portfolio of index funds or ETFs. And, oh, by the way, buy my book or, better yet, sign up for my monthly newsletter that keeps you abreast of the best index funds and ETFs. It's only $50 per month. A bargain!" Do the talking heads in the financial media have a point, though? Are passively managed index funds and ETFs better than actively managed funds?

It is true. The average actively managed mutual fund does not beat its respective index. There are a variety of reasons why this may be so. One of the most important reasons is that the average mutual fund has an expense ratio of 1% whereas an index has no expense ratio; it is just a list of stocks or bonds. Therefore, the mutual fund must beat the index by 1% just to match the return of the index! Another important factor has been the culture and competitiveness of the investment industry. New mutual funds starting out in their careers knew very well that they must produce quickly or they wouldn't be around for long, typically 1½ to 2½ years. This led many to take on more risk than would normally be appropriate. The managers knew that if their choices did well, they would get to keep their jobs and be showered with love and attention and a whole lot of money. Of course, if their choices didn't produce good results, oh, well, they weren't going to be around for very long, anyway. Luckily, much of the mutual fund industry has seen the error of their ways and adjusted accordingly. New mutual fund managers now normally get more time to prove their worth. Dear Students, no investment strategy is perfect.

The same can be said to be true for passive management, though. No investment strategy is perfect. What are the disadvantages of passive management? Many decades ago, Benjamin Graham, the author of *The Intelligent Investor*, warned against any investment strategy that removed human judgment from the investment process. Passive management does just that. Passive management removes the ability of a mutual fund manager to make a judgment regarding the value of an investment. Passive fund proponents might argue that this is precisely the point. That is the beauty of an index fund. If there is no judgment, there can be no emotion attached to the choices made.

However, active fund proponents would counter by pointing out that there are instances when a company's stock, for example, has risen to the point where it is absurdly valued. In this situation, the passive fund manager is not able to sell. Instead, the rise in the

price of the stock raises the value of the stock in the index. Hence, the passive fund manager must buy more of the stock. This raises the price even further in what essentially becomes a feedback mechanism. The higher the price of the stock, the more the index fund managers must buy the stock. The more stock the index fund managers buy, the more the price of the stock rises. The opposite is true when the price of a stock has been beaten down. The index fund manager must sell the company as it is now worth less within the index. Whereas the active manager has the ability to take advantage of an attractive price for a stock that they might want to have in their portfolio. In the presentation, we discuss this phenomenon and two popular indexes and what happened when the indexes were skewed by market euphoria. We will return to them later on in the semester after we have discussed the particular indexes and the statistics that accompany them.

Ultimately, though, the fundamental flaw in the argument of the passive management proponents is their use of the word *average*. As Don Phillips, the founder of Morningstar, said, "The real-world average of almost anything is an ugly thing." Yes, the average fund does not beat their respective index but there are many mutual funds that are above average. There are many mutual funds that have beaten their respective indexes and have done so over many decades. Here is a quote from a retired mutual fund manager with over 35 years of experience at the time:

> *"As with any human endeavor, whether it is athletic competition, the performing arts or technological innovation, some people clearly perform at a higher-than-average level." – Mark Denning, mutual fund manager with over 35 years of investment experience*

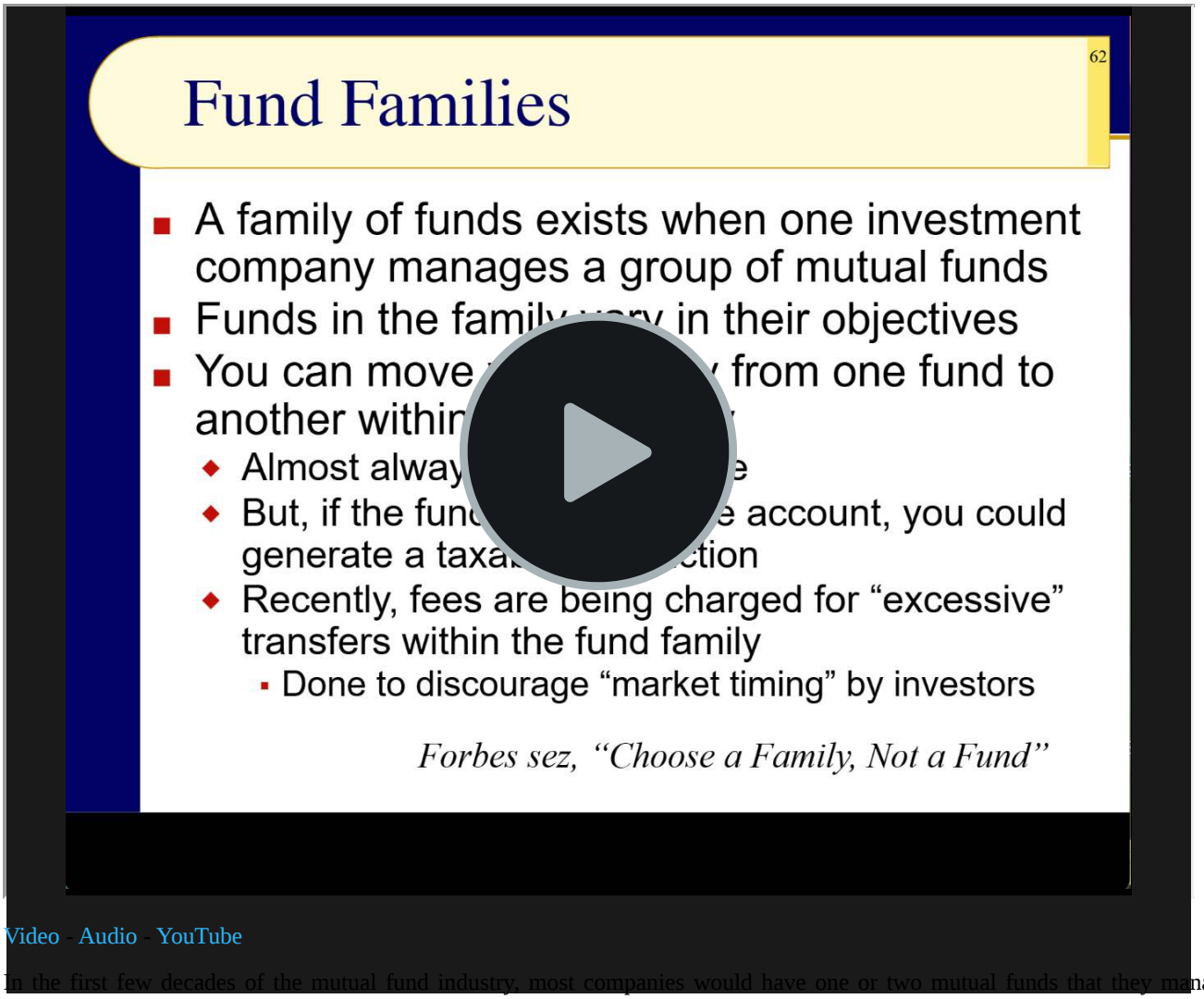
Many actively managed funds do beat their respective indexes over time. Prudent, long-term oriented investors seek mutual funds that have consistently beaten their respective indexes over decades, in good times and bad. We will return to this discussion later on in our journey together. For now, we will end this discussion of the controversy over active versus passive management with another quote from Don Phillips:

> *"The active-versus-passive debate has been greatly overplayed to the detriment of many fine, actively managed fund shops and to intelligent investment discourse." – Don Phillips, Founder and Managing Director of Morningstar*

Let us relate one last note about the active versus passive debate. Many passive fund advocates can become quite agitated and angry if you attempt to discuss both sides of the debate. Mr. Phillips hints at this in his mention of "intelligent investment discourse." When you mention some of the mutual fund families that have done well over decades, you may even be accused of being an industry shill and peddling for the companies. Once again, we ask, "Who said investing was dry and uninteresting?"

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2.9: Mutual Fund Families and Fund Services



Video - Audio - YouTube

In the first few decades of the mutual fund industry, most companies would have one or two mutual funds that they managed. Competition pushed companies in the industry to offer more and more mutual fund choices and to support more and better customer services. This led to the growth of what are now referred to as mutual fund families.

Mutual Fund Families

A family of funds exists when one investment company manages a group of mutual funds. The funds in the family vary in their objectives. You can move your money from one fund to another within a fund family, almost always with no charge. This is especially important if you purchased a load fund. If you decided to move your money to another fund, you would not be charged the sales load again. However, there may be an exception to this rule. Some mutual fund companies will charge an "excessive transfer" fee to discourage trading of mutual funds. This fee only applies to open-end mutual funds. It does not apply to closed-end mutual funds or ETFs since they are bought and sold on the exchanges through a brokerage account. Mutual funds are meant to be long-term investments. Short-term trading of mutual funds is highly discouraged.

Although the fund family will not charge you to move your money into another fund, be aware that the IRS regulations say that you have generated a taxable transaction. You will need to declare either a loss or a gain on the sale of your previous mutual fund. Therefore, taxes should be considered when deciding to alter your investments. We will discuss taxes on mutual funds shortly. This consideration does not apply to mutual funds that are tax-qualified accounts such as retirement accounts, educational savings accounts, or health savings accounts. We will discuss a few of the more popular types of qualified and non-qualified accounts at the end of our journey together.

Many years ago, Forbes, the popular financial magazine, gave the following advice: *Choose a Family, not a Fund*. The authors were lamenting the tendency of investors to have many mutual funds from several different mutual fund companies. They believed that investors were better served concentrating on a single mutual fund family where most all funds have consistently done well over significant periods of time and experienced both favorable and unfavorable markets. Below is a list of the top ten mutual fund families.

Table 2.9.1: Top Ten Mutual Fund Companies by Assets Under Management

	Fund Family
1	Vanguard Group
2	Blackrock / iShares
3	Fidelity Investments
4	American Funds (The Capital Group)
5	State Street Global Advisors / SPDR
6	T. Rowe Price
7	Invesco
8	Dimensional Fund Advisors
9	PIMCO
10	Franklin Templeton Investments

It is surprisingly difficult to find precise data about the top ten mutual funds families. The source of the data above comes from ThinkAdvisor in September 2019. They reference Morningstar. However, this data is not available on Morningstar's website. Note that other sources have the top 10 listed differently. Some mistakenly add non-mutual fund assets to the totals. For this reason, for example, you may see Blackrock as the #1 company. Although Blackrock holds more assets under management than any other company, not all of the assets are mutual funds. Vanguard has more mutual fund assets.

Mutual Fund Services, Transactions, and Sources of Information

The growth and competition in the mutual fund industry has led the industry to offer many convenient and powerful mutual fund services for investors. Three of these services are automatic contribution plans, automatic reinvestment plans, and automatic withdrawal plans. The most important of these is the automatic contribution plan, also known as an automatic investment plan or a systematic investment plan. These plans allow an investor to establish an automatic contribution from their checking or savings account at a bank or credit union. The investor can specify a day of the month that $50 or $100 or whatever is appropriate is taken from their checking account and sent to their mutual fund. Systematic investments plans are also available with employer-sponsored retirement plans. The employer automatically takes a sum from the employee's paycheck and invests it into the employee's account. Examples include 401k or 403b or Simple IRA accounts.

Automatic contribution plans make investing very simple. The investor no longer needs to concern themselves when it is the best time to invest. The investments happen automatically. Every month is a great time to invest. Indeed, these plans are practically the only way that many individuals will ever start or continue to invest. Well-intentioned people might say to themselves, "I will wait until I save up $5,000 and then start investing." When and how is that going to happen in one's life when there are always so many other costly responsibilities to attend to? This manner of investing is often called "paying yourself first" and is widely recommended by financial planning and investment experts.

According to the Investment Company Act of 1940, mutual funds must distribute their earnings to their investors at least once a year. Some distribute their earnings semi-annually, quarterly, or monthly. With an automatic reinvestment plan, the earnings an investor receives are automatically reinvested back into the mutual fund. The investor is credited with more shares of the investment. Today, this is the default. The mutual fund company will enroll the investor in their automatic reinvestment plan unless

they specify otherwise. This allows the investor to earn fully compounded rates of return. Unless an investor needs the income, it is always a good idea to reinvest dividends and capital gains.

Now here is the best part! An automatic withdrawal plan, also known as a systematic withdrawal plan, is the exact opposite of the automatic contribution plan. This service enables shareholders to automatically receive a predetermined amount of money periodically. Typically, this would be monthly but others may decide upon quarter, semi-annual, or annual withdrawals. Ideally, the investor will establish a periodic electronic withdrawal transferred directly to their checking account. So, here you go, young adults! Start putting away $50, $100, or whatever you afford while you are young. Choose prudent, long-term oriented mutual funds with an eye toward growth and income. Don't get caught up in the Next Big Thing and don't panic when the markets tumble. Do this throughout your working career, ideally bumping up your contribution $5 or $10 per year, especially when you get a raise or some other debt is paid off. In your retirement, you will be happy to discover that – providing the world did not end – you will be able to withdraw $2,000 or $3,000 or $4,000 per month for the rest of your life! (Did we mention that there are no guarantees? Good! Just checking.)

These and other mutual fund services help to give mutual funds their very low PITA factor. (Recall that PITA stands for Pain-in-the-***.) One factor that is out of the control of the mutual fund companies, though, is taxes. We will reiterate throughout the course that we should not allow taxes to dissuade us from an investment. Taxes should not be the "tail that wags the dog." However, we should be mindful of their presence. For regular, non-qualified accounts, there are two types of taxes, income dividends and capital gains. Each is taxed differently depending upon the investor's income level and whether the distribution was a short-term distribution or a long-term distribution. In this context, a short-term distribution means a year or less and a long-term distribution means anything more than a year and day. We will leave the details for your accounting classes.

One item to keep in mind, reinvested dividends and capital gains are still taxable transactions. This can create an awkward situation for some investors. In a year when markets fall, the mutual fund is still required to distribute the earnings. The investor receives a Form 1099 that requires the investor to pay taxes on the earnings. The investor exclaims, "But I lost money this year! Why do I have to pay taxes?!" Our representatives in Congress get this complaint often from constituents. Every so often, there is discussion about allowing these unrealized gains to be taxed when the investor actually sells the mutual fund. Again, we will leave the details and a discussion of the pros and cons of such a change to the tax code to your accounting professor. Suffice to say that it is highly unlikely that this will ever happen. It would be an accounting nightmare! In any event, be sure to save your year-end statements.

What about tax-qualified accounts such as retirement accounts? These accounts are typically tax-deferred. You do not pay taxes until the money is withdrawn, typically in retirement when the investor is often in a lower tax bracket. All the proceeds are normally taxed as income. The exception to this rule applies to Roth IRA and similar accounts. Roth IRA accounts are normally tax-exempt in retirement. We will cover types of accounts in detail much later on.

Where does one go for information about mutual funds? What tools are available for research? The quick answer is, "There is too much information and too many resources!" However, there are two documents that are indispensable when investigating a potential mutual fund for your portfolio, the prospectus and the annual report. We discussed the prospectus when we covered the fees that mutual funds charge. The prospectus contains a tremendous amount of other information such as a statement describing the risk factors, descriptions of the fund's past performance, the type of investments in the fund's portfolio, information about dividends, distributions and taxes, and information about the fund's management. It is quite unfortunate that practically no investor had bothered to read one. In fact, the Securities and Exchange Commission has authorized the use of much shorter versions of the prospectus, called the Summary Prospectus, in an effort to save paper since most prospectuses wind up in the landfill.

The other important document is the annual report. The mutual fund is a corporation and corporations must provide an annual report to their investors that describes their operations and financial conditions. The annual report is often divided into two distinct parts. The front part of the report is printed on glossy, high-quality paper and contains tasty graphs and failsafe superlative prose that describes how wonderful the mutual fund is performing. The back part of the report is typically printed on low-quality paper and contains the hard and fast numbers that often call into question the ornamental and flowery words found in the first part. There is an old saying in the investment industry that the most important information about an investment is printed on the least quality paper. This is also true of stocks and their annual reports.

Of course, in this day and age of digital publications, inventors typically don't even receive a prospectus or annual report in the mail anymore. "Click here to confirm that you have read the prospectus and agree to the terms of this investment." As part of one

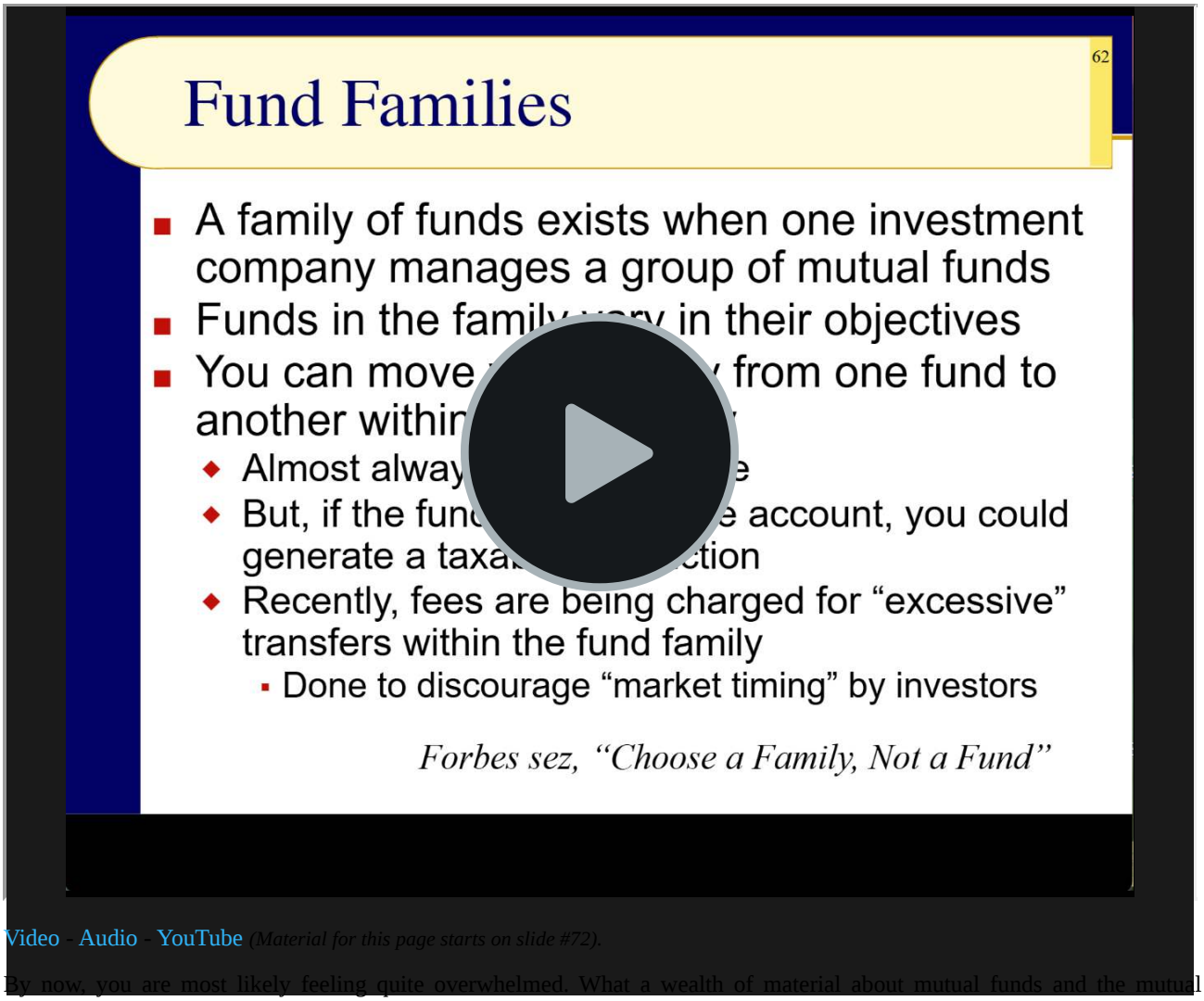
of your assignments for chapter 2, we are going to ask you to dig into the prospectus and annual report as well as other resources for researching mutual funds.

What are some of the other resources for researching mutual funds? There are two major mutual fund rating companies, Morningstar and Lipper, now owned by Thomson Reuters. Their information is available online and at most libraries. Be careful as Morningstar will do their best to get you to subscribe to the service for a monthly fee. Remember that most of the information from these two agencies is available at your local library for free.

Other resources include the vast number of financial publications such as *Bloomberg BusinessWeek*, *Forbes*, *Kiplinger's Personal Finance*, and *Barron's*, and financial websites such as Yahoo Finance and MarketWatch. Most offer mutual fund surveys usually include the fund's overall rating compared to other funds in the same category, fund size, sales charges and expense ratios, risk factors, and the rewards history for the past three, five, and ten years. The mutual fund companies themselves have invested heavily in their own websites and along with all the normal marketing materials now include excellent educational articles and commentaries on investing and the markets. The chapter 2 sections of the class website have numerous links to websites of some of the largest and most successful mutual fund companies. There are many, many others. Last, the mother lode of information can be found at ici.org, the website of the Investment Company Institute, the non-profit trade organization sponsored by the mutual fund companies.

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2.10: A Sample Mutual Fund



Video - Audio - YouTube *(Material for this page starts on slide #72).*

By now, you are most likely feeling quite overwhelmed. What a wealth of material about mutual funds and the mutual fund industry you have covered! You should be proud of yourself. But do you now feel ready to invest? Has any of this actually helped you at all with the most important question, namely ...

"Okay, So How Do I Pick a Mutual Fund?!"

With approximately 12,000 mutual funds to choose from, the typical investor is completely bewildered and often has no idea where to even begin the process of choosing a mutual fund. You have read and studied about mutual funds and it is likely that you are no better off, possibly even worse off than when you started. There is no way to sugar coat the issue. Choosing a mutual fund is incredibly difficult. Many individuals will seek a trusted investment professional for help. Others will succumb to the ubiquitous advertising campaigns of one or another mutual fund company. Serious-minded investors might take it upon themselves to research, investigate, choose, and then monitor their mutual fund choices. But even then, no one should fool themselves into thinking they are going to be able to do these rigorous processes for all the mutual funds available. By the time you researched all the mutual funds available, it would be time for your retirement! So how does one pick a mutual fund?

Our advice is to pick a mutual fund that invests in high-quality stocks or bonds, is well diversified across several industries and sectors of the economy, has a long-term perspective and a manager or, better yet, a global management team with many decades of experience, and most importantly, has been around for decades and performed consistently well in both good and bad markets. Be sure to place more emphasis on how well the mutual funds did during market upheavals. Anyone can do well when the markets are charging ahead. Although their investments will suffer along with all the others, the best managers will hold up well during the

inevitable downturns. Also, you want to avoid companies that "shuffle" their managers every few years. Luckily, the industry is moving away from this tactic and giving their managers more time to prove themselves. Lastly, be mindful of fees and bend toward lower-cost funds but concentrate on the quality of the investment manager and their long-term results.

ICA: Investment Company of America, A Sample Mutual Fund

For a sample mutual to showcase, we chose the Investment Company of America, typically referred to as ICA. It is one of the nation's oldest and most successful mutual funds. We want to emphasize that we are not recommending this fund to you as an investment. Rather, the idea is to demonstrate the characteristics of a high-quality, long-lived, successful mutual fund. ICA's inception date was January 1, 1934. (It actually dates back to the mid-1920's but the current investment manager took over the operation on December 31, 1933, in the depths of the Great Depression.) This means that ICA celebrated its 90th birthday January 2024. Hence, there is a long history available to study.

On the class website, there are several commentaries that discuss the fund. One particular commentary walks through their entire history and the investment returns of the fund. ICA is a domestic, large-cap, growth and income stock mutual fund. This means that ICA invests primarily in large company stocks based in the United States that are growing and paying dividends. We have already discussed how volatile stock investing is, yes? In the commentary, you will see that the path to wealth was anything but smooth. However, even with the many bumps and stomach-churning plunges in value, investors who stayed the course were well rewarded. Often, the sharp fall in value of one or two years was followed by a significant rise in the one or two subsequent years. So how does one handle the inevitable downturns? The key is to keep a long-term perspective and take advantage of dollar-cost averaging.

Dollar-Cost Averaging

Dollar-cost averaging is a horrible name for a simple, but highly effective investment strategy. Dollar-cost averaging is a system of buying an investment at regular intervals with a fixed dollar amount. We discussed the automatic contribution plan, also known as a systematic investment plan. When an investor utilizes this method to invest, the investor is automatically taking advantage of dollar-cost averaging. Dollar-cost averaging takes the emotion out of investing. Every month is a good time to invest. In fact, with dollar-cost averaging, each day when you awake, there is always good news waiting for you. If the market is up – good news! – your account is worth more. If the market is down – good news! – next month, you will get more shares at a lower price when the $50 or $100 comes out of your paycheck or checking account. We will revisit this important technique later on. And remember, an automatic investment plan is practically the only way that most of us working class individuals will ever begin and continue the process of investing.

Hypothetical Illustrations

At the beginning of this chapter, we noted that those who needed motivation to read the chapter should jump to this section and review the accompanying commentaries. There was a very good reason for this. The news is good! Prudent, long-term investing has been very rewarding. To share this good news, most mutual fund companies have a system for running what are normally called hypotheticals or illustrations or hypothetical illustrations. The life insurance industry also extensively uses these tools. Hypotheticals are examples of returns of investments for lump sum principals or streams of investments or combinations of both. A stream of investments is another term for automatic contribution plan or dollar-cost averaging. Hypotheticals must be approved by the Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA) and contain numerous disclaimers about past versus future performance.

Please review the hypothetical illustrations for 30 years at $100 per month and 40 years at $100 per month. These are impressive results. However, the real eye-opener is the scenario where the investor started contributing $100 per month 40 years ago. Then every year, the investor increased their monthly contribution by $10, two fewer trips to FiveBucks, ah, Sixbucks, no, Starbucks! Hopefully, you will never look at another cup of expensive coffee the same way. The last two illustrations show what is typical when an investor waits until their 40's before they start investing. They must put away far more each month and even then, the investor does not have the blessings of time. Mirroring the manifold disclaimers in the hypotheticals, this is backward-looking data. As you will see and hear over and over again, past results are not guarantees of future returns. No one can predict the future. However, this is a pretty darned good endorsement of prudent, long-term investing.

We also want to emphasize that ICA is just one mutual fund. There are many others with similar results and many with even better returns. But with 12,000 mutual funds to choose from, we have to start somewhere. One other issue about the use of ICA is important to note. We used ICA because of its long lifespan as well as its success. However, if we were going to recommend a single mutual fund to the typical younger investor, we would suggest a global fund over a domestic fund. Recall that ICA is a domestic, large-cap, growth and income fund. The issue here is that there are no global, large-cap, growth and income funds that have a 40-year lifespan. The first global, large-cap, growth and income funds started appearing in the late 1980's.

Just in case you still might be tempted to believe that you must run out right away and invest in ICA, please note that there are many other mutual funds that have been around for decades and done well in both good and bad markets. Below is a list of mutual funds that have greater than 50 years of experience as of December 31, 2023. All of them have returned 10% or better. The news is good. Choose a well-run mutual fund (or maybe two or three), contribute consistently through good times and bad, don't panic when the markets tumble, and – assuming the world does not end – your mutual fund or funds will bore you to wealth.

Notice that all of these funds are either growth, growth and income, or equity income stock funds. All except two are domestic. These are the oldest types of mutual funds. As explained, many other types of mutual funds with similar or better returns simply don't have as long a lifespan and don't make the list. We emphasize that there is no one-size-fits-all in the mutual fund industry. Many investors will want much more aggressive choices or much more risk-averse choices than what are available on this list. You decide. Do you want to eat well or do you want to sleep well? Hopefully, you are starting to see that dollar-cost averaging will help you gain control of your emotions and when the inevitable downturn occurs, you will see it as an opportunity to let your automatic contribution take full advantage of the reduced prices. You might even decide to make an extra contribution or two because stocks are on sale. Welcome to prudent, long-term investing. You should do well over the long term, Dear Students. And, oh, by the way, you're welcome.

Mutual funds with 50 or more years of excellent returns as of December 31, 2023

Investments With Over 50 Years Of Excellent Returns	Annual Return	Inception Date
AMCAP Fund	11.25%	5/1/1967
American Mutual Fund	10.20%	2/21/1950
Fidelity Contrafund	12.62%	5/17/1967
Fidelity Equity-Income Fund	11.12%	5/16/1966
Fidelity Fund	10.27%	4/30/1930
Fidelity Magellan Fund	15.59%	5/3/1964
Fidelity Trend Fund	12.09%	6/16/1958
Franklin Growth Fund	10.37%	3/31/1948
Franklin Mutual Shares Fund	11.21%	7/1/1949
The Growth Fund of America	13.31%	12/1/1973
The Income Fund of America	10.30%	8/31/1973
Invesco Global Fund	11.08%	12/22/1969
The Investment Company of America	11.99%	1/1/1934
MFS Investors Growth Stock Fund	10.56%	1/1/1935
New Perspective Fund	11.93%	3/13/1973
T. Rowe Price Growth Stock	10.98%	4/11/1950
T. Rowe Price New Horizons Fund	11.58%	6/3/1960
T. Rowe Price Small-cap Stock Fund	12.69%	6/1/1956
The Dreyfus Fund (now BNY Mellon Large Cap Securities)	10.57%	5/24/1951
Templeton Growth Fund (Franklin)	11.14%	11/29/1954
Vanguard Windsor	11.29%	10/23/1958
Washington Mutual Investors Fund	11.71%	7/31/1952

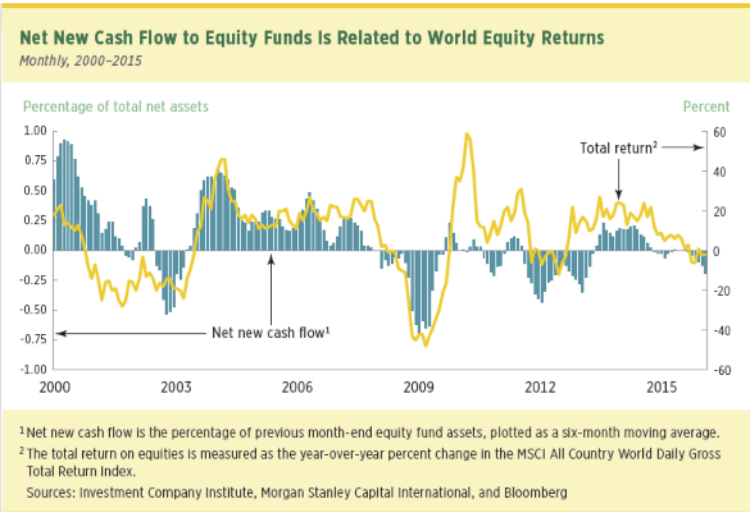
Characteristics of Successful Long-Term Mutual Funds

One study by the Capital Group some years ago attempted to survey the vast array of mutual funds and find the most common characteristics of long-term, successful mutual funds. They found that almost all had three characteristics in common. The first attribute was that the funds had lower than average annual operating expenses. Please make sure you review the presentation that compares the commission-based hypothetical illustrations with the assets under management-based hypothetical illustrations on the class website. You will see just how much an extra 1% or so in fees can eat into your long-term results. The second most common property was that the mutual fund managers had substantial amounts of their own money invested in the funds. In the industry, this is referred to as “eating one's own cooking.” The third most common trait was that the funds demonstrated substantial downside resilience. They held up comparatively well when the markets fell. One of the statistics we want you to research in your Mutual Fund Annual Report Assignment is the upside/downside ratio. It is one of the most important measures in Your Humble Author's opinion. Downside resilience helps us sleep reasonably well when the inevitable market downturn occurs.

Mutual Fund Returns versus Investors' Returns

We have seen how well some mutual funds have done over decades. The question to ask is how well the typical mutual fund investor has done. One would expect there to be an easy answer to this question. Mutual fund investors have done the same as their mutual funds, of course. How could it be any different? We are sad to report that mutual fund investors have done much worse over time than the mutual funds they invest in.

"Wait a minute!" you say, "That does not make any sense whatsoever. How could a mutual fund investor do worse than the mutual fund that they invest in." Actually, it does make sense. It makes perfect sense and is entirely predictable given human emotions and what we have learned. Do you remember Mr. Warren Buffett's observation? "Investing is simply … but it ain't easy!" Many investors allow their emotions to control their actions. "The market's up! Ooh, ooh, ooh! Is it too late to get in!?" When you hear this question asked often by your friends, family members, neighbors, and colleagues, the answer is invariably, "Yes, it's too late to get in." Many uninformed investors pile into mutual funds during the market's upward swings and typically start pouring mountains of money into mutual funds just before or at the peak in the market. For whatever reasons, the market will then head lower and you will then hear, "The market's down! Ooh, ooh, ooh! Is it too late to get out?!" When you hear this from those around you, the answer is again invariably, "Yes, it's too late to get out." This is where you come into the picture. You are going to have the "talk them off the ledge" chat with them. You are going to explain to them that these times of panic are historically the best times to invest for the long term. You are going to be their Investment Guru and explain the wonders of long-term investing via dollar-cost averaging. It is a weighty responsibility. We are counting on you. You can do it!



The green bars in the above graphic shows the mutual fund inflows and outflows. The yellow line is the global stock market's performance. Notice how in 2000, mutual fund inflows were immense. This coincides with the beginning of the bursting of the Internet bubble and the end of a decade with close to 20% annual returns. The United States market then went on to lose close to 50% from March of 2000 to October of 2002. Notice that ill-informed investors finally started pulling their money out of mutual funds precisely at the end of the 2½-year downturn … just in time for the market to come roaring back. The inflows followed suit, that is, until the greatest downturn in stock prices since the Great Depression occurred in 2008. What did many mutual fund investors do? Of course, they pulled out their money during the downturn. This time, it wasn't until 2013 when they started to pile back into stock mutual funds.

There is an old saying in the mutual fund industry: "Most mutual fund investors do worse than the mutual funds they invest in." The data shows this to be true. Many uninformed mutual fund investors buy high and then sell low. You are not going to be one of them.

The Bottom Line on Mutual Funds

The bottom line of mutual funds is to choose a fund family and *stick with them*. Reevaluate your fund or funds periodically. Every six months or every year is more than enough. Make changes judiciously and sparingly, giving your funds enough time to prove themselves through good times and bad. As you approach retirement, migrate from stock funds to bond funds but do not give up on

stocks entirely. (We will discuss portfolio diversification and asset allocation in detail later on.) Use automatic investment plans to take advantage of dollar-cost averaging. Contribute $50 or $100 or whatever you can afford every month. But for the most part, forget about them!

Do not be one of the mutual fund investors that does worse than your mutual funds. Allow your mutual fund or funds to bore you to wealth. In the world of investments, boring is good!

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2.S: Summary

Congratulations – You Have Finished Chapter 2 – Mutual Funds: Investments for the Masses

You have reached the end of chapter 2, Mutual Funds: Investments for the Masses. In this chapter, you have:

- Been introduced to the definition of a mutual fund, aka an investment company, and reviewed the growth of the mutual fund industry
- Investigated major mutual fund share classes and how mutual funds charge their investors for the services of the mutual fund
- Explored the major mutual fund categories from the most risky to the least risky
- Compared and contrasted active versus passive portfolio management of mutual fund assets
- Examined a few mutual fund families and concentrated on a sample mutual fund with decades of investing experience

You should now be able to:

1. Describe the various components, characteristics, benefits, advantages, and disadvantages of mutual funds
2. Identify and describe the various ways in which mutual funds charge their investors for their services and explain the actual costs borne by the investor
3. Outline the major mutual fund categories and their risk/return profiles
4. Discuss the advantages and disadvantages of active versus passive portfolio management of mutual fund assets
5. Identify a sampling of mutual fund families and the services available to mutual fund investors
6. Describe the benefits of long-term, prudent, consistent mutual fund investing and the pitfalls of short-term, uniformed, impatient mutual fund investing

So are you ready to be bored to wealth with mutual funds? Well, if mutual funds are not exciting enough for you, you are in luck. In our next chapter we begin the process of studying stocks. Before that, though, study this material thoroughly. Remember that you are going to be the Investment Guru for your friends, family members, and colleagues. You can't let them down!

There is a Future for You in the Investment Services Industry

Have you enjoyed listening to and watching the presentations and reading the text? Instead of being dry and dull, did the material seem exciting and promising to you? Can you envision yourself relating this material to potential clients who are terrified of investing but know they need to do something soon because they are not getting any younger? Would you like to help them understand that investing is not as difficult as it seems and that you can show them investments that are prudent, long-term oriented, and have performed well over decades?

If so, please consider pursuing a career in the industry. The financial and investment industry is enormous. The industry is always looking for new, energetic individuals. There are numerous career path opportunities. From banking to real estate finance to insurance to brokerage firms, there is a place for you. In fact, the industry is actively seeking bilingual speakers and women. Going forward, they understand that diversity is essential to the success of their businesses. They simply love ex-military folks. (The financial industry is highly regulated and who better than those who have already lived and worked in a structured, regulated environment?)

Here at Southwestern, we offer an Associate in Business Administration with an Emphasis in Finance. We also offer a Certificate of Achievement in Financial and Investment Services. Either of these will help you land a position at a bank or credit union, an insurance company, a real estate finance firm, a brokerage or other investment management company, or any of the many other finance-related and investment-related companies.

You don't believe me? You think you need a four-year degree from a prestigious university? Aha! You are wrong! The dirty little secret in our industry is that a degree from a prestigious university is not a guarantee that someone will perform well as a financial adviser with the general public. The recruiters will tell you that they have no reliable method for predicting how someone will do in the industry. Someone with a certificate from a community college might surpass a whole room full of graduates from the Ivy League universities.

I have my own predictors. Are you a positive, optimistic person with a sunny disposition? Do you like to socialize? Do you enjoy meeting new people? Do you want to help them succeed? Are you not afraid to ask someone if they need your help? If they say,

“No,” are you still willing to go to the next person and ask the same question ... and then go on to ask twenty-seven more people? In short, are you a go-getter who refuses to give up? Will you ***never*** give up?

If you can answer, “Yes,” to all or most of these questions (especially the part about ***never*** giving up), I guarantee you will do well in the industry. You might bounce around from one position to another for a bit but you will find your place. Talk to a counselor about our programs. Or better yet, please contact me. I gotta’ warn ya’! I can talk about finance and investments far longer than most any reasonable person would ever want to listen.

I wish you all tremendous success in the future and I look forward to talking to you about a potential career in the finance and investment industry.

Your Feedback, Please

Remember that we want this class to be the best class you have ever taken! We want this class to be one of the few classes that you can look back on 5, 10, 20, or more years and say, “Ya’ know. That Introduction to Investments class really helped me in this crazy, beautiful, scary, joyful, absurd, sad adventure that we call life.” As always, contact me directly if you have any questions, comments, criticisms, suggestions, complaints, etc.

We are now ready for stocks. Exciting stocks! Sexy stocks! *Risky* stocks! Dear Rising Investment Gurus, read and study consistently and earnestly. See you in our next chapter.

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SECTION OVERVIEW

Part 2: Stocks, also known as Equities

It is time to begin our long journey toward becoming Official Investment Gurus, Dear Readers. There is much to learn about stocks, also known as equities. They are the best long-term financial investments. They are also very risky. We will do our best to help you learn how to eat reasonably well investing in stocks and sleep reasonably well investing in stocks. Stick with us!

Stocks are exciting! Stocks are sexy! Stocks are *risky!*

Chapter 3: Introduction to Stocks

3.1: What Are Stocks?
3.2: The Stock Market
3.3: Stock Transactions, Transaction Costs, and Stock Quotes
3.4: Stock Market Averages and Indexes; Volatility Reexamined
3.5: Stock Characteristics and Measurements
3.6: Types of Stocks, Growth versus Value, and Market Capitalization
3.7: Stock Investment Strategies
3.S: Summary

Chapter 4: Fundamental Analysis: Valuation Models

4.1: Common Stock Valuation
4.2: Dividend Discount Models (DDMs)
4.3: The Discounted Cash Flow Model
4.4: The Value Line: All the Financial News That's Fit to Print
4.5: The Bottom Line
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Chapter 5: Fundamental Analysis: Financial Statements and Ratio Analysis

5.1: Financial Statements
5.2: Common Stock Ratios
5.3: Profitability Ratios
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5.5: Activity Ratios
5.6: Leverage Ratios
5.S: Summary

Chapter 6: Market Efficiency Theory: "Who Can Beat the Market?"

6.1: Efficient Markets
6.2: Manias and Crashes
6.3: Investor Psychology and Common Investor Weaknesses
6.4: Active versus Passive Management Revisited
6.5: All Stars of Investing
6.6: Famous Myths and Stupid Sayings
6.S: Summary

Chapter 7: Technical Analysis: Reading Squiggles on a Computer Screen

7.1: Technical Analysis

7.2: A Career in Stocks

7.S: Summary

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CHAPTER OVERVIEW

Chapter 3: Introduction to Stocks

> *"Don't gamble! Take all your savings and buy some good stock and hold it till it goes up. If it don't go up, don't buy it." – Will Rogers*
>
> *Question: How do you make a small fortune in the stock market?*
>
> *Answer: Start with a large fortune!*

Learning Objectives

In this chapter, you will

- Be introduced to the definition of stocks, their advantages and disadvantages, and historical returns
- Review the rapidly changing universe of the various entities that constitute the stock market
- Investigate the various stock transactions and associated fees
- Explore the major stock market indices, the major characteristics of stocks, and various stock measurements
- Examine the major stock types, market capitalization, and stock investing strategies

By the end of this chapter, you should be able to

- Describe the various components, characteristics, benefits, advantages, and disadvantages of stocks and stock investing
- Identify and describe the various major stock markets, stock transactions, and fees
- Outline the major mutual fund categories and their risk/return aspect
- Calculate stock measures including earnings per share, dividend payout ratio, price-to-earnings ratio, and market capitalization
- Describe the advantages and disadvantages of the major stock investing strategies

Stocks are exciting! Stocks are sexy! Stocks are *risky*!

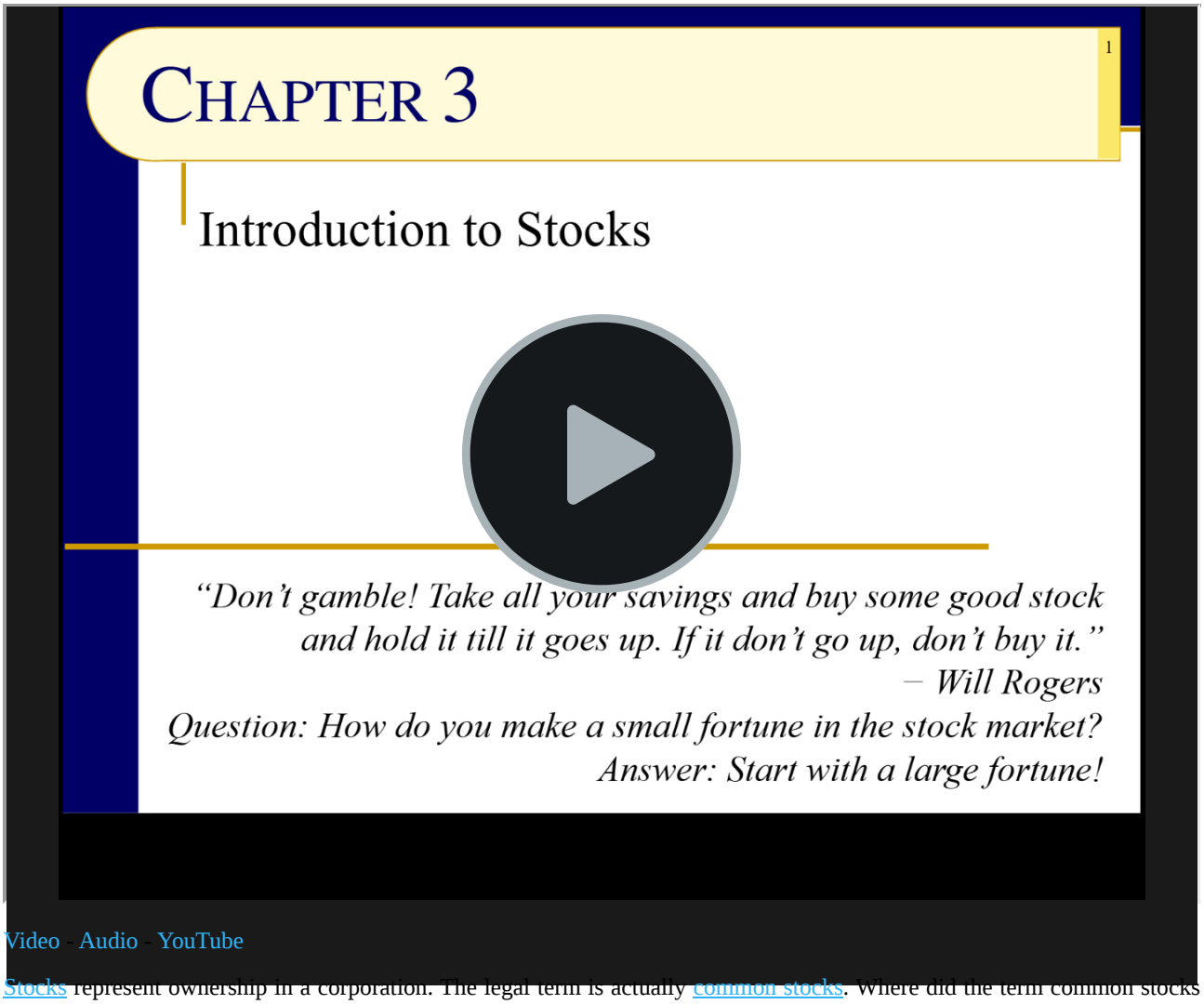
Yes, Dear Students, stocks are where the action is in the investment world, especially for those with a long-term time horizon. We are going to spend the six weeks immersing ourselves in the world of stocks.

Remember that you are Rising Investment Gurus for your family, friends, and co-workers. They are counting on you to cut through all the hype and hoopla and show them the good news of prudent, long-term investments. So let's get started on our journey. All of us at Southwestern are very proud of you!

3.1: What Are Stocks?
3.2: The Stock Market
3.3: Stock Transactions, Transaction Costs, and Stock Quotes
3.4: Stock Market Averages and Indexes; Volatility Reexamined
3.5: Stock Characteristics and Measurements
3.6: Types of Stocks, Growth versus Value, and Market Capitalization
3.7: Stock Investment Strategies
3.S: Summary

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3.1: What Are Stocks?



Video - Audio - YouTube

Stocks represent ownership in a corporation. The legal term is actually common stocks. Where did the term common stocks come from? The investors are "shareholders in common" who own shares in the corporation. Investing in corporations goes back to the 1600's. Entrepreneurs were eager to take advantage of the new trade routes and opportunities for development as pioneers explored the world. The entrepreneurs needed resources and sought out investors to fund their new ventures. Before the advent of stock investing, entrepreneurs would borrow money from wealthy investors with a promise to repay the money. These new corporations, on the other hand, sold common stock to raise the funds and the investors were now part owners of the venture. Hence, another term for stock investing is equity financing. Equity is another word for ownership.

The term stock is somewhat unfortunate. A much better term would be business. As a stock investor, you are investing directly in a business. You are a partial owner of the business. You are able to participate in the profits and growth generated by the business enterprise. Contrary to what many believe and how many behave, stocks are not simply millions upon millions of worthless pieces of paper – now electronic bits! – that people trade with one another each day for no apparent reason. Stocks represent ownership in real businesses.

However, unlike other forms of businesses such as a sole proprietor, investors of common stock are limited liability owners. A stock investor is only liable for their investment, even if the corporation incurs debts above and beyond the value of the stock. A sole proprietor, on the other hand, can be held liable for debts beyond the business value and creditors can attempt to seize the personal assets of the business owner, up to and including their personal residence. There are corporations that are established for the mere purpose of shielding assets from creditors. If the courts deem that the corporation's sole purpose was simply to hide assets from creditors, the courts might allow creditors to "pierce the corporate veil." For those interested in business structures and how

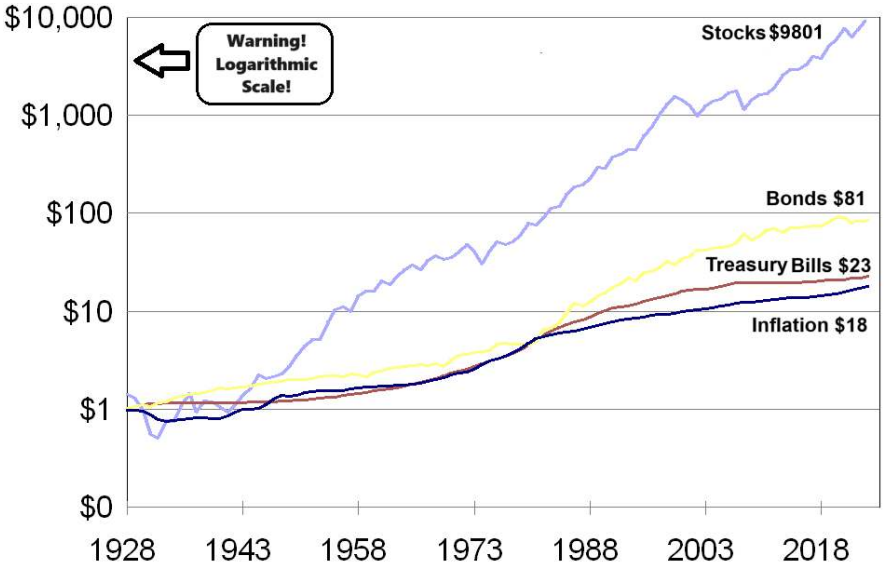
businesses interact with the law, we recommend to you our BUS-120, Introduction to Business, and BUS-140, Business Law, classes at Southwestern Community College.

Why invest in stocks? Stock investors receive two optional benefits, dividends and capital appreciation. Dividends are optional payments of earnings from the business. Capital gains, also known as capital appreciation, occur when the value of the corporation rises as the business grows. Please note that both of these benefits are optional. They are not guaranteed. The corporation is not under any obligation to pay dividends although some companies have paid dividends for decades. Also note that there is no guarantee that the business will succeed. Hence, the expected capital gain may result in a capital loss. Stocks are risky! Stocks are volatile! (Recall that "volatility" is our industry's euphemism for, "Aye! I lost a whole lot o' money!")

Prudent, long-term stock investors must learn how to handle the volatility of stocks. We discussed this in our previous chapter on mutual funds. If we can keep our heads while others are losing theirs and resist the temptation to panic when the markets fall, then we can learn to use the volatility to our advantage. And if we can keep that long-term perspective and not panic, historically, the rewards for stock investing have been significant. (Ah, did we mention that there are no guarantees? Yes? Good. Just wanted to be sure.)

Historical Performance

Over the long-term history of modern finance, stocks have given investors the best rewards of the major financial investment alternatives. The return from the stock market has averaged approximately 10% to 11% annually for the last ninety years. We get this statistic from a list of stocks called the Standard and Poor's 500 Index which we will discuss in detail soon. Ten to eleven percent annual return on your investment is pretty good, yes? Wouldn't it be just grand if we received that 10% or 11% each year? Sadly, investing in stocks does not work that way. In any given year, it is highly unlikely that the return will be 10% or 11%. The return has varied from a high of 53.8% in 1954 to a low of -43.4% in 1931. The return in 2008 was -38.5%, one of the worst! In any given year, there has been a one-in-three or one-in-four chance of a down market. And no, the stock market does not predictably go up for three or four years and then go down for one year. For example, from 1982 to 2000, with only two years of slight downturns, the market went in two directions, up and way up. It then proceeded to fall for three years in a row. Let's revisit and reexamine some graphs from chapter 1.

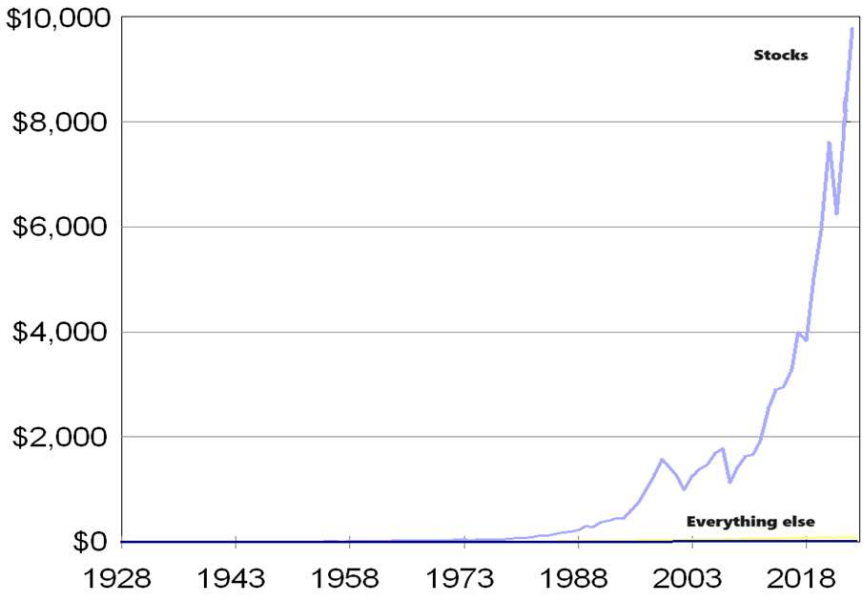


Source: New York University Stern School of Business

The above graphic shows how investing in stocks compared with other popular alternatives. We see that over the long term, the rewards for stock investing have outpaced loans (represented by bonds), savings accounts and other short-term investments (represented by Treasury bills), and inflation (represented by the Consumer Price Index). However, to show this disparity, we used a logarithmic scale. Notice that the numbers of the left do not increase arithmetically, they increase exponentially. From $1, we jump to $10, then to $100, on to $10,000. This is because if we used an arithmetic scale, the lower three alternatives would all appear as essentially flat lines. The danger of using a logarithmic scale is that it makes large movements look small and may mask

the magnitude of the historical downturns. It appears that the return on stocks is moving in a relatively straight line upward. This is not the case! Those little squiggles that represent downturns from 1973 to 1973, 2000 to 2002, and in 2008 were large drops downward, approximately 50% down in all three cases.

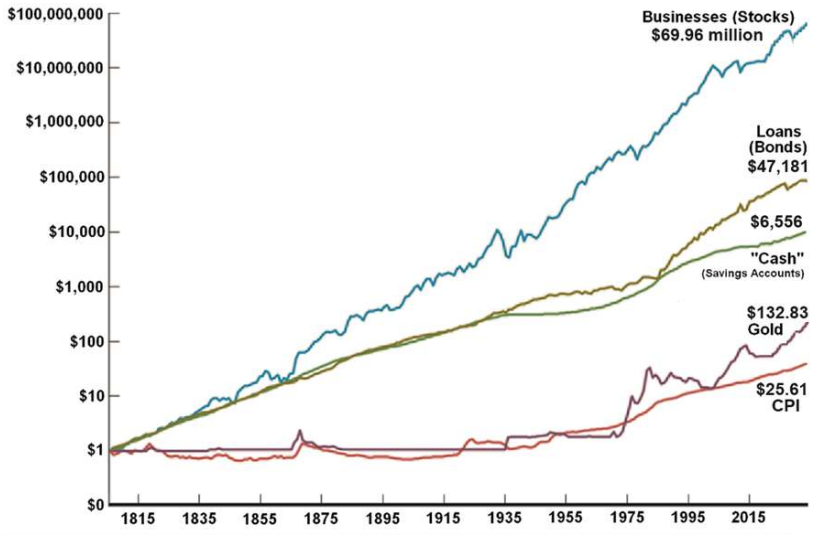
Here is the graph if we did not use a logarithmic scale:



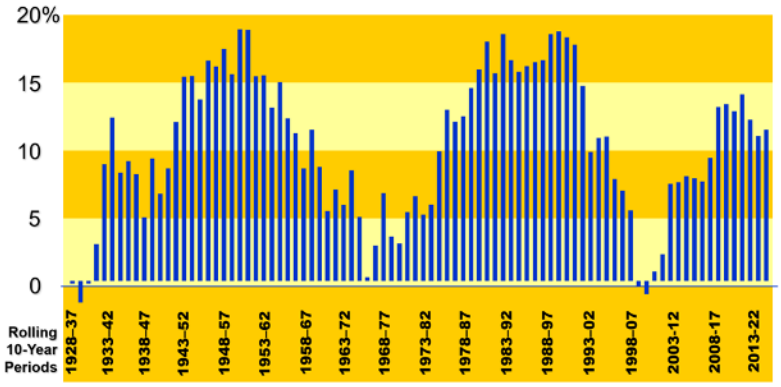
This second graph uses an arithmetic scale. You know, the ones that we mere mortals are used to seeing. However, because of the exponential growth, we don't begin to see any change in any of the investments until the 1970's. Then we begin to see business investments, as represented by stocks, begin to climb far above their alternatives. We can begin to see the exponential swoosh upward of growth in the stock investments. And we can also see that the downturns in 2000-2002, 2008-2009, and 2022 were far more pronounced than they were in the first graph.

Why are we emphasizing the downturns? As you may already have guessed, we want you to be emotionally prepared for them. History tells us they will occur, most likely at least once or twice or more times in your investing career. Intellectually, we can see and learn and know that stocks reward us with the best financial investment returns. But when the economy falters, when the outlook is bleak, when the organic matter hits the ventilating device, when the end of the world is nigh, etc., and the markets subsequently plummet, we have to be prepared emotionally. We must not panic.

Let's now take a look at a much longer time frame. Let's go back to the dawn of the Industrial Revolution. We see that the rewards from investing in stocks are staggering. Again, if we used an arithmetic scale, none of the other alternatives would be noticeable. Notice how poorly gold has done relative to the other alternatives. We will discuss investing in precious metals near the end of our journey together.



Okay, all right, none of us have a 200-year time frame. (It is entirely possible that some of the younger adults reading this may have a 100-year time frame, though. Supposedly, the first person to live to 150 has already been born.) Let's break down our investment time horizons into rolling 10-year periods. Once again, we are reminded of the volatility that accompanies stock investing.



Source: Dow Jones Industrial Average, based on average annual compound returns over 10-year periods

Starting just before the Great Depression, we see three 10-year rolling periods where stocks have lost money. You invested $1,000 and in ten years, you had less than $1,000, for example. What did we hear people say? "Ooo, ooo, ooo! Is it too late to get out?!" Yes, it was too late to get out. Then as the United States and the world emerged from the Great Depression and World War II, we saw the greatest expansion of the economies of the United States and many parts of the globe that the world had ever seen. Dishwashers, televisions, air conditioning, refrigerators, washers and dryers, an automobile in every driveway! By the late 1950's, the United States stock market had returned upwards of 20% over the 10-year rolling periods. What did your great-grandparents hear from their family members, friends, neighbors, and colleagues? "Ooo, ooo, ooo! Is it too late to get in?!" Once again, the answer was yes. We will let the famed investor, Peter Lynch, in his excellent, must-read book, *One Up On Wall Street*, describe the resulting 1973/1974 market crash:

> *"For two decades after the Crash of '29, stocks were regarded as gambling by a majority of the population. This impression wasn't fully revised until the late 1960's when stocks once again were embraced as investments, but in an overvalued market that made most stocks very risky. Historically, stocks are embraced as investments and dismissed as gambles in routine and circular fashion, and usually at the wrong times. Stocks are most likely to be accepted as prudent at the moment they're not." – Peter Lynch*

The 10-year return in the mid-1970's was close to zero. It was a golden opportunity to invest in stocks. Yet, most potential investors ran the other way. Why? By now, we hope that you can answer that question on your own. Our emotions get the better of us. "Investing is simple … but it ain't easy!"

Like clockwork, the cycle began all over again. Coming out of the 1970's, the world began to hear the terms, "globalization," "personal computers," "mobile phones," "telecommunications," "Internet," etc. The stock market in the 1980's and 1990's then proceeded to go in two directions, up and way up. By the end of the 1990's, the 10-year rolling returns were again approaching 20%. "Ooo, ooo, ooo! Is it too late to get in?!" You know the answer! We were greeted with two vicious downturns, from 2000 to 2002 and then again in 2008. We saw for the first time since the Great Depression rolling 10-year periods with negative returns. "Ooo, ooo, ooo! Is it too late to get out?!"

Why? Why do we humans act this way, over and over again? We will discuss some of the psychological issues of investing later. For an in-depth study, we recommend *Thinking Fast and Slow* by Daniel Kanneman, the Nobel laureate who proved, once and for all, humans are not rational. Be prepared for some illuminating yet disconcerting news about human nature.

For ten years after the Global Financial Crisis and the Great Recession in 2008, the stock market again moved in two directions, up and way up. The Covid-induced recession of 2020 and then the rise of inflation and interest rates of 2022 led to two jarring downturns. But as of early 2025, the markets are again rising. Are we destined to repeat the cycle? We will know in 10 or 20 years. In the meantime, your guess is about as good as anyone else's. The one truth we do know is that if you had kept investing, prudently and consistently, and did not panic when the markets fell, you would have profited greatly by investing in stocks.

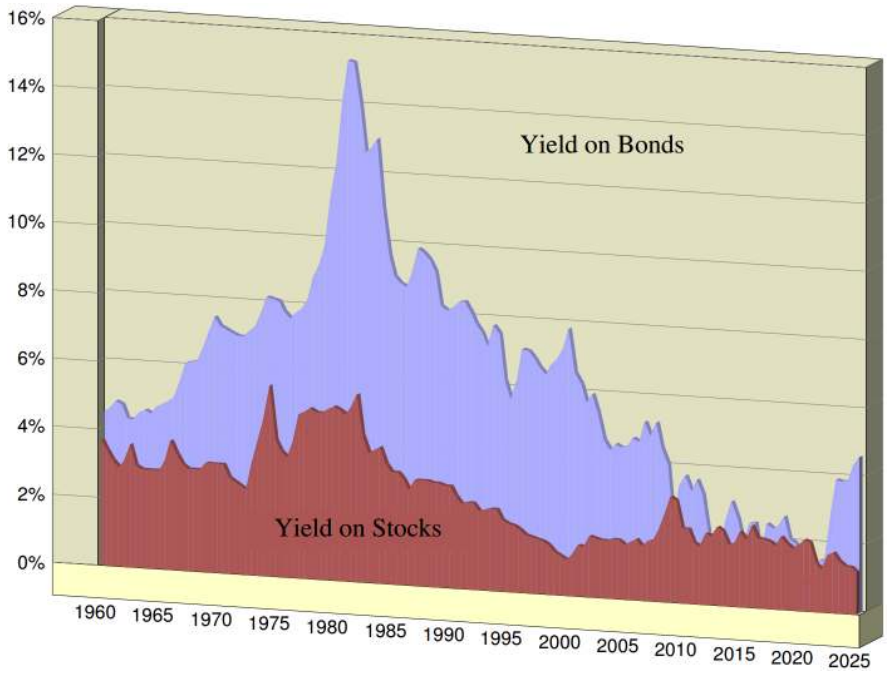
The Power of Dividends

Traditionally, close to half of the return from stocks was from reinvested dividends. Stockholders used to expect 4% to 6% in dividends each year. That was as much or more than bonds returned in interest since stocks were considered much riskier than bonds. From 1936 to 2008, the average dividend return was 3.8%. Starting in the 1980's, the return from dividends fell dramatically. From 1997 to 2007, the average dividend return was 1.5%. At the peak of the market in March of 2000, the dividend yield had fallen to 1.0%. Capital gains & growth were what investors wanted in the 1990's. Many reasons were forwarded. They included the fact that dividends were taxed at a higher rate than capital gains, people wanted the business to reinvest the earnings for growth instead of distributing it to the investors, stocks were no longer considered riskier than bonds, and savings accounts were now paying less than 2%. But probably the most compelling reason was that people lost track of their senses and bid up the prices. It was the New Millennium! (Feels kinda' like the old millennium, don't you think?)

The market downturns of 2000-2002 and 2008 changed investors' perception about dividends. We now see investors and companies focusing more and more attention on dividends. Many companies that never paid dividends in the past are doing so now. Good examples of this are the tech companies. Many tech companies are no longer growing at phenomenal rates and the industry as a whole is maturing. Mature companies can afford to distribute more of their earnings to shareholders. Also, the tax law has changed dividends so that they are taxed roughly the same as capital gains.

> *"Dividends Don't Lie." − Geraldine Weiss*

> *"Do you know the only thing that gives me pleasure? It's to see my dividends coming in."*
> *− attributed to John D. Rockefeller*



The dividend yield from stocks compared to the interest rate from bonds.

The graphic above shows the relationship between the dividend yield from stocks in red and the interest rate from bonds in blue. In 1960, they were fairly close to one another. As inflation rose in the late 1970's, we saw the interest yield on bonds climbing as investors demanded a higher rate of interest to lend money. The dividend yield on stocks climbed also, but that was mostly because the prices of stocks fell sharply in the mid-1970's. Starting in 1979 and then into the early 1980's, the Federal Reserve Bank raised short-term interest rates to break the back of inflation. It worked! We saw both the interest rates on bonds and the dividend yields on stocks falling in what has been called the Great Moderation. It was a time of great wealth accumulation … until the market crashes of 2000 to 2002 and 2008. Since the Global Financial Crisis and Great Recession, the two had been fairly close to one another and the markets have gone in two directions, up and way up. That changed in 2022 when the Federal Reserve Bank raised interest rates dramatically to combat the Covid-induced inflation. What will the future bring? Your Humble Author's crystal ball is about as useful as anyone else's. However, we do know that the only constant is change and that we are guaranteed at least one or maybe two dramatic downturns in the next 10 to 20 years. As Mr. Peter Lynch says, down markets are as inevitable as snowstorms in January. Prudent, long-term investors weather the storms and wait for the good times to come again. In the meantime, dividends always give us investors a positive return on our investment. "Dividends don't lie!"

Bull Markets versus Bear Markets

By now, no doubt you have heard the two popular phrases for the upward and downward swings in the stock market. Bull markets are favorable markets normally associated with rising prices, investor optimism, economic recovery, and government stimulus. Bear markets are unfavorable markets normally associated with falling prices, investor pessimism, economic slowdown, and government restraint. Where did the terms bull market and bear market come from? Typically, we point to the manner in which bulls and bears fight and attack their opponents. Bulls charge ahead and throw their opponents up into the air. Bears use their paws and claws to slash downward. Of course, the actual origins of the phrases are more complicated than these simplistic descriptions and a great source of sport and entertainment for all budding etymologists, seeking to enlarge their knowledge base of word origins.

Advantages and Disadvantages of Stock Investing

Along with the best historical returns over time for financial assets via dividends and capital gains, there are other advantages of stock investing. To review, stock investing allows the general public to share in the rewards of global business enterprises. Stock investors enjoy limited liability and can only be held responsible for their monetary investment. Additionally, in general, stocks are very liquid investments; they are easy to buy and sell. (There are exceptions to this advantage. Stocks of many sham or very

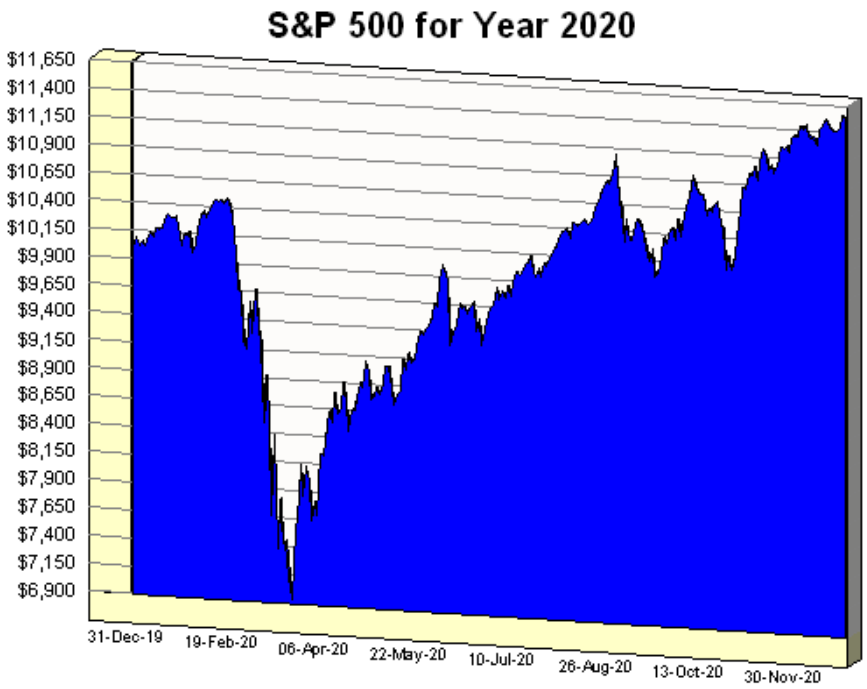
distressed companies may be very illiquid. Most are “penny stocks” that are utilized in scams and swindles perpetrated by con artists. We will learn how to identify and stay far away from these tricksters.)

Finally, an advantage that is often overlooked is that the capitalist system has resulted in an increased standard of living for all. Nothing we humans do or have done is perfect and that includes our economic system. In fact, capitalism might just be the worst possible system for distributing goods and services to a population … except for all the others! We have a long way to go until the time when every person has access to clean water and healthy food, adequate clothing, and safe shelter … and Internet access, of course. If some other system comes along that proves its worth above and beyond capitalism, we will be sure to give it a chance. In the meantime, we global investors are helping raise the standard of living all around the world and at the same time, earning a good return on our investments. (My apologies. It sounds like a public service advertisement, eh? Sorry.)

Now, what are the disadvantages of stock investing? Hopefully, as you have already observed and internalized, stock investing is risky. Stocks are “volatile.” (Recall that “volatility” is our industry’s popular euphemism for, “Hey! I lost a whole lot o’ money!”) The volatility of the stocks of legitimate companies is bad enough when markets fall or a company falls on bad times. Added to this is the fact that there are many scam “penny stock” corporations that are used in various swindles. Even some well-known, bona fide companies have engaged in deception and misconduct. But even with all the volatility and financial “hanky-panky,” remember that stocks have been the best financial assets over the long term. (Note that we are qualifying our statement about investment returns with the use of the word *financial*. This is to placate the real estate investors who might now be jumping up and down screaming that real estate investing has done better than stock investing. Recall that the two are very different. The difference mainly rests with how stocks are purchased and how real estate is purchased. We will discuss real estate investing and highlight the differences near the end of our journey together.)

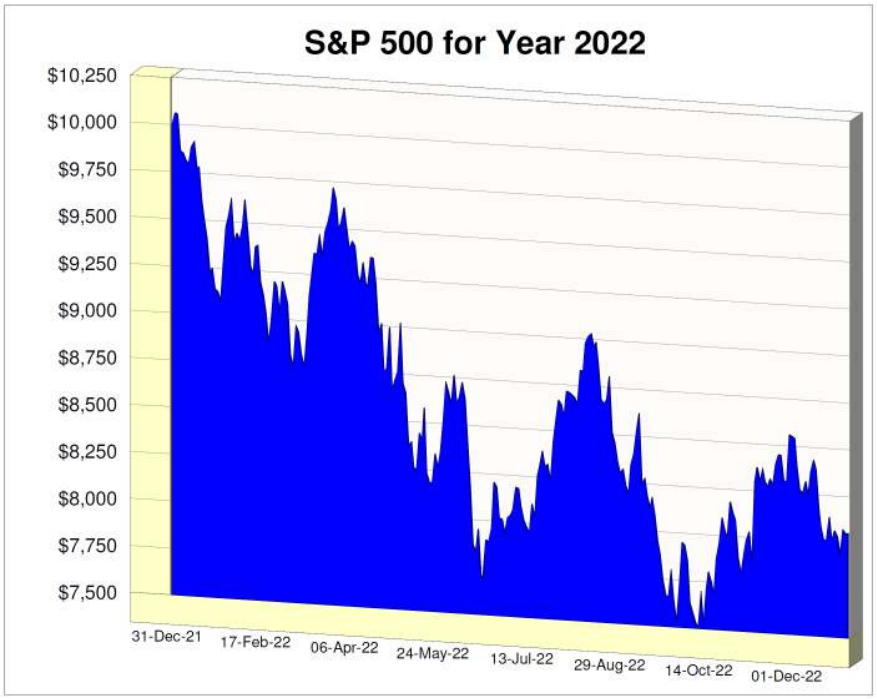
Volatility Examined

The graphic below demonstrates the volatility inherent in stock investing. Suppose you had stock investments of $10,000 on January 1, 2020. To be sure, the year 2020 is one that most of us would rather forget thanks to the Covid-19 pandemic. But for some unfortunate investors, there is another reason they will want to forget 2020. Note the dramatic downturn as the world became aware of just how dangerous Covid-19 was. 2020 recorded the fastest bear market on record. Those uninformed investors who sold in late March or early April locked in 30% declines. They were then left with the difficult decision of when to jump back in. Many never did. (Psst. When would you have heard your friends, family members, and colleagues saying, “Ooo, ooo, ooo! Is it too late to get out?” Hint: It was about the same time that we were all hoarding toilet paper.)



On the other hand, if you had simply turned off the tele, stopped swiping your mobile device, and stopped checking your brokerage account online and instead went to the park to play volleyball with your kids, you would have enjoyed the fastest recovery from a bear market on record. In fact, you did pretty darn well for yourself in spite of the Covid-19 pandemic and a very contentious United States presidential election.

Let's now take a look at 2022, another challenging year.

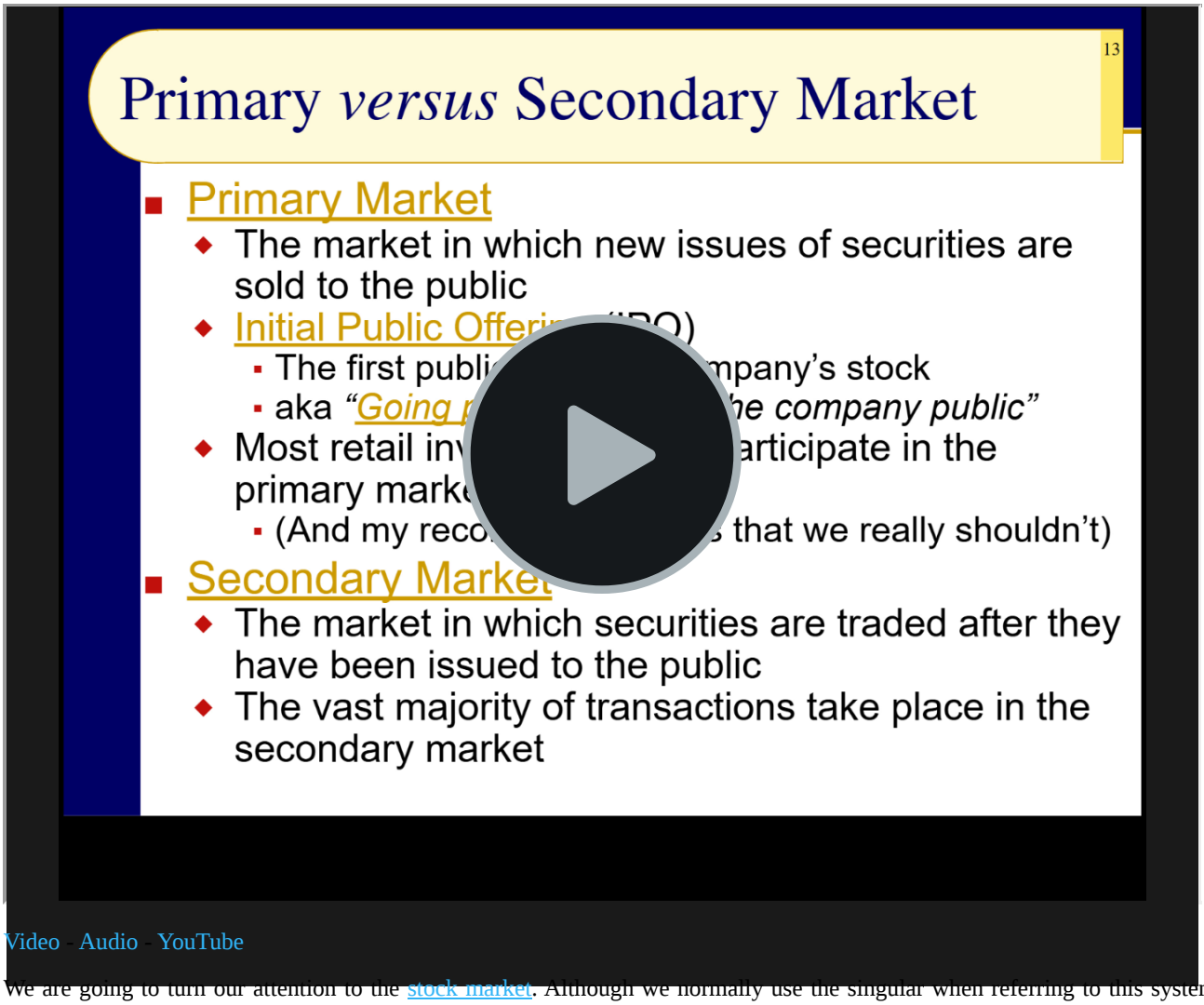


What a roller coaster! You put $10,000 into the market at the beginning of the year. It promptly dropped more than 10% to less than $9,000. Of course, being a concerned investor, you quickly pull out your money … only to see the market rise 10%. You put your money back in and watch it now fall 20%! Okay, that's enough, you pull out your money and the market then rises 16%. All right, one more time. You put your money back in and it falls again, this time 16%. "¡Aye, no más! ¡Nunca jamas!" Never again you will invest. Oh, by the way, if you had just left your $10,000 in the market the whole year, you lost about 18% and your $10,000 became $8,200. By trying to time the market and moving in and out, your $10,000 became $5,880.

The volatility is real, Dear Students. It's the price we pay for investing in stocks. Oh, well.

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3.2: The Stock Market



Video - Audio - YouTube

We are going to turn our attention to the stock market. Although we normally use the singular when referring to this system, the stock market is actually a collection of markets and exchanges that compete with one another. These systems allow for the efficient trading of stocks and other securities. The stock markets are a part of a larger system that is called the capital markets. Entities such as businesses and governments come to the capital markets when they need to raise money. This money is referred to as capital, hence the term capital markets. These entities may seek to borrow money, typically through bond offerings which we will cover in detail later on. Businesses may also attempt to raise money through stock offerings where partial ownership of the corporation is sold to the public. We will see that these systems are undergoing tremendous change. And the changes are showing no signs of slowing down anytime soon.

The Primary Markets and Initial Public Offerings

The capital markets are broken into two parts, the primary market and the secondary market. The primary market is the market in which new issues of securities are sold to the public for the first time. This is called an Initial Public Offering, commonly referred to as an IPO. It is also referred to as "going public" or "taking the company public." Most retail investors do not participate in the primary market. There is a very good reason for most prudent, long-term investors to avoid the primary market. Obviously, some IPOs eventually become large, successful companies and their stock values rise considerably. However, one year after the Initial Public Offering, the typical new stock has lost 50% of its value. Benjamin Graham, author of *The Intelligent Investor*, was not fond of IPOs, to put it mildly. He believed that IPO really stood for, "It's Probably Overpriced," "Imaginary Profits Only," and, "Insiders Profit Opportunity." If you desire to become a Registered Representative, the legal term for a Stockbroker, you will be required to

internalize the entire IPO process before taking the Series 7 licensing exam. Hopefully, as a securities professional, you will heed Mr. Graham's advice and not subject your clients to the vast majority of Initial Public Offerings.

Why would a corporation issue an Initial Public Offering? Why "go public?" As mentioned, the corporation is attempting to raise money to start or expand their business. They may already have issued stock but need to go back to the capital markets to raise more money to help pay for ongoing business expenses. This is very typical here in San Diego, California, where there are many biotechnology startup companies that need tremendous sums of money to fund their drug development.

Another very common reason to issue stock to the public is that it is a way to gain prestige and respect within the investment and industrial communities. Once a business is large enough, it is simply expected that they will become a public corporation and sell stock. In the early 2000's, the owners of Google were reluctant to take the company public. The boys and girls on Wall Street came a' callin' and showed them another more personal and profitable reason for going public. In an IPO, those who started the business usually become instant millionaires and sometimes billionaires. One example is Faceplant, ah, Fleecebook, no, Facebook. After the Facebook IPO, the California taxes for the CEO of Facebook were $1 billion. That's $1 billion with a "b" for the California taxes alone.

This is why we call starting a business the Ultimate Investment. At the very end of our journey, we will briefly discuss becoming an entrepreneur. It's definitely not for everyone but the rewards can be enormous. But please do remember for every Facebook, there was MySpace, Ello, Bebo, Friendster, and QuePasa. For every Google, there was Yahoo, AskJeeves, Lycos, Excite, AltaVista, and Dogpile. Capitalism breeds intense competition.

A final important reason for issuing stock and becoming a public corporation is that once a business becomes sufficiently large, it becomes very difficult for the owners to "divvy up the spoils" without going public. If you were one of the people who started GE or Coca-Cola or Walmart, how would you sell your share of the business? In fact, by keeping a business private, the owners run the risk of family dynamics negatively affecting the future success of the enterprise. One such example was In 'n' Out Burger. Family dysfunction and tragedy put the entire empire into question. Luckily for In 'n' Out Burger fans, the story has a happy ending but other companies are not always so lucky.

Corporations that issue stock to the public are under no obligation to repurchase the shares of the stock. The corporation does not have to repay the money they raised. The shareholders may or may not be able to find someone who will purchase their shares from them, especially if the enterprise fails. However, the corporation is now a public entity. As such, it now has many rights and responsibilities that private companies do not need to worry about. The corporation must file annual reports and quarterly reports with the Securities and Exchange Commission (SEC). The annual reports are called the corporation's 10K report and the quarterly reports are referred to as the 10Q report. Part of our assignment will be to research a recent annual or quarterly report.

Another obligation of public corporations is that they must have at least one public meeting annually where shareholders can air their grievances. Unfortunately, the annual meeting does not necessarily have to be in a location that is easily accessible to shareholders. One such example was the 2005 annual meeting of Sempra Energy, the parent company of San Diego Gas and Electric. Instead of Southern California where it typically held its annual meetings, Sempra decided to hold its 2005 annual meeting in London. Although Sempra publicly stated that their goal was to, "raise Sempra's profile with European investors and to expose directors to its European operations," it was widely believed that they were simply running away from some local disgruntled shareholders.

The Secondary Markets: Exchanges versus Over The Counter Markets

The secondary stock market is the collection of markets and exchanges where securities are sold after they have been issued. The secondary market is much larger than the primary market. When people refer to the "stock market," they are almost always referring to the secondary market. Secondary markets provide liquidity, an easy method for transferring ownership of securities. They also provide an efficient mechanism for pricing and valuation of securities. For example, if a lender wants to know the value of those 100 shares of Chevron you want to use as collateral for a loan, you can quickly point to the current price that Chevron shares are selling for.

The secondary market is divided into two major systems, the organized securities exchanges and the over-the-counter (OTC) markets. The securities exchanges are centralized institutions in which transactions are made in outstanding securities. The over-the-counter markets are widely scattered telecommunications networks through which transactions are made in outstanding

securities and smaller IPOs. The exchanges featured face-to-face “double auction” trading while the over-the-counter markets used a quote-based system, originally communicating via telephone and then moving online. However, this is a woefully outdated comparison. Due to technology advancements, mergers, and acquisitions, the traditional differences between the two have been erased. And the changes are just gettin’ started!

Historically, all trading on the securities exchanges was done on the trading floor. Trading was conducted using a “double auction” system. Instead of the “one seller, multiple buyers” that you would see at an estate or farm auction, for example, there were “multiple sellers and multiple buyers,” all calling out prices and quantities of stocks they were buying or selling on behalf of their clients. But due to both technology & the sheer massive volume of shares traded, things have changed. Almost all of the trading is now conducted electronically. Some large trades still involve human interaction but they now consist of far less than 1% of the total number of trades. Many in the industry have declared the trading floor dead. For those interested in the history of the exchanges and the double auction process, there are numerous videos available online of brokers calling out prices and quantities, simply type “stock exchange videos historical” into YouTube or any search engine.

The New York Stock Exchange, aka NYSE, the Big Board

The largest exchange in the United States is the New York Stock Exchange, commonly referred to as the NYSE and the “Big Board.” For over 200 years, the NYSE has been the dominant exchange in the United States. Traditionally, it was responsible for over 90% of the volume of transactions on all the exchanges. There are approximately 2,400 companies traded on the Big Board worth about $28 trillion as of March 2024. Between 2 and 6 billion shares trade daily.

Companies traded on the NYSE must meet stringent listing requirements. Traditionally, these companies were the largest and most prestigious. If a company fails to continue to meet the NYSE requirements, the company can be delisted. This happens when a company falls on hard times and the stock price plummets.

Many people believe that the NYSE was the first stock exchange in the United States. Actually, that distinction belongs to the Philadelphia Exchange. However, the NYSE quickly grew to be far larger than its older sibling. It was established as a members-only entity in 1792 named after their favorite meeting place, a buttonwood tree on Wall Street when Wall Street really was next to a wall in lower Manhattan.

Traditionally, change happened slowly at the NYSE. It wasn’t until 1967 that the first woman, Muriel Siebert, was admitted as a member. The first minority member, Joseph L. Searles III, was admitted in 1970. In 1991, the first minority-owned company, BET Holdings, was listed on the exchange. The next year in 1992, the exchange celebrated its 200th birthday. That year, if you had told the folks at the NYSE that the next 20 years would see far more changes than in their first 200 years, they would have thought that you were quite insane. However, you were about to prove them wrong.

By 1992, the face-to-face double auction system had already shown itself to be woefully inadequate to keep pace with sheer volume of trading. If there were any doubts, Black Monday and the Crash of 1987 put them all to rest. The NYSE began moving as quickly as possible to electronic trading. They also began a push to expand through acquisitions. In 2005, the Big Board purchased the Archipelago electronic exchange and the Pacific regional exchange. (We will discuss more about these two systems soon.) In March of 2006, they changed their business structure from a members-only partnership to a publicly traded corporation. You could now buy shares in the New York Stock Exchange! That year, they merged with the Euronext electronic exchange and aggressively started to phase out the face-to-face double auction trading in favor of exclusively trading electronically.

Here is where events start to appear similar to something out of a science fiction or fantasy movie. In 2011, Germany’s stock exchange, the Deutsche Börse AG based in Frankfurt, tried to purchase the New York Stock Exchange. The European regulators blocked the deal. Two years later, on November 13, 2013, the NYSE was acquired for $11 billion by a 13-year-old derivatives trading firm from Atlanta, the Intercontinental Exchange. This was a company that did not exist until the 21st Century!

In the historical videos, from afar, the interactions on the floor of the exchange appear to be pure chaos. People, mostly men, are scurrying about with different colored jackets. Some are standing in one place and wildly gesturing and shouting. If one were to approach a particular group, it would become clear what is happening. The people are making deals with one another. Most of the individual buying and selling are floor brokers. The floor brokers executed orders on behalf of their firm’s customers or occasionally on behalf of their firm’s own account. Some are independent brokers who provide as-needed execution services to other brokers, independent of a particular firm. The floor brokers were very worried that the NYSE’s aggressive moves to all-

electronic trading meant the end of their way of life. It was not really the end; it was just a big change – from face-to-face interaction to sitting in front of a computer screen all day. Sound familiar? What other major institution is experiencing the same transition? (Hint: You are enrolled at one such institution. Education!)

Some of the professionals on the floor of the exchange had a special role. The specialists were stock exchange members who specialized in making transactions in one or more stocks. The job of the specialist was to manage the auction process. The specialist bought or sold the stock from their own inventory to provide a continuous, fair, and orderly market. If there were not enough buy orders to maintain an orderly market, the specialist was required to step up and buy. Likewise, if there were not enough sell orders, the specialist was expected to offer his or her shares for sale. The role of the specialists has essentially been squeezed out by technology and the tremendous volume of trading. They are involved in only a tiny amount of trading each day.

The specialists were replaced by "designated market makers" and "supplementary liquidity providers" in 2009. From time to time, the specialists were either praised or maligned. Suffice to say that the specialists were trying to make a profit just like everyone else. While their goal may have seemed altruistic, they made sure that when the market received benefits from their efforts, so did they.

The American Exchange, aka, the Curb, now the NYSE American Exchange

For decades, the American Stock Exchange was the distant challenger to the NYSE. The AMEX, as it was commonly called, never achieved more than 3% of the total volume of shares traded on all exchanges. Another popular name for the American Exchange was the "Curb." Where did that name come from? The AMEX literally started on the curb outside the NYSE! Their brokers would follow the action of the NYSE by looking inside the window and then trade outside. Happily for them, they were able to move into a permanent location down the street from the NYSE. (It gets cold in New York in the winter!)

By the early 1990's, the AMEX started concentrating on securities other than stocks over 20 years ago. The Exchange Traded Funds (ETFs) that we discussed in our chapter on mutual funds were first introduced on the AMEX. The changes in the industry did not escape the AMEX. In 1998, the NASDAQ purchased the American Exchange. (We will discuss the NASDAQ very soon.) The AMEX then was kicked to the curb (pun intended) in 2004 by the NASDAQ. Finally, in 2008, the NYSE purchased the American Exchange and moved them down the street into the NYSE's building on Wall Street. The NYSE first changed the name of the AMEX to the NYSE MKT and then mercifully changed the name to NYSE American.

The Regional Exchanges

The regional stock exchanges were modeled after the NYSE and AMEX. They only ever accounted for 4% of all exchange volume. These include the Chicago, Philadelphia, Pacific, Boston, Denver, and Cincinnati exchanges. Each is a single location where the trading took place with the exception of the Pacific Exchange which was located in both San Francisco and Los Angeles. Many of the securities listed on the regional exchanges are also available on the NYSE or NASDAQ. Traditionally, the regional exchanges were often places where undesirable or unethical issues were sold. The regional exchanges have tried to diversify and differentiate themselves from the NYSE and NASDAQ in order to survive. Plus, the regional exchanges have not been immune to the rush to consolidate. The NYSE bought the Pacific Exchange and the NASDAQ bought the Philadelphia and Boston Exchanges.

Options and Futures Exchanges

We briefly discussed the two major types of derivatives in our first chapter, options contracts and futures contracts, typically referred to as options and futures. Briefly, options allow traders to sell or to buy an underlying security at a specified price for a given time and futures are contracts that guarantee the delivery of a specified commodity at a specific future date at an agreed-on price. We will discuss these in detail toward the end of the class. The Chicago Board Options Exchange (CBOE) was organized to facilitate options contracts trading and likewise, the Chicago Board of Trade (CBT) was created for futures contracts trading. Options and futures are also traded on most all the major and regional exchanges now as well as the CBOE and CBT.

Over-the-Counter Markets and the Role of Dealers / Market Makers

Over-the-counter markets (OTC) started out as widely scattered telecommunications networks through which transactions of securities were made. In an over-the-counter market, there is no single location as with an exchange. It is a quote-based system as

opposed to the face-to-face double auction of the exchanges. Decades ago, the widely scattered telecommunications network took the form of people scattered around the country calling one another on the phone and making deals and transactions.

Two of the groups that make up the OTC are the OTC Bulletin Board and the OTC Pink Sheets. And yes, you guessed correctly, the Pink Sheets got their name from their newspaper that listed the thousands of companies and their most recent prices. The newspaper was printed on pink paper. The Pink Sheets are now called the OTC Markets Group. There are approximately 5,000 companies listed on the Bulletin Board and 10,000 companies listed on the Pink Sheets. Virtually all of these companies are sham corporations that should not be discussed in polite company. Their stocks are typically used in swindles. There are some legitimate issues but they are the exception, not the norm. Our advice is to stay far away from the OTC Bulletin Board and OTC Pink Sheets. In recent years, these two groups have stated publicly that they are trying to clean up their acts. However, the sham corporations remain.

The OTC markets use dealers instead of brokers. Dealers, also called market makers, are traders who "make markets" by offering to buy or sell certain securities at stated prices. Similar to the specialists of the exchanges, the dealers / market makers offer buy and sell quotes from their own inventory of stocks. This is different from brokers who simply serve as go-betweens between buyers and sellers and typically keep no inventory. The dealers / market makers post an ask price and a bid price. The ask price is the retail price; it is the price that we retail investors will pay for the shares we want to buy. The bid price is the wholesale price; it is the price we will receive when we sell the shares back to the dealer / market maker. The dealers / market makers earn money from the bid-ask spread, the difference between the ask price and the bid price.

For those who live close to a border such as the United States / Mexico border or the United States / Canada border, this system should be familiar. Situated along the borders are money exchange houses that keep an inventory of United States dollars and Mexican pesos or United States dollars and Canadian dollars. Here is a presentation that highlights the "casas de cambio" that you find along the United States / Mexico border. There is not just one price advertised. There are two prices. When you want to exchange your dollars to pesos, for example, you will receive one price – the ask price – for your dollars. When you want to change the pesos back into dollars, you will receive a lower price – the bid price – for your pesos. This is exactly how it works on the OTC markets. The dealer's markups or markdowns are not reported to the customers whereas the broker's commissions are reported. (Psst. How do you think the Internet brokers make money on only $5 or $7 or now $0 per trade? Stay tuned.)

So how did these OTC markets work before modern telecommunications? An OTC dealer in Minneapolis held shares of a tiny company based in someone's garage in Iowa or Idaho or one of those places that starts with the letter I. Another OTC dealer in Mobile, Alabama, found a sucker, oops!, we mean, a client who wanted to buy the shares of the garbage, sorry, garage company. After the dealers hung up on each other a few times, the deal was finally made. The client in Mobile was now the proud owner of 10,000 shares of Flim Flam, Inc. worth a total of $70 at $0.007 per share. Of course, if our hero immediately wanted to sell his 10,000 shares back, the dealer in Minneapolis would only give him $0.005 per share for a total of $50. The bid-ask spread in this case is $0.002, a small sum indeed but equivalent to 28% of the ask price. Our hero just lost 28% from buying the shares. Of course, virtually all the transactions are now executed online with no human interaction but the result is the same. Most of the shares are garbage.

Traditionally, the NASDAQ was lumped together with the other two OTC markets. Today, NASDAQ does not want to be associated in any way with the OTC anymore, and deservedly so. It warrants its own section.

The NASDAQ

The NASDAQ was created by the NASD, the National Association of Securities Dealers. NASDAQ initially stood for the National Association of Securities Dealers Automated Quotation system. The National Association of Securities Dealers was the non-governmental organization that used to be responsible for self-regulation of registered representatives. The NASD was sponsored by the Securities and Exchange Commission (SEC). In 1971, the NASD created the NASDAQ, the first electronic communications network for trading securities. The NASDAQ used to be the arena for small companies to get started. Once the companies became large enough to qualify for listing on the New York Stock Exchange, they would typically move to the NYSE. However, since the 1980's, many prestigious companies decided to stay on the NASDAQ rather than move to the NYSE. You may have heard of a few of them? Ever hear of Apple or Microsoft or Google or Amazon? One can guess with absolute surety that when this started to happen, there were two words that came out of the mouths of the executives sitting atop the 23rd floor of the NYSE building. The first word was, "Oh," just in case you were wondering.

Although still smaller than the NYSE, the NASDAQ has made the securities trading industry a two-horse race. The National Association of Dealers gave up their position as the non-governmental organization responsible for self-regulation of registered representatives. (That task is now served by FINRA, the Financial Industry Regulatory Authority.) They also changed their name to NASDAQ. No more NASD, no more National Association of Securities Dealers Automated Quotation system, and certainly no more association with the OTC markets. The NASDAQ is simply the NASDAQ and it provides up-to-date bid and ask prices on approximately 3,300 stocks.

The NASDAQ is now a three-tier system. There is the NASDAQ Global Select Market. These are 1,200 companies that would easily qualify for the NYSE, the "crème de la crème." There is the NASDAQ Global Market, née NASDAQ National Market, that consists of 1,450 larger companies. The third tier is the NASDAQ Capital Market, née NASDAQ SmallCap Market, that lists 650 smaller companies. In an obvious jab at the NYSE, in their advertising, the NASDAQ began positioning itself as the "Securities Market of the Future" as it became apparent that the traditional face-to-face, double auction model was not adequate to keep up with the massive increase of trading. The value of the companies on the NASDAQ is roughly $25 trillion as of March 2024.

Alternative Trading Platforms: The Third and Fourth Markets

With the advent of telecommunications and computing advances in the 1980's, two alternative trading platforms began to emerge. The third market was a system that sponsored over-the-counter transactions made in securities listed on the NYSE or one of the other organized exchanges. The third market was reserved for institutional investors such as mutual funds, insurance companies, pension plans, etc. The institutional investors trade in large blocks of securities and hence could realize reduced transaction costs. However, the transactions were still facilitated by a dealer / market maker. One example was the Intermarket, which was subsequently purchased by the NASDAQ and became the NASDAQ Intermarket.

The fourth market was similar to the third market. The difference was that the fourth market eliminated the dealers / market makers and let their customers make transactions directly with one another. At first, the fourth market catered to the same large institutional buyers and sellers of securities as the third market. With the advent of the Internet, they successfully started to court retail customers, creating privately owned electronic communication networks, ECNs, that automatically match buy and sell orders that customers place electronically. This got the attention of the big players. The fourth market securities trading system Archipelago was purchased by the NYSE and became the NYSE Arca. Another fourth market player, BATS, the Better Alternative Trading System, was purchased by the Chicago Board Options Exchange.

As with many of today's technological innovations, the overarching theme we see in the securities marketplaces is disruption. The relatively inexpensive and immensely powerful technologies available are allowing new companies to enter the industry and challenge the staid, storied titans of the past. No longer does a company need to be centered in New York or one of the other historical centers of finance. For example, BATS was started in a strip mall in Kansas City! As such, the newer companies are able to offer their services for less than the older companies. This has created the "urge to merge" in the industry as we saw with the NYSE and NASDAQ buying up their smaller rivals. And by no means is this just limited to the United States as we saw with NYSE merging with Euronext and Germany's stock market trying to buy the NYSE.

Finally, just in case you might be under the mistaken impression that these securities trading marketplaces are offering their services free of charge as a philanthropic gift to humanity, know that these systems are all for-profit operations. As well as other fees that are charged the companies that list on the securities trading system, there is a fee for every share that changes hands. It makes you wonder yet again how brokerage firms are offering their customers commission-free trades. (Stay tuned!)

"One Big Malignant Casino?"

You may share the same thought that many people believe and ask, "C'mon, Paiano! Isn't the stock market all just one big malignant casino?" It is a legitimate question. Simply put, the answer is, "Yes," and "No." At first, this response seems confusing and at odds with itself. How could it be both, "yes," and, "no?" It depends upon how you approach stock investing. The answer is, "Yes," for many individuals who see the markets as one big crapshoot. For them, the way to riches is to buy and sell, buy and sell, buy and sell. We call them speculators or traders. Speculating is very difficult and you are up against the best in the business. Neophytes become very upset when the market turns against them. There is a reason why we often call speculating or trading, "The Loser's Game." (This term was coined by Charles Ellis. Please see the Bibliography for more about "Charley.")

The answer is also, “No.” Many others look at the stock market and the other capital markets as a way to participate in the growth and prosperity of the global economy. We call them investors. With a prudent, long-term orientation, investors are usually very well rewarded. How will you answer the question? Obviously, we hope that you will choose the latter and choose to be an investor. This gives us yet another opportunity to quote from Mr. Benjamin Graham.

> *“An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative.” − The Intelligent Investor, Benjamin Graham*

One might be tempted to counter, “Oh, yeah, but what about Enron? Aren’t corporations all crooks?” Fraud and accounting trickery and gimmicks have always been with us. They are always going to be with us. The bank robber, Willie Sutton, when asked why he robbed banks, reportedly was quoted as answering, “Because that’s where the money is!” (He didn’t actually say it, though. A random reporter just made it up. Mr. Sutton was very grateful, though, as it helped him “build his brand,” as we would say now.) Normally, but not always, those firms are relegated to the nether reaches of the OTC markets. But for every one Enron, there are hundreds – no, thousands! – of companies that continue to do business with integrity and honesty (uh, usually). In 1973, it was Equity Funding. In 1986, it was Ivan Boesky and Michael Milken and Vagabond Inns. In 2002, it was Enron, Global Crossing, Tyco, and WorldCom. In 2008, it was Fannie, Freddie, Lehman, Citi, WaMu, Wachovia, and AIG. And don’t forget Bernie Madoff who made off with $13 billion dollars from his luckless investors. Ten or twenty years from now, during the next big bull market craze, someone else will take their place.

To recap, the securities markets exist to allow investors a safe, cost-effective method to participate in the success of the global economy. And even with all the underhanded shenanigans, they have performed very well. They are changing at breakneck speed and the change is accelerating. Whether or not we ever have one or more oft-mentioned global, 24-hour trading markets remains to be seen. But it is exciting and for some, scary, to watch, especially for those of us in the industry who have a stake in the outcome.

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3.3: Stock Transactions, Transaction Costs, and Stock Quotes



Video - Audio - YouTube

We now know where the stock transactions take place. Let's discuss what types of transactions we can use to buy and sell our stocks, how much it costs to conduct those transactions, and how and where we can get stock quotes.

Types of Stock Transactions

There are several types of stock transactions. We will cover the four major types. If and when you ever take the Series 7 Registered Representative (aka Stockbroker) exam, you will need to learn many more. However, in Your Humble Author's opinion, there is really only one type of transaction a prudent, long-term investor will ever need, the market order. A market order is an order to buy or sell at the current price. You want to buy some shares, you buy them and pay the current market price. If you want to sell some shares, you sell them and you receive whatever price the transaction offered. With today's technology, the order will execute in milliseconds or sooner.

An investor may be thinking, "I want to buy this stock but the price is too high at $25. If it ever drops down to $20, I will buy 100 shares." This investor would use a limit order. The investor would enter a limit order to buy the stock at the price they specify. The same situation would apply if an investor held shares and thought, "If the price ever reaches $30, I want to sell." The investor would specify a limit order to sell the stock at $30. With a limit order, the investor knows what price they pay or receive. However, the downside is that the transaction might never take place. The price may never fall to the buy limit price or rise to the sell limit price.

A third type of transaction is called a stop-loss order, also known as a stop order. Stop-loss orders are similar to market orders. However, with a market order, the investors cannot specify what price the transaction will settle. With a stop-loss order, the investor

is saying, “If the price ever reaches a price that I specify, execute the order as if it were a market order.” Stop-loss orders are typically used to protect an investor from incurring a loss. “If the price ever falls below the amount I specify, I want the stock to be sold.” This is why they are called stop-loss orders.

A stop-limit order is very similar to the stop-loss order. The key difference is that a stop-limit order becomes a limit order, not a market order, when the trigger point is reached. To illustrate this subtle difference, say an investor utilizes a stop-loss order to protect from a loss. “If the price ever falls to $20, sell at the market.” For whatever reason, what if the price fell quickly from $25 to $16. This is very unusual but it happens. The stop-loss order would be triggered and the investor would receive the $16 price for their shares. A stop-limit order might specify, “If the price ever falls to $20, sell my shares but only sell if the price stays at $20 or higher.”

Your Humble Author normally uses and recommends market orders. Short-term traders often state that they prefer limit orders, stop-loss orders, or stop-limit orders on all their trades. Although you can use limit orders to buy or sell at the price you want and stop-loss and stop-limit orders to “lock-in” profits or protect against losses, remember that they trigger automatically. If for some reason you change your mind, it is often too late to cancel the order. The order will be executed in thousandths of a second or quicker.

Types of Stock Transactions

Order Type	Buy	Sell
Market order	Buy at the best price available. Order will execute almost instantaneously.	Sell at the best price available. Order will execute almost instantaneously.
Limit order	The order will be executed at the buy limit price or lower. The order may never be executed if the price does not fall low enough.	The order will be executed at the sell limit price or higher. The order may never be executed if the price does not rise high enough.
Stop order	The order will be converted to a market order to buy when the stock price crosses the stop price from below. Since the order becomes a market order, the price may be much higher than the stop trigger price.	The order will be converted to a market order when to sell when the stock price crosses the stop price from above. Since the order becomes a market order, the price may be much lower than the stop trigger price. Also called a stop-loss order.
Stop-limit order	Same as a stop order except the order is converted to a limit order when the price crosses the stop-limit price from below.	Same as a stop order except the order is converted to a limit order when the price crosses the stop-limit price from above.

Transaction Costs

Traditionally, transaction costs were in the 1% to 5% range, sometimes higher. The largest portion was the brokerage commission. Deep-discount Internet brokers drove the commissions down to as low as $5 per trade. Two companies experimented with $0 trades but were unsuccessful. Some years ago, the brokerage firm Robinhood started offering free trades, targeted to young adults and has managed to stay afloat and disrupt the industry. Their success has prompted other brokerage firms to follow them with $0 trades. But have transaction costs really gone down? The quick answer is, “Yes, transaction costs have gone down.” However, more and more of the cost is now hidden from the investor.

Let’s look at an example. A deep-discount Internet broker offers trades for $5 or $7 or now $0. In the fine print of the client-broker agreement is included a provision for allowing the broker to solely utilize exclusive stock dealers / market makers. The quoted price the investor sees before making the trade is simply the best price available but at any one time, there are dozens of prices quoted as dealers and market-makers compete for buy and sell orders. The chosen dealer doesn’t necessarily have the best price. Instead of paying $20 per share, the investor might pay $20.05. So, on a 100 share transaction, the investor sees the $5 or $7 or $0 commission on their confirmation. The investor does not see the extra $5 they paid on a 100-share purchase because of the dealer’s $0.05 markup.

The following disclaimer was included in each trade confirmation email from Scottrade (purchased by TD Ameritrade which was then purchased by Charles Schwab):

> *"SCOTTRADE INC. RECEIVES REMUNERATION FOR DIRECTING ORDERS TO PARTICULAR BROKER/DEALERS OR MARKET CENTERS FOR EXECUTION. SUCH REMUNERATION IS CONSIDERED COMPENSATION TO THE FIRM AND THE SOURCE AND AMOUNT OF ANY COMPENSATION RECEIVED BY THE FIRM IN CONNECTION WITH YOUR TRANSACTION WILL BE DISCLOSED UPON REQUEST*

Our first observation is that the notice is in all upper case. Companies use all uppercase when they want something to appear important but they also don't want their customers to read it. Uppercase sentences are actually harder to read than normal upper- and lower-case sentences. The second observation is that even if we did read it, it doesn't make any sense. What are they saying? Scottrade is telling us that they are getting a kickback from the exclusive "particular broker / dealers or market centers" that they are using to execute their trades. This is how brokerage firms that charge no commissions are actually making money now. In Scottrade's defense, at least they prominently disclose this relationship. Robinhood, on the other hand, brashly declares that they are not making money using this technique when they most obviously are, at least according to both Investopedia and CNBC.

So now you know how brokerage firms can offer commission-free trades. When a friend or family member or colleague brags that they trade for free, it is your responsibility as a Rising Investment Guru to explain that, no, the trades are not free. They are paying by not getting the best price available when they buy shares and when they sell shares. Oh, by the way, this system is innocently called, "payment for order flow," or simply, "order flow." Doesn't that sound better than, "kickback?" In 2021, the Securities and Exchange Commission floated the idea of banning order flow. The industry backlash was brutal. Do not ever count on this happening, Dear Students.

Wait a minute! Doesn't the SEC say that "your broker has a duty to seek the best execution that is reasonably available for its customers' orders?" Yes, but it is not a guarantee. According to Investopedia, "… the SEC requires broker/dealers to notify their customers if their orders are not routed for best execution. Typically, this disclosure is on the trade confirmation slip you receive … after placing your order." And determining whether or not a customer got "best execution" can be very difficult. Here is an example of the SEC trying to enforce the rules and not doing a particularly good job.

The SEC was looking into making the costs more transparent. They possibly would require the brokerage firms to show their customers the difference between the dealer's price and the best price available at the time of the transaction. They might even – gasp! – show the total cost of the transaction from the markup/markdown. Needless to say, the deep-discount brokers cried that it would drive up the cost of commissions and ultimately hurt the consumer and the proposal died. So, it is up to you to check if you are getting the "best execution." But how can you, a lone investor, determine if you are getting the best price if even the SEC has trouble watching over the brokerage companies? Wait. It gets worse.

High Frequency Trading

Who are these particular broker/dealers that the commission-free brokerage firms are routing their customers' transactions to? They are typically High Frequency Trading (HFT) firms. HFT uses computers to transact large numbers of orders at very fast speeds. For example, Robinhood routes the majority of their transactions to a firm called Citadel. High Frequency Trading and firms such as Citadel were detailed in an excellent book, *Flash Boys*, written by famed investment author Michael Lewis. There is little doubt that High Frequency Trading has reduced transaction costs dramatically. However, at the same time, HFT firms have been accused of using their ability to transact at the microsecond level to "front-run" investors. They are essentially stealing tiny amounts of money from the average retail investor and even large players like mutual funds and pension funds.

In his book, Mr. Lewis is the first person to tell you that no one actually knows how much the HFT firms are stealing from investors from front-running. The HFT firms keep their technology under lock and key. From experts in the field at the time of the writing of the book, the best guesses ranged from five to fifteen billion dollars per year. To the average person, that is a staggering sum of money. However, if we split the difference and say $10 billion. That is approximately how much money is bet each year on the NCAA March Madness Basketball Tournament. In a system where trillions of dollars are changing hands every few days, $10 billion dollars per year is actually a very small sum of money.

The hero of *Flash Boys*, a victim himself of the HFT firms' front running, started his own securities trading marketplace to combat the HFT firms, IEX, and garnered support from some major players in the world of investments including FranklinTempleton and

the Capital Group. IEX created what they call a “speed bump” so the HFT firms cannot “jump” in front of you and “front-run” your transaction. In June 2016, the SEC approved IEX’s bid to become an exchange. In 2017, the New York Stock Exchange followed suit and added their own speed bump, but only for small- and mid-sized companies.

At the time of the writing of the book *Flash Boys* in the early 2010’s, there was much publicity and controversy regarding High Frequency Trading. FINRA, the Financial Industry Regulatory Authority, and the SEC, the Security and Exchange Commission, both were publishing statements saying how they were investigating HFT to determine whether or not HFT firms were taking unfair advantage of investors. And then in 2015 or so, the statements stopped. The best that one can guess from their silence is that, yes, the authorities are aware that the HFT firms have an unfair advantage and are exploiting that advantage. But at the same time, HFT has reduced transaction costs dramatically. To coin an old adage, do the authorities want to throw out the baby with the bath water?

The lesson we retail investors can learn from HFT is that we are once again reminded how difficult short-term trading is. Not only do we have to tame our human emotions, we are also up against firms with billions of dollars invested in systems that can trade millions of shares in milliseconds. We are totally outgunned. We come to the fight with our pistol; they come with automatic assault rifles, tanks, and jet fighters.

Round Lots, Odd Lots, Mixed Lots

Traditionally, brokerage firms would encourage their customers to buy shares in round lots. This was encouraged because it helped speed up the transaction process on the floor of the exchanges. A broker would call out, “25!” while pulling his arms toward himself. This meant that the broker wanted to buy 100 shares, one round lot, at 25 per share. If the broker had pushed her arms away from herself, it signified that she had 100 shares to sell at 25. “2 at 25!” meant that he had 200 shares, two round lots, to buy or sell.

An odd lot is a quantity to sell less than 100 shares. If a customer wanted to buy or sell 17 shares, the broker would need to yell, “17 shares at 25!” and either signal a purchase or a sale using their arms gestures. This slowed the trading process. Hence, brokers would charge their clients an odd-lot differential. Traditionally, this was typically 12½ cents to 25 cents extra per share. or increments of 100 shares. Mixed lots of more than 100 shares but not divisible by 100 were also subject to the odd-lot differential. The face-to-face double auction trading process is now part of ancient history and so the need to buy and sell in round lots is a thing of the past. The odd-lot differential now is typically waived or far less than 5 cents per share, often much less. Nevertheless, old habits die hard and some of your older friends or family members will admonish you to always buy in 100 share round lots. Don’t listen to them. Since this is such a small matter, there is no need to waste your time trying to convince them that it is no longer necessary to buy in round lots. Wait until they are ready to sell everything after the market has fallen 50%. That is when they really need your expertise.

The competition for your investment dollars has become so intense, in fact, that brokerage firms are now allowing investors to buy fractional shares of stocks. Was one share of Amazon too much for you at over $3,000 per share in February of 2022? If you had $100 to spare, you could have purchased 0.03000 shares with that $100. Ah, don’t expect to get a very decent price using a service such as this. The markup will be substantial. (In our BUS-121, Principles of Money Management, class, we warn students that the price of convenience is typically very high. Note: Amazon split their stock 20 to 1 in June 2022. It now sells for over $200.) Your Humble Author does not use any of these services. If any students do, it would be greatly appreciated if you could relate your experiences. Did the brokerage show you the difference between the best price available and what price they sold you the fractional shares? One brokerage firm that offers this service is Schwab. In the fall of 2022, I contacted one of their representatives and asked how much they charged for this service. He had no idea and said he would do some research and get back to me. He never did.

Stock Quotes

Before the Internet (BI?), most people would wait until the next morning to read the price quotes of their favorite stocks. They were published in every major newspaper. If the need for a stock quote was urgent, you would call your broker who had a Quotron machine in his or her office. The Quotron machine was receiving data directly from the stock exchanges and OTC markets. How 20th Century!

Now we simply swipe our mobile device and a fire hose of information about our stocks drenches us. One peculiarity to know about stock quotes from the Internet is that they are typically not up to date. You may have an account with a broker that offers you real-time quotes. But unless you have been assured ahead of time from your source that you are receiving real-time quotes, the quotes are normally delayed 15 to 20 minutes. (Real-time quotes are yet another fee that stock markets charge for.) Also, always remember that the quoted prices are not the only prices available. At any one time, there are many prices available from many different dealers/market-makers. The quoted prices are simply the best prices available.

Different sources will contain different amounts of information. A few of the more popular free websites available are bloomberg.com, marketwatch.com (free version of Wall Street Journal), morningstar.com, finance.google.com, and finance.yahoo.com. Bloomberg, Marketwatch, Morningstar, and now Yahoo Finance will pepper you with solicitations to enroll in their monthly subscription services. There are others. If you have any experience with any other free websites that you believe would be worthwhile to your fellow students, please contact us.

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3.4: Stock Market Averages and Indexes; Volatility Reexamined



Video - Audio - YouTube

Finally! We are finally at the point in our journey together where we will discuss market measures that we have been using since our first discussions about investments. It's about time! How can we say that "stocks have returned approximately 10% over the past 90 years?" The industry uses market averages and indexes. These are standards, also called benchmarks, that are used to measure the general behavior of securities prices at a given point in time or over specific time periods. In other words, they are just lists of stocks. You cannot help but hear about these every day in the news. "The Dow went down! The NASDAQ went up!" What are they trying to tell us and how much significance should we attach to them? Let's explore.

Market Averages versus Market Indexes

A few of these standards are market averages and reflect the average price behavior of the list of stocks. Most others are market indexes and reflect the relational price behavior. The differences between a market average and market index are subtle. Most people do not even know there are differences. Market averages use share price calculation only. They look solely at the price of the stock without regard to the market value of the stock. The most important example of a market average is the Dow Jones Industrial Average. Market indexes use a market-weighted calculation. They take into account the overall market value of the company as well as the stock price. The larger the size of the company, the more weight and influence the security will have in the index. The most popular example of a market index is the Standard and Poor's 500 Stock Index. Market-weighted calculations are generally regarded as better measures than market averages but for our purposes, the differences are mostly unimportant. As with anything we humans have done, neither is perfect.

The Dow Jones Industrial Average and other Dow Averages and Indexes

In 1896, Charles Dow and his partner, Edward Jones, created the Dow Jones Industrial Average, a list of 12 stocks. It is also represented as the DJIA, the Dow Average, or simply the Dow. The Dow is the second oldest market benchmark and is the most famous of all stock market measures. The list of companies in the average is composed of 30 high-quality stocks selected for total market value and broad public ownership and believed to reflect overall market activity. Since it is an average, it uses share price calculation only, not taking into account the size of the company. As the economy and technology change and evolve and companies rise and fall, from time to time, the list of stocks is adjusted. Some companies are removed and others take their place. As such, it now has more non-industrial stocks than industrial stocks. Although the Dow is by far the most popular index and is reported more than any other, with only 30 companies, it really isn't the best measure of the stock market's performance.

For decades the Dow was managed by Dow Jones, the company that publishes the Wall Street Journal. Dow Jones was controlled by a close-knit family for generations, the famed Bancrofts. The stock of the company was selling for approximately $36 when in 2007, Rupert Murdoch of Fox News, offered to buy all shares for $60 per share and fold the business into his publishing empire. Some in the family did not want to sell. However, the allure of the elevated premium was too powerful to resist. Since then, it appears that Fox News has either sold or simply delegated the management of the Dow to Standards and Poor's, the research company that manages the Standard and Poor's 500 Index and the subject of our next section. However, it is difficult to know for sure the exact nature of the relationship between Dow Jones and Standard and Poor's. If anyone wants to take on this research as an extra credit assignment, please contact me.

Table 3.4.1: The Thirty Stocks of the Dow Jones Industrial Average

American Express	Goldman Sachs	NVIDIA
Amazon	Home Depot	Procter & Gamble
Amgen	Honeywell	Salesforce
Apple	IBM	Sherwin-Williams
Boeing	Johnson & Johnson	3M
Caterpillar	J. P. Morgan Chase	Travelers
Chevron	McDonald's	United Healthcare
Cisco Systems	Merck	Verizon
Coca Cola	Microsoft	Visa
Disney	Nike	Walmart

The table above lists the 30 stocks that are contained in the Dow Jones Industrial Average as of February 2025. Only a handful are associated with the industrial industry. That is why it is more often referred to as the Dow. Also, the past 25 years have seen numerous changes in the makeup of the index. Many of the recent changes have seemed erratically, questionable, and even slow-witted. For example, AIG and Citigroup were removed from the Dow as they teetered on the edge of bankruptcy. GM was in bankruptcy when it was removed. This is yet another reason why the Dow is not a good measure of stock market performance. With only 30 stocks, just one or two spectacular failures muddle the long-term results.

There is a more insidious problem with the Dow. For example, you may hear after a severe market downturn, "The Dow is where it was 15 years ago!" The problem with this statement is that the Dow 15 years ago was a very different index. Many of the companies that are now in the Dow weren't in the index 15 years ago and others that were in the list have been removed. This is a problem with all averages and indexes but it is especially a problem with a list such as the Dow which only has 30 stocks. In Your Humble Author's opinion, the Dow should be retired. However, that is not going to happen anytime soon.

Dow Jones has many other benchmarks. One average that is followed by many is the Dow Jones Transportation Average. This average is actually the first average that Mr. Dow and Mr. Jones created. It was created in 1884, twelve years before the Industrial Average. It is a list of 20 stocks in the transportation industry. The Transportation Average is followed by many because of the

belief that the transport industry is a leading indicator of economic activity. Before the products can be produced and then sold, the raw materials must get to where they need to go to be developed into finished products and then the finished products need to be delivered to where they will be sold. Another long-lived Dow Jones average is the Dow Jones Utility Average. It was created in 1929 and contains 15 prominent utility companies. Put them all together and you have the Dow Jones Composite Average. The Transport average is sometimes reported in the media. The Utility Average and the Composite Average are rarely ever reported.

A Dow Jones benchmark which is worthy of following is the Dow Jones U.S. Total Stock Market Index. This is a broad-based index that includes large companies, mid-sized companies, and small companies, representing approximately 95% of the total market value of stocks domiciled in the United States stocks. The original index was created by Wilshire Associates in 1974 and was called the Wilshire 5000. In 2004, Dow Jones somehow cajoled Wilshire to rename the index the Dow Jones Wilshire 5000 Index and then in 2009, they kicked Wilshire to the side of the road and renamed the index to Dow Jones U.S. Total Stock Market Index. We don't know about you, but Wilshire 5000 is a whole lot easier to say than Dow Jones U.S. Total Stock Market Index, don't you agree? Unfortunately for us tongue-twisted investors, this index is important for us to be aware of. It is used in many passively-managed index funds and Exchange Traded Funds.

Another important Dow Jones index is the Dow Jones U.S. Completion Total Stock Market Index. What a mouthful! Like the Wilshire 5000, Dow Jones somehow spirited away the idea behind this index from Wilshire Associates. The original index was called the Wilshire 4500. Wilshire Associates wanted to measure the results of medium-sized and small companies. They took the 5,000 stocks in the Wilshire 5000 and then removed the 500 largest companies. This index may be familiar to those who have finished the Thrift Savings Plan assignment. One of the funds uses this index as its benchmark. Do you remember which one?

Dow Jones published many other benchmarks. One of their more forgettable indexes was the Dow Jones Internet Index. The index was created in February of 1999 as the "dot com" Internet mania was in full swing. Companies with no prospects of earnings for several years attached ".com" to their names and saw their stock prices rise tenfold! The "dot com" mania was then followed by the "dot bomb" crash. The Dow Jones Internet Index proceeded to fall 96% from its peak. Yet another example of why it is dangerous to follow the crowd to the "Next Big Thing!"

The Standard & Poor's 500 Index and other S&P Indexes

Standard and Poor's is an investment research firm with many decades of experience. They now refer to themselves as S&P Global but everyone still refers to them as Standard and Poor's, or just S&P. Their most famous index is the Standard and Poor's 500 Index, commonly referred to as the S&P 500. We have been using it in our studies since the first chapter. While the Dow Jones Industrial Average may be more popular in the eyes of the general public, the S&P 500 is by far the more influential benchmark. The index consists of approximately 500 stocks chosen for market size, liquidity, and industry group representation. Traditionally, the index contained 500 of the largest companies based in the United States. The S&P 500 is a very popular index and is used by many index mutual funds and Exchange Traded Funds.

Because the S&P 500 is market-weighted, it was affected by the Internet bubble of the late 1990's in a bizarre manner. The market values of a small percentage of technology companies were inflated to extremes. This skewed the index even more toward those companies. Consequently, in 1998, 10% of the gain in the S&P 500 was due to one stock. This same phenomenon is currently in play with the top ten companies having an outsized influence on the index.

If Wikipedia is to be believed, Standard and Poor's has over 100,000 benchmarks consisting of their own and the Dow Jones averages and indexes that they also manage. There are small company indexes, mid-sized company indexes, global and international indexes, sector indexes, you name it! None are as important as the S&P 500. Feel free to peruse them at your leisure at their website. Enjoy!

The NYSE, AMEX, and NASDAQ Indexes

The NYSE, the AMEX, and the NASDAQ all have their own composite indexes consisting of chosen stocks on their respective stock marketplaces. The NYSE Composite and the AMEX Composite Index are not generally reported by the media nor followed by the investing public. However, the NASDAQ Composite is. Since the NASDAQ is dominated by technology companies, the NASDAQ Composite is often called the "tech index." The NASDAQ Composite went from 800 in March of 1995 to 5,000 in March of 2000. As the Internet bubble burst, the NASDAQ then dropped to 1,200 in September of 2002 before starting to recover.

When this happened, you often heard the talking heads in the investment media asking rhetorical questions such as, “When will the NASDAQ reach 5,000 again?” or, “Can you believe that the NASDAQ is back to where it was in 1996?” Both of these questions show a profound misunderstanding of how indexes work. In 2000, the index was nothing like it was in 1996. Dozens and dozens of companies were not in the index in 1996 and had sprouted up during the Internet euphoria. Many of these companies were not likely to ever be profitable yet but had profound valuations. Likewise, when the NASDAQ finally did reach 5,000 again in 2015, most of those new companies that were in the NASDAQ in 2000 were gone, bankrupt, finished, kaput! The name of the index was the same. However, the companies on the list were very different.

For this reason, prudent, long-term investors may follow the popular indexes in the news as they would follow the weather. They are both interesting and a frequent topic of polite conversation. However, making any kind of investment decisions based upon the short-term or long-term performance – or lack thereof – of any particular index or group of indexes is contradictory to one’s long-term success.

The Russell 2000

In 1984, the investment research firm Russell Investments, née Frank Russell and Associates, created the Russell 2000 Index. They took the 3,000 largest companies and then chopped off the largest 1,000 companies. What is left are 2,000 small and mid-sized companies. Many investors look to the Russell 2000 as a leading indicator for the United States economy as small businesses tend to suffer sooner when an economic downturn occurs. However, smaller companies tend to recover more quickly when the economy turns around as they are nimbler and can more rapidly take advantage of new opportunities.

Global and International Indexes

After World War II, some domestic investment firms started searching for investment opportunities outside the United States. However, there was no index designed to measure the performance of global and international markets. In 1969, Capital International, then a division of the Capital Group, launched a series of indexes to measure the performance of global and international markets. In 1986, Morgan Stanley licensed the rights to the indexes and rebranded them with the title MSCI, Morgan Stanley Capital International. The most popular and useful indexes were the MSCI World Index and the MSCI EAFE Index. The MSCI World Index was meant to measure the global stock market, including the United States while the MSCI EAFE Index was meant to measure the international stock market, everyone except for the United States. EAFE stands for Europe, Australia, and the Far East. When these indexes were created, they focused primarily on developed countries. No provision was ever made for the fast-growing emerging and developing economies. As they grew, their companies were left out of the indexes. Instead of including companies from these countries, MSCI decided to launch two new indexes, the MSCI All Country World Index and the MSCI All Country World Index ex-USA. (And you thought that the Dow Jones U.S. Completion Total Stock Market Index name was bad!)

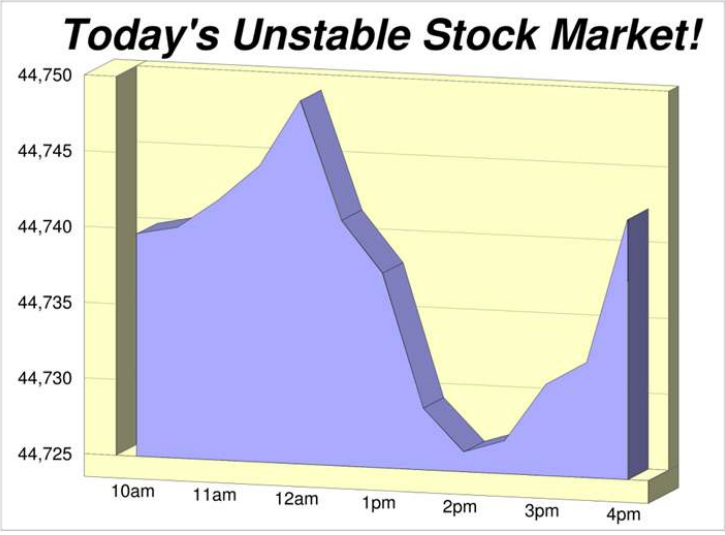
Which indexes are important for investors to follow? Each investor will decide upon which indexes are important to them or indeed, if any are important. However, for our class, we need to internalize the following eight indexes as described in Stock Worksheet #1. (As with all worksheets on the class website, there is an answer key and an audio commentary.)

Table 3.4.2: The Most Important Stock Market Averages and Indexes

Market Average or Index	Description
Dow Jones Industrial Average, also known as the DJIA or just the Dow	Stock market average made up of 30 high-quality stocks selected for total market value and broad public ownership and believed to reflect overall United States market activity
Standard and Poor's 500 Index, also known as the S&P 500 or just the S&P	Traditionally, the 500 largest stocks based in the United States chosen for their market size, liquidity, and industry group representation
NASDAQ Composite	Market index mostly composed mainly of high-tech companies based in the United States
Dow Jones U.S. Total Stock Market Index, née Wilshire 5000	Market index designed to gauge the total United States stock market
Dow Jones U.S. Completion Total Stock Market Index, née Wilshire 4500	Market index designed to measure the total United States stock market *excluding* the largest 500 companies, very popular with many index funds
Russell 2000	Market index most often used as a measure of the strength or weakness of medium-sized and small-sized companies based in the United States
MSCI All Country World Index (née MSCI World Index)	Market index designed to measure the global stock markets of the world *including* the United States
MSCI All Country World Index ex-USA (née MSCI EAFE Index)	Market index designed to measure the international stock markets of the world *excluding* the United States

Stock Market Index Mania!

The job of the mass media is to keep you on the edge of your seats. *"Stay tuned for the latest disasters!"* The investment media is not immune from sensationalism. Each day, you will be bombarded with graphics similar to this one, entitled *Today's Unstable Stock Market*:



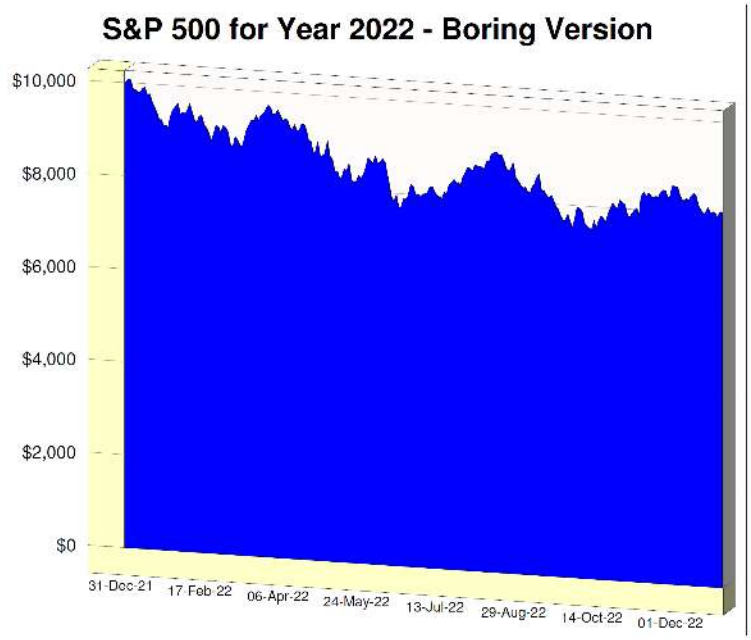
There is a joyful little book entitled *How to Lie with Statistics* by Darrel Huff. It was written in 1954 so the numbers are very different from what we would see today. Nevertheless, the concepts are timeless. In the book, Mr. Huff shows us one of the most common ways to lie with statistics is to simply not show the whole story. In this case, by just showing you the Dow from 44,725 to 44,740, we perceive that the market is widely convulsing up and down. However, if we were to include from 0 to 45,000, the graphic would show a much different story. Please consider today's stable stock market:



This graphic would not elicit much emotion, would it? Good! That's what we want! When the news or radio or website is screaming about how volatile the stock market is, please pull out this graph and remind yourself what their scary slick graphic would look if they showed us the whole picture.

Volatility Reexamined

We can now revisit volatility. Here is the same graph of the S&P 500 Index for the year 2022 that we first saw at the beginning of this chapter. The only difference is that this graph shows us the whole picture, starting at $0. For Your Humble Author, when we get to this slide in a face-to-face class, this is typically one of the most satisfying moments in the whole semester. Invariably, you can literally see the faces of at least a few students relax as they realize, "Hey! A 30% downturn ain't so bad. I can handle it."



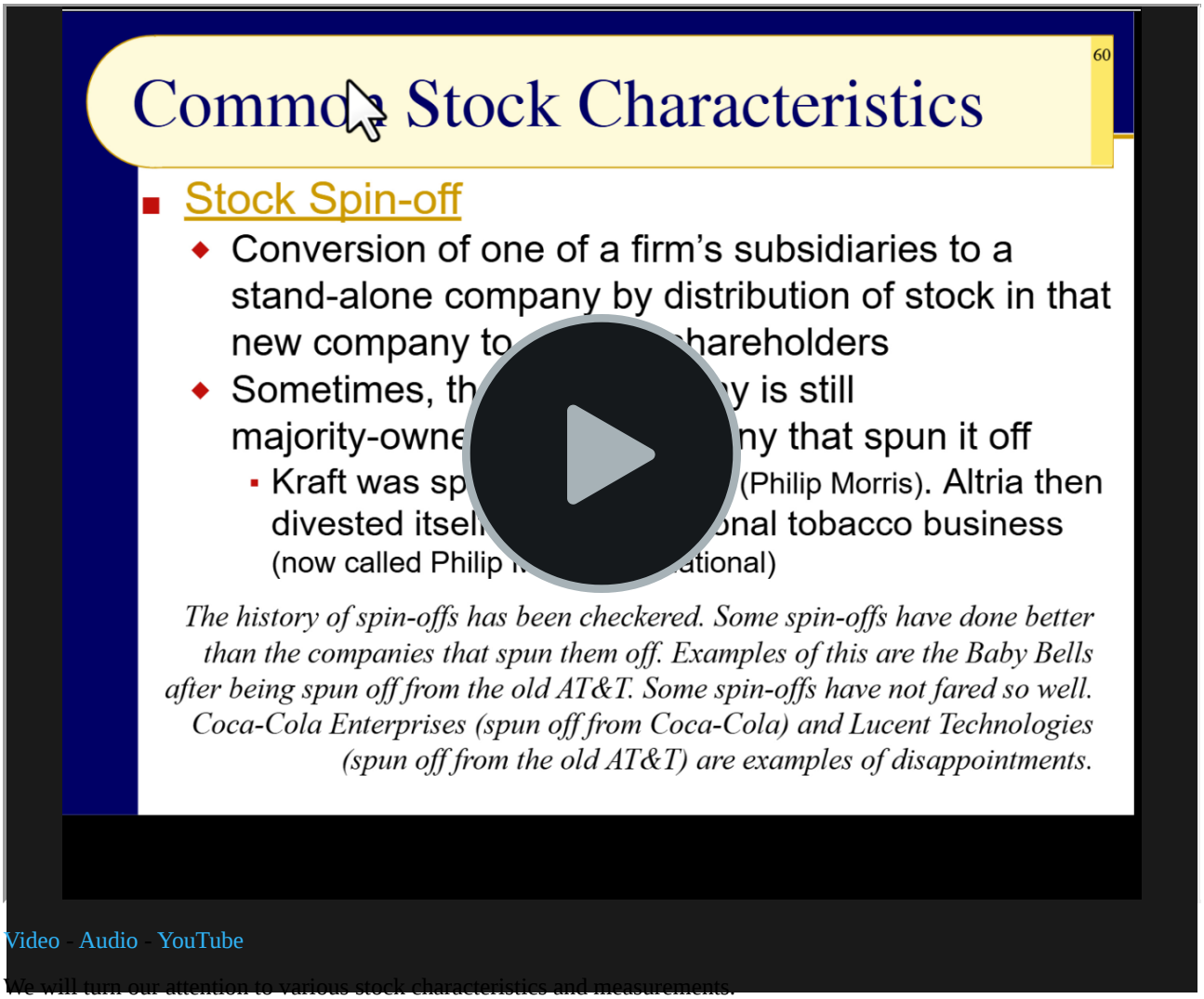
P.S. You won't see this graph on the nightly financial news!

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3.5: Stock Characteristics and Measurements

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We will turn our attention to various stock characteristics and measurements.

Stock Spinoffs

A stock spin-off is the conversion of one of a firm's subsidiaries to a stand-alone company by distribution of stock in that new company to existing shareholders. After the spin-off, the investor will still have shares in the previous firm but will now also have shares in the company that was spun off. Sometimes, the new company is still majority-owned by the company that spun it off. Examples include Kraft Foods which was spun off from Altria, the makers of Philip Morris and Virginia Slims cigarettes. Altria then divested itself of its international tobacco business, now called Philip Morris International. After both spin-offs were spun off, investors held shares in Altria, Kraft, and Philip Morris International.

Some investors show keen interest in spin-offs. They believe that the-spin off is being undertaken because the management believes the spun off company will be successful on its own. You will hear some in the industry say, "This spin-off will unlock value." However, the history of spin-offs has been checkered. Some spin-offs have done better than the companies that spun them off. Examples of this are the Baby Bells after being spun off from the old AT&T 1984. Two of the companies grew to be Verizon Communications and SBC Communications. Verizon used to be Bell Atlantic. SBC Communications bought the old AT&T in 2005

and changed its name to AT&T. Some spin-offs have not fared so well. Examples of this are Coca-Cola Enterprises, spun off from Coca-Cola, and Lucent Technologies, spun off from the old AT&T. Both were disappointments to their investors.

Stock Splits

A stock split is an accounting maneuver in which a company increases the number of shares outstanding by exchanging a specified number of new shares of stock for each outstanding share. The most popular split is 2 for 1 split. For example, in a 2 for 1 split, if you had 100 shares, after the split, you would now have 200 shares. Of course, the price will also experience a 2 for 1 split. The price will fall in half. There is no increased value from stock splits. If you had 100 shares at $20, now you have 200 shares at $10; the value is still $2,000. It is a psychological increase at best. Warren Buffett of Berkshire Hathaway has refused to split his stock since its inception. As of February 2025, a single share was selling for over $700,000!

Historically, the investment community encouraged companies to split their stock prices because of the historical face-to-face double auction system. Recall that to facilitate trading, investors were encouraged to buy round lots in multiples of 100. When a stock price starts to get into the 100's of dollars, 100 shares can become very pricey and out of the reach of many investors. With the new technology, there is no longer any advantage to buying and selling round lots. The computer system does not care if there are 100 or 17 or 5 or even one share. Therefore, stock splits are not as common as they once were.

Two for 1 splits are not the only types of splits. There are 5 for 1 splits, 3 for 2 splits, etc. There are even reverse splits. For example: a 1 for 10 split means that the company will replace 10 of your shares with only 1 share. What is the rationale for this? When a stock price falls below approximately $5, the company's standing in the investment community suffers. Not only that, but the listing requirements of the NYSE and NASDAQ come into play and the company may become in danger of being delisted. To compensate, the company will issue a reverse split. For example, if an investor owned 100 shares of a stock that were selling for $2 and the stock split 1 for 10, the investor would now only own 10 shares. However, the price would jump to $20. Recall that the value does not change, only the accounting. A reverse split is usually a sign of a company in distress.

Treasury Stock and Share Buybacks

Treasury stock are shares of stock that have been issued to the public and then subsequently repurchased by the issuing firm. The process of repurchasing stock by a company is called a share buyback, also known as a share repurchase or simply a buyback. The shares are taken out of circulation. Hence, share buybacks reduce the number of outstanding shares. The logic being that after the buyback, there is less supply of outstanding stock. And any first semester student of economics will tell you if the supply of a product or service is reduced, assuming the demand does not change, the price should rise. Existing shareholders now have a larger percentage ownership of the corporation.

During the run-up of the 1990's, share buybacks were often seen as a better alternative to dividend increases. The belief was that investors were more interested in capital gains than dividends and that buybacks increased the potential for capital gains by reducing the supply of stock. Recently, with interest rates at generational lows, companies borrowed money to repurchase shares of their stock, as well as pay additional dividends. The dramatic lowering of corporate tax cuts in 2017 also prompted many corporations to accelerate their share buybacks, instead of the promised productivity and wage gains.

Common Stock Classes

From time to time, some corporations will issue different classes of common stock. Typically, there might be two classes but sometimes more. At one time, General Motors is reported to have had seven classes of stock. One typical reason for two different classes of stock is to allow the original owners or family to have specific privileges that retail investors do not receive. For example, the A shares of a company stock would be for the general public and the B shares would be owned only by the family and they would receive a much higher dividend. Sometimes, the B shares have far more voting rights per share allowing the original owner or the family to keep ultimate control over the company. This is how Facebook structured their two share classes. The A shares are owned by the general public while the B shares are owned by the CEO and executive team. The B shares have 10 votes for every 1 share and give the CEO 58% of the voting rights, essentially ensuring that no other shareholders will ever have a voice in the operations of the company. This structure is increasingly being used in many technology companies such as Lyft and Google. Recently, The Council of Institutional Investors (CII) and other shareholder groups have begun to petition the NYSE and

NASDAQ to limit the use of these techniques, arguing that these structures are ultimately not in the best long-term interests of retail shareholders.

There is an interesting story about multiple shares classes and Berkshire Hathaway, the holding company run by the famed investor Warren Buffett. You may recall that Mr. Buffett refused to split the shares of Berkshire Hathaway. Hence, the price of one share had ballooned to $30,000 by the mid-1990's. The financial world pressed Mr. Buffett to make it easier for retail investors to invest in the company, not so subtly threatening to take action if Berkshire Hathaway did not comply. Berkshire Hathaway responded by issuing class B shares at $1/30^{th}$ of the price of the original shares, now renamed class A. In typical fashion, the class B shares had much lower voting rights than the class A shares. In the prospectus for the Initial Public Offering of the class B shares, Mr. Buffett said that he would not buy the class B shares and recommended that others not buy them, either. However, later on, in 2010, Mr. Buffett and Berkshire Hathaway found a new usage for the class B shares. They split the B shares 50 for 1 in 2010 and started using the B shares like cash to purchase new investments. The price of a single B share was close to $310 as of February of 2023.

Par Value, Book Value, and Market Value

The par value of stock is the nominal value, also called face value, of the stock. It may be as low as a penny or even much less. For example, the par value of Apple shares is $0.00001. This number is sometimes required for legal purposes and is fairly meaningless to investors. A more important measure is book value. Book value is the amount of shareholders' equity in a firm. It is computed by taking the firm's assets and subtracting the firm's liabilities and preferred stock. Students of accounting will instantly recognize this calculation. In our BUS-121, Principles of Money Management, class we call it our net worth. However, the book value is usually ignored by investors who instead concentrate on the market value. The market value is the prevailing market value of a security. It's the current price of the stock set by the forces of supply and demand. In other words, what is the company worth? What is its valuation? What should I pay for a share of a company's stock? This is an enormously difficult question to answer. We will introduce valuation techniques in our next chapter.

Stock Dividends, Earnings per Share, and Dividend Yield

Dividends are optional distributions of earnings given to stockholders. Companies in the United States and countries that were associated at one time or another with the United Kingdom normally pay dividends quarterly. Companies from other countries typically pay dividends either semi-annually or annually. The corporation's Board of Directors decides how much, if any, dividends should be paid and when to pay them. Dividends are usually a percentage of the earnings per share, a very important statistic. Earnings per share, often expressed as EPS, are the amount of annual earnings available to common stockholders, as stated on a per share basis.

For example, the annual earnings of a company may be $1,000,000 and there are 500,000 shares outstanding. Therefore, earnings per share = $1,000,000 earnings / 500,000 shares = $2.00 earnings per share. The Board of Directors might decide to pay out 50% of the earnings per share in the form of dividends. Hence, each shareholder would receive a $1.00 dividend for each share of stock they owned. In this case, the company is paying out 50% of their earnings to shareholders in the form of dividends. The percentage of dividends paid out from earnings per share is called the dividend payout ratio. Larger, more mature companies tend to pay out larger percentages of their earnings in the form of dividends. Smaller, growing companies typically pay out a much smaller percentage of the earnings or, more likely, they will not pay out any dividends at all. This is because the company needs the earnings to invest back in the business to help with the growth. Accounting students will remember that the portion of earnings that are not paid out in the form of dividends is called retained earnings. (We take this opportunity to remind you yet again that we will not be doing any accounting in this class. We will simply utilize the financial statements and other statistics that the accountants create for us.)

Earnings and dividends are two very important measures of the value of a company. We will be discussing these for the remainder of our time together. Dividends are the only statistic that we know absolutely for sure is correct. All the other statistics could be pure fantasy, and sadly, sometimes they are. However, we know the reported dividend is true because the company sent us a check. Well, actually, they don't send us checks anymore; dividends are now paid electronically and deposited automatically into our brokerage account. Nevertheless, we can emphatically say once again, "Dividends don't lie!"

The dividend yield is another very important statistic. It is a measure that relates the dividends paid by a stock to the share price of the stock. This puts stock dividends on a relative percentage basis rather than an absolute dollar basis. Continuing the example from

above, if our stock that was paying us $1 dividend were currently selling for $20, the dividend yield would be 5%. Dividend yield = $1 dividend per share / $20 market price of one share = 0.05 or 5%. The dividend yield allows us to compare stocks with other income-oriented vehicles such as bonds or savings accounts. You may recall that traditionally, 3% to 6% was a typical dividend yield. In the 1990's dividends went to 2% and eventually 1% at the peak of the Internet bubble in March of 2000. Dividends then went above 3% in the 2008/2009 turmoil as stock prices plummeted. As of February 2025, they are 1.27%, very close to the March 2000 low of 1%.

Important Stock Dividend Dates

There are four dates to remember with regard to dividends. The first is the declaration date. This is the date that the Board of Directors declares the dividend. For example, on May 15th, the Board might say, "On June 17th, shareholders of record will be eligible for our quarterly dividend of $1." In this example, June 17th is the date of record, the date on which an investor must be a registered shareholder of a firm to be entitled to receive the dividend. It is also called the record date. The date of record is typically a few weeks after the declaration date.

Now here is where it gets a bit tricky. You may believe that you could purchase the shares of the stock before June 17th and hence be eligible for the dividend. This is not the case. You must purchase the shares before the ex-dividend date. The ex-dividend date is actually one business day before the date of record. Only those shareholders who have purchased the shares before the ex-dividend will be eligible to receive the dividend. Why is the ex-dividend one business day before the date of record? This is because stock transactions clear in one business day. When you buy a stock, you don't actually become the official shareholder for one business day. Likewise, when you sell shares of stock, because stock transactions clear in one business day, the proceeds from the sale aren't actually deposited into your account for one business day.

Once you have a good working relation with your brokerage, because of this characteristic of stock transactions, your broker may allow you to initiate a stock purchase without the sufficient cash in your account. You then have one business day to get the money into the account. Some brokerage firms will not allow a purchase to occur if sufficient cash is not in the account. When you sell shares, again, with a good relationship with your brokerage firm, the brokerage firm may deposit the cash proceeds the day of the sale in anticipation of receiving the funds one business day later, sometimes as a loan with minimal interest charged.

If you research the ex-dividend date, you may find some sources still claiming that stock transactions clear in two or even three business days. The reason for this is that the move to one-day settlement is fairly recent, starting in 2024. The move to two-day settlement started in 2017. The move to three business days was done in 1993. Before 1993, you had to wait 5 business days to get your cash! Technology has enabled much faster transaction settlements.

In our example from above, if the date of record were June 17th, assuming that June 17th was not on a Monday, then the ex-dividend date would be June 16th. Of course, if the date of record is a Monday or if there is a holiday just before the date of record, the ex-dividend date is modified accordingly.

The last date to be aware of is the payment date. This is the date on which the company pays the dividend and the cash arrives in your account. This is normally a few weeks after the date of record.

Theoretically, the opening share price on the ex-dividend date should reflect a drop in price commensurate with the amount of the dividend. In our example above, the $1 per share dividend should result in the opening stock price being reduced by $1. Of course, it never really works that way in the marketplace since prices are changing all the time.

"Don't Buy the Dividend!" is a common saying in the industry. Those who advance this technique believe investors are often better off waiting until the ex-dividend date before buying a stock. The logic behind this admonition is thus: Dividends are taxable transactions. If you "buy the dividend" – buy the stock just before the ex-dividend date – you will be responsible for paying the tax, and presumably, the stock price will fall commensurate with the amount of the dividend, so you are better off waiting until after the ex-dividend date so that you will get the stock at a better price and not generate a taxable transaction. This might be a useful strategy for those dealing in large-scale investments involving significant sums of money. Of course, for the vast majority of us retail investors, the initial purchases will be modest and the price and tax savings will be negligible. (When and if the purchases become gargantuan, congratulations! You are very welcome, by the way.)

Cash Dividends versus Stock Dividends

There are two types of dividends, cash dividends and stock dividends. If the following definitions and comparison escape you, remember this: You Want Cash Dividends! With cash dividends, payments are in the form of cash. Before modern telecommunications and information processing, the company would send you a check. Now, the cash is automatically deposited into your brokerage account. If you were using the dividends for income expenses, most brokerage firms will allow you to set up your account so that the dividends are sent electronically to your bank or credit union. Cash dividends are taxable transactions. Every January, you will receive a Form 1099 that lists your cash dividends and you would be required to declare them on your tax return. If your investments are in tax-qualified accounts such as IRAs or 401(k) plans, the transactions would not be reported and you would not pay any taxes until you withdrew the money. (If you have a Roth IRA and you wait until retirement age, all distributions are tax-exempt! More later.)

In contrast, stock dividends are dividend payments in the form of additional shares of stock. All other things being equal (and they never are, by the way), stock dividends have no value because they constitute a dilution of ownership and there is no change in value. They are similar to stock splits. For example: The Board of Directors declares a 10% stock dividend. For every 10 shares, an investor will receive 1 extra share. However, similar to a stock split, the price of the shares will drop 10%. Thankfully, unlike a cash dividend, a stock dividend is not taxed. “Gee, thanks, IRS, for not taxing me on something that isn’t worth anything!” Prudent, long-term investors are normally never interested in stock dividends.

Bottom line: You Want Cash Dividends!

Dividend Reinvestment Plans (DRIPs)

Dividend reinvestment plans, often referred to as DRIPs, are plans in which shareholders have cash dividends automatically reinvested into additional shares of the firm’s common stock. These are not to be confused with stock dividends. DRIPs are cash dividends. However, instead of receiving the cash in your account, the plan purchases shares of the stock on the open market with the cash dividends. No new shares are issued and hence, no dilution of ownership occurs. Since these are cash dividends, these are taxable transactions. DRIPs are an excellent way to own stock for those interested in long-term growth and not interested in current income. It allows an investor to take advantage of compounding automatically with normally no, or very small, transaction costs. There is an example along with a commentary about a DRIP on the class website. Many corporations sponsor DRIPs for their stocks and you deal directly with the corporation at a very low cost. Also, most brokerage firms now offer DRIPs to their clients. Plus, won’t your friends and family members think it’s cool when you tell them that you have a DRIP?

Here is an example of a dividend reinvestment plan (DRIP) from Sempra Energy, the parent company of San Diego Gas and Electric. Notice that Sempra Energy does not administer the DRIP. They hired a company called Equiserve (which is now part of Computershare) to do the accounting for them. Most DRIPs are very low cost. Every so often, in the [Fees] box, we would be charged $0.03 or $0.06 or $0.09. Pretty good deal! However, how would you like to keep track of 18 different DRIPs? For this reason, most brokerage firms now offer DRIPs for their clients and you can have your DRIPs all together in one place. (I just love writing and saying DRIP!)

Price-to-Earnings Ratio, aka P/E, PE

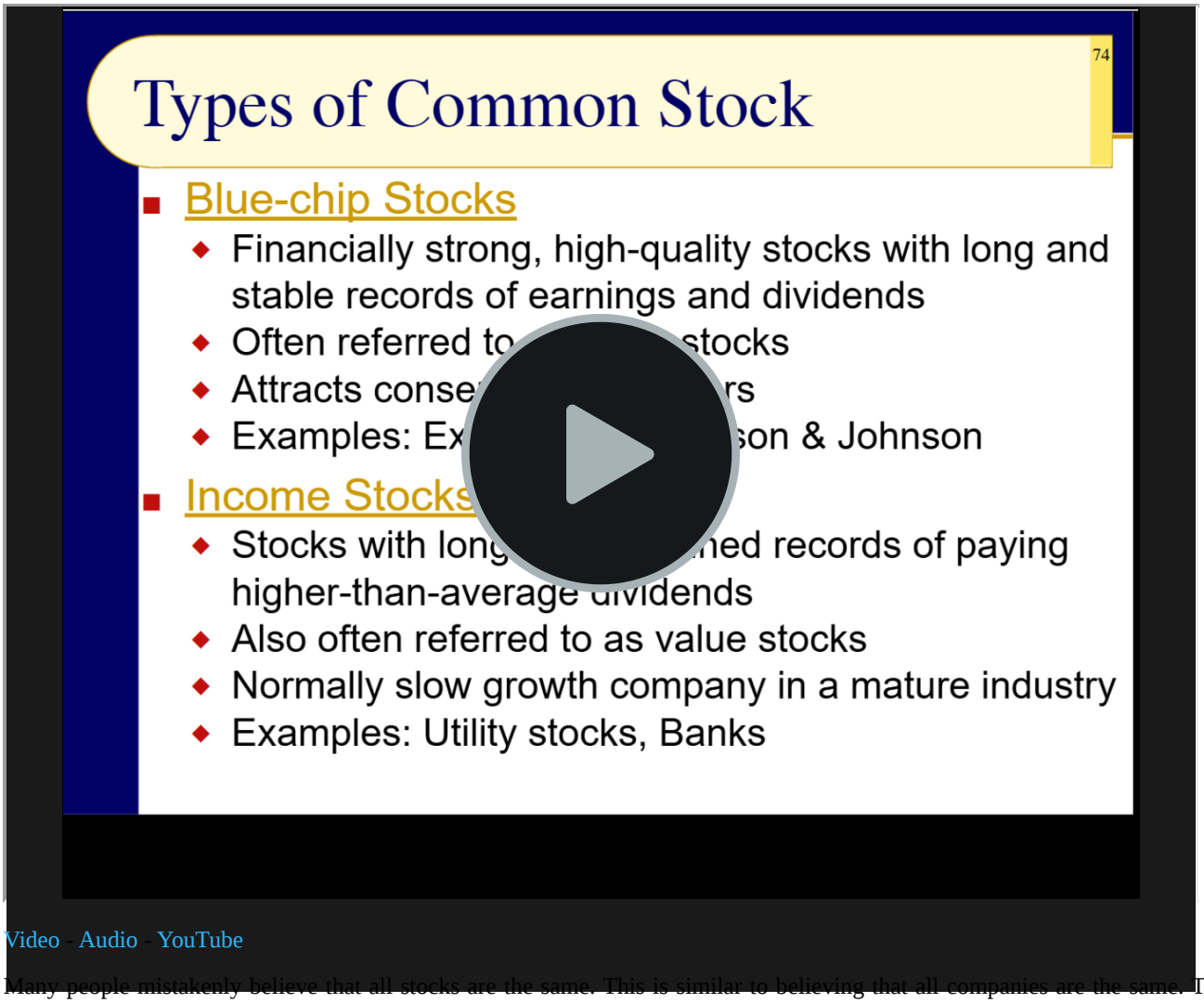
By far, the most watched stock valuation statistic is the price-to-earnings ratio. It is also written as price to earnings ratio and often abbreviated as P/E or just PE. It is a simple calculation. The price-to-earnings ratio is calculated by taking the market price of one share of stock divided by the earnings per share. However, there is never any end to the mountain of analysis, research, conjecture, opinion, predictions, weeping, gnashing of teeth, and beating of breasts that accompany price-to-earnings ratios. In our previous example with a $20 market price and $2 earnings per share, the price-to-earnings ratio would be $20 price / $2 earnings = 10 P/E. The price-to-earnings ratio is unit-less. We don’t place a $ or % next to our result.

Traditionally, stocks typically sold for P/E ratios of between 5 to 15. A P/E ratio of 20 or above was only reserved for the fastest growing stocks. During times of market manias and bubbles, a P/E of 20 was not unusual. During market downturns, P/E ratios come down greatly. We will spend a great deal of time learning P/E and other valuation techniques in the next two chapters.

Before moving to the next section, it is time to work through Stock Worksheet #2. As with most all worksheets in our class, there is also a commentary and answer key on the class website.

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3.6: Types of Stocks, Growth versus Value, and Market Capitalization



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Many people mistakenly believe that all stocks are the same. This is similar to believing that all companies are the same. This is obviously untrue. Is McDonald's similar to *The New York Times*? Is Kellogg's the same as Google? Who or what is Fifth Third and what do they do? Every company is different. However, there are broad categories that we can identify. Some companies fit neatly into one category, some fit into more than one category, and some don't fit well into any category. In this next section, we will identify and discuss the major categories of companies. Much of this material was paraphrased from Peter Lynch's excellent and very easy-to-read book *One Up On Wall Street*. It is one of the two books that should be your first investment book to read. The other is *A Random Walk Down Wall Street* by Professor Burton Malkeil. Both are readily available at your local library. Some libraries even allow you to download them to your mobile device. (Psst. If you want to have an unfair advantage over your fellow students and your future colleagues at work, read. But since you are reading this, you already knew that, didn't you? Lucky you!)

Blue-Chip Stocks

Blue-chip stocks are financially strong, high-quality stocks with long and stable records of earnings and dividends. They have their roots deep in the economy. Most are multinational and many earn more money outside the United States than inside the United States. They are sometimes referred to as value stocks. They are suited to conservative investors who are attracted to stocks for their growth and income opportunities but who also want stocks with downside resilience. (In this context, conservative applies only to investments, not politics.) Examples include ExxonMobil and Johnson & Johnson, companies that have been in business for over a century. Most blue-chip companies have survived many market downturns. Peter Lynch calls blue-chip stocks the stalwarts. Blue-chip stocks normally never explode on the upside but they almost never implode and dissolve into a pool of tears.

Interestingly, the term blue-chip comes from the world of gambling. Over 100 years ago, only gentlemen owned stocks. Gentlemen also went to the gambling tables. It was what a gentleman did. At the time, the blue chips were the most expensive tokens.

Income Stocks

Income stocks are the stocks of companies with long and sustained records of paying higher-than-average dividends. Income stocks are also often referred to as value stocks. These are normally slow growth companies in mature industries. Examples included utilities and banks. Investors typically choose income stocks for their dividend opportunities. Similar to blue-chip stocks, income stocks are also very popular with conservative investors looking for downside protection. Remember that the return from dividends is also positive. Unlike capital losses, there are no dividend losses. However, growth opportunities from income stocks are normally very limited. Sometimes the industry that the income stocks are situated within is actually shrinking. This has been likened to a melting ice cube. Sometimes, the stream of income can run dry.

Growth Stocks and the Growth versus Value Debate

Growth stocks are stocks of companies that are experiencing high rates of growth in operations and earnings. Their growth rate is typically 15% to 20% per year or higher. They are normally associated with high price-to-earnings (P/E) ratios. Usually, they pay no dividends at all or possibly a very small token amount. This is because the earnings are needed to reinvest back into the company as it grows. Their stock prices should go up but they will exhibit strong volatility.

Examples of growth companies are typically found in the current news. They are celebrities. Their photos are on the covers of all the magazines from *Forbes* to *Vogue* and *GQ*. They have the perfect haircuts and the bright white teeth and the well-defined abs. Money flows into these stocks and the prices often rise to unsustainable levels. When the slightest hint of their growth slowing appears, the stock prices are often punished. For the math fans reading this, growth investors often look at the second derivative (the acceleration of growth), not just the first derivative (the velocity of growth). For everyone else, please ignore the previous sentence.

The investment world loves to throw around the terms “growth” and “value.” Unfortunately, the meanings of these terms are not exact. Typically, investors often use the term “growth” to designate a high P/E stock while they use the term “value” to denote a low P/E stock. For others, “value” means there is something attractive or compelling about a stock, either from an opportunity for growth and capital appreciation or from a current or growing income perspective or maybe both growth and income. Hence, a stock with a high P/E ratio might be a great value while a stock with a low P/E ratio might not be a good value. An excellent example of this was the story of Google and GM in 2005. In January of 2005, Google was selling for around $200 with a sky-high P/E ratio while the old GM was selling for $34 with a very low P/E ratio and a huge dividend. As of Feburary 2025, Google sells for approximately $3,400, split adjusted, with a much lower P/E ratio, and the old GM stock, first renamed Liquidation Motors and then ultimately Motors Liquidation, went into bankruptcy and last sold for $0.04 in March of 2011 and is now completely worthless. Which one was the better value?

Therefore, to avoid confusion when reading, researching, or simply talking with other investors about potential stocks to invest in, always be sure which definition of value is being used.

Speculative Stocks

Speculative stocks are companies with a high degree of risk. These companies typically are losing money or they might have very low earnings relative to their valuation. The possibility of substantial capital gains is great but more likely is the probability of substantial capital losses. Examples of these stocks include biotechnology, Internet startups, marijuana stocks, and now cryptocurrency companies. Don’t you think it is a great time to remind ourselves of the profound wisdom and insight of Mr. Benjamin Graham from his landmark book *The Intelligent Investor*?

> *“An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative.” − The Intelligent Investor, Benjamin Graham*

So, does anyone wanna’ go buy some stock of that sure-fire high-tech startup your friend told you about? Well, before you do, take a look at the history of GoBroke, oops!, sorry, I meant GoPro (GPRO). From a high of over $90 in 2014, as of February 2025, it

was selling for less than $1. In 2022, the prices of many of the high-flying growth stocks fall 50% or more. Research what happened to Meta (META, née Facebook), Netflix (NFLX), Roblox (RBLX), and Shopify (SHOP).

Cyclical Stocks

Cyclical stocks are stocks whose earnings and overall market performance are closely linked to the general state of the economy. These businesses follow the business cycle of advances and declines. The poster child for cyclical stocks are car companies. When the economy is strong, car sales soar. Everybody wants a new car! What happens when there is economic turmoil? Car sales hit the brakes and screech to a halt. Other examples include manufacturers of basic materials such as timber, steel, and chemicals. In fact, any company that makes products that are used in the manufacturing process is typically cyclical. A generation ago, the chip manufacturers were growth stocks. Now that almost every product contains at least one computer chip, the chip manufacturers have more and more become cyclical.

Defensive Stocks

The opposite of cyclical stocks are defensive stocks. Defensive stocks tend to hold their own, and even do well, when the economy starts to falter. These companies typically exhibit strong downside resilience during declines in the market. Sometimes, the prices of their stocks go up as the market goes down. The conventional reasoning for this dynamic is that momentum speculators and traders “rotate” out of their short-term, growth-oriented speculations and move to the relative safety of the defensive stocks. As with much of the conventional wisdom regarding investments, whether or not this is correct is subject to debate because no one has ever stopped to ask the millions of traders if that was their motivation. Defensive stocks are often associated with income and value stocks. Examples include food companies such as Kellogg’s and consumer staples companies such as Procter & Gamble.

Turnaround Stocks

Turnaround stocks are companies that have fallen on hard times. As a potential investor, you must judge whether or not there is the potential for a rebound. Your Humble Author normally refers to turnaround stocks as “goners.” In practice, the percentage of companies facing bankruptcy that can successfully turn themselves around is small compared to the companies that do eventually disappear. For those who love a great business story, research Lee Iacocca and Chrysler in the late 1970’s and early 1980’s. Mr. Iacocca is generally regarded as bringing Chrysler back from the brink of extinction. For you budding entrepreneurs who believe engineering a turnaround of a company is in your future, please consider reading Mr. Iacocca’s autobiography. Another successful example of a turnaround is GM, which went through bankruptcy after the Global Financial Crisis and has emerged as a much stronger company. Examples of turnaround companies to study now are AMC, GameStop, Kohl's, and Bath and Body Works. Any predictions?

Asset Play Stocks

A company that is sitting on an asset that could be sold or spun off is called an asset play stock. Investors often must dig a bit deeper than usual to find the hidden assets in a company. A good example was JCPenney’s. Their retail business has been struggling for many years now and there were reports that they were going to head into bankruptcy. However, most people did not know that JCPenney’s had a very profitable insurance division. They were able to sell the insurance business in 2015 to help keep the company afloat. Another example is the company that owns Frito-Lay. Care to guess who they are? (Great research assignment!) Whenever we research a company, it pays for us to look under the rug and see if there are any golden nuggets hiding underneath the company’s visible face to the world.

Penny Stocks

Penny stocks are normally not to be discussed in polite company. The vast majority of them are sham corporations that are used by con artists. They live on the wrong side of the tracks in the rough part of town, namely the OTC Markets, the Bulletin Board and the Pink Sheets. Yes, every so often you will find a company that has hit on hard times and is trying to make the big time again, but that is the rare exception, not the norm. There are literally thousands of these penny stocks with names like butterfly.com and Flim-Flam, Inc. One real example was Definitive Rest which started out making mattresses but then suddenly switched to making specialty metals for the aerospace industry before disappearing from the face of the planet. Another is Deep Earth Resources which has somehow managed to stay in the same business but as of April 2022 was selling for $0.0002 per share while earnings were a

stunning negative $0.0010. At least in Deep Earth's defense, they published their earnings. Many other penny stocks don't bother to fulfill their SEC requirements and simply wait until they are kicked off the OTC Markets before reemerging in some other incarnation. Oh, by the way, Deep Earth Resources stock is no longer being traded.

You may be thinking, "So what is the purpose of penny stocks?" The purpose is to separate you from your money, pure and simple. A mass email or text or social media page will tout the wonders of this particular unknown company which has a technology that will revolutionize the world and it is only selling for 7¢ per share! They scream in ALL UPPER CAPS that it will rise to 25¢ by the end of this week so you must act NOW! So you think, "Okay, what have I got to lose?" You buy $70 or $700 worth of Bogus Enterprises. Sure enough, the next day, it rises to 10¢. Oh, my Goodness! (Or as the younger folk text to one another, OMG!) You buy some more shares. Two days later, it's now 17¢! You can't believe your luck. You break the bank and sell all your other stocks and spend every last dime and buy as many shares as you can afford at 17¢ a share because, well, gee, I can get out tomorrow or the next day just before it hits 25¢, right? The next day, you check the price of Bogus and it is now 0.001¢. What? What happened? You have been had. You have been scammed by an age-old trick in the financial world, pump 'n' dump.

A bit of investment industry trivia: When you open a brokerage account, in the application process, you will be asked if you have any other brokerage accounts open. The reason for this is that often, the scammer is just one person. He or she needs to be able to make trades with themselves to make it appear that there is market activity in the penny stock they are using for the scam. The SEC is monitoring individuals with multiple accounts and watching for just such activity. For this reason, most pump 'n' dump schemes need to have multiple scam artists. Hence, when a pump 'n' dump scheme is uncovered, the individuals are also charged with conspiracy. By the way, many brokerage firms will simply not accept trades of sham penny stocks.

Deciding what exactly constitutes a penny stock is not always easy. Traditionally, when the price of a stock fell below $5, it was in danger of being labeled a penny stock. However, as we saw, a reverse split can remedy this situation with one stroke of the accountant's pen. Identifying a penny stock can be compared to determining whether something is a work of art or not, "You know it when you see it." Upon examination of the company's business, their reported products, customers, and financial statements – or lack thereof of these essentials – it often quickly becomes evident that the company is a sham and their stock is worthless except for the perpetration of fraud.

Some people think they can outsmart the scam artists. Don't even try. There is an old saying, "If you don't know who the patsy is at the poker table, the patsy is you." The scam artists are watching every trade that happens because there aren't that many of them. Normally, the only trades were your trades and the trades that the scam artists were selling to one another to make it look as though there was normal trading going on. Dear Readers, stay away from penny stocks. Again, penny stocks should never be discussed in polite company.

Foreign Stocks

Foreign stocks, also called international stocks, are stocks that are domiciled outside the United States. For several decades, it was difficult and sometimes impossible to purchase foreign stocks directly. A potential investor needed to open a brokerage account in the country the company was domiciled and then exchange their dollars for the currency of the company. Most investors seeking to invest globally would utilize global or international mutual funds. The mutual funds have the sufficient resources and skills to trade globally.

However, many investors still wanted to invest directly in foreign companies. Many prudent, long-term investors used American Depository Receipts (ADRs) to purchase the stocks of high-quality foreign companies. A large bank or trust company would go abroad and purchase a substantial block of shares of a large multinational company based in London or Frankfurt or Tokyo. The bank or trust company would then issue dollar-denominated American Depository Receipts in New York on the New York Stock Exchange. Global Depository Receipts (GDRs) followed in the footsteps of ADRs and are traded around the world.

Due to technological advancements and competition, many brokerage firms now offer international brokerage accounts that allow investors to easily convert their dollars to foreign currencies and then trade on foreign exchanges. When converting dollars to another currency and investing abroad, one must be mindful of currency risk. Every business day, the dollar rises and falls relative to foreign currencies. In general, all other things being equal (and they never are), when the dollar strengthens, the values of your investments abroad fall. When the dollar falls, the values of your investments abroad rise. Since the Global Financial Crisis of

2008, the dollar has risen substantially. Coupled with the outsized performance of the United States stock market, this had made foreign stock investments look comparatively poor relative to the United States.

Some market professionals argue against investing abroad. One of the most famous was Jack Bogle, Founder and past CEO of Vanguard Funds. The last decade and a half has made their argument appear strong. However, going back decades before the turmoil of 2008, the performance of the United States relative to foreign markets had been fairly even, albeit volatile. For this reason, before the last decade and a half, many prudent, long-term investors believed it was a good strategy to be invested in both the United States and abroad. In general, diversification is a good thing and there are many great opportunities around the world. It is simply not true that all the best companies are based in the United States.

In addition, there are many who argue that at this point in time (February 2025), it is imperative that investors seek opportunities abroad. Many international stocks are inexpensive relative to their United States counterparts. At the same time, the dollar is very strong. This is a great one-two combination. Investors can use strong dollars to buy relatively cheap stocks of great companies. Time will tell if this strategy is successful compared to staying invested solely in the United States. In the interests of full disclosure, Your Humble Author is a strong advocate of global diversification. (Psst. Who is the world's largest tire manufacturer? The world's largest food company? The world's largest cement company?)

Market Capitalization

When discussing stocks, many casual observers will invariably concentrate on the market price. This is unfortunate and ultimately unproductive. Prudent, long-term investors are far more interested in researching the market capitalization of a company, rather than just the price of a single share. Market capitalization represents the total value of the company. It is a simple calculation. The current price of a single share of the stock is multiplied by the number of shares outstanding. The resulting number is how much the company is worth. There are three major categories, two sub-categories, and an additional category that should never be discussed in polite company.

Table 3.6.1: Market Capitalization Categories

Category	Market Values	Sub-category (if applicable)
Large-cap	Greater than $10 billion (Some now say >$15 billion)	Mega-cap – Greater than $100 billion
Mid-cap	Between $2 billion and $10 billion (Some now say between $5 or $6 billion up to $15 billion)	
Small-cap	Between $100 million and $1 or $2 billion (Some now say up to $5 or $6 billion)	Micro-cap – Less than $100 million

Do you remember our discussion of the various types of stock mutual funds and the three major market capitalization categories, large-cap, mid-cap, and small-cap? A playful way to remember the three major categories is to think of the large-cap companies as the Papa Bears, the mid-cap companies as the Mama Bears, and the small-cap companies as the Baby Bears. (Goldilocks is nowhere to be found in this analogy.) Large-cap companies typically have their roots deep in the economy and can withstand the inevitable economic downturns better than their mid-cap and small-cap counterparts and hence exhibit less risk than the others. Small companies are nimbler and can better take advantage of changes in the economy but are more likely to be hurt substantially when the ill economic winds blow their way. Mid-cap companies fall in between their large-cap and small-cap siblings.

The two sub-categories that are popularly discussed and researched are mega-cap and micro-cap. As the names suggest, mega-cap companies exist in that rarified air of market capitalizations in the 100's of billions of dollars. In the past few years, a few companies have cracked the trillion-dollar mark. Micro-cap companies are very small companies that have the potential to generate outsized capital gains but are just as likely to disappear from the markets all together, often for reasons out of their control. The last category that was omitted from our table above is penny stocks. Hopefully, we have already skewered these foul reprobates of the investment community enough for you to steer far away from them.

To illustrate an example of computing market capitalization, suppose a company's stock is selling for $20 per share. We don't know the value of the company nor which category the company fits into without knowing how many shares are outstanding. If the number of shares outstanding were 5,000,000 (5 million), then the calculation would be $20 per share multiplied by 5,000,000 shares or $100,000,000 of market capitalization. This is a small-cap company. Stocks Worksheet #3 on the class website has some example companies and calculations for you to do. However, in practice, we investors don't need to bother with the calculation. A simple Internet search renders the number immediately.

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3.7: Stock Investment Strategies



Video - Audio - YouTube

In our last section, we will discuss various stock strategies. Some go so far as to call these strategies investment philosophies, sets of beliefs and principles that guide investors' decision-making processes. That may sound a bit far-fetched to many. Should investing be likened to a philosophy or religion? Maybe not, but it is true that without sufficient education and a well thought out strategy beforehand, investing in stocks can be difficult and very challenging. There is an old saying in the industry attributed to George Goodman, who wrote under the pen name Adam Smith: "If you don't know who you are, [the stock market] is an expensive place to find out." Let's see which of the following stock investing strategies will help you find out who you are without having to pay a princely sum.

Buy and Hold Strategy

The most common strategy for prudent, long-term oriented investors is called the buy and hold strategy. Buy and hold investors use research and analysis to identify high-quality companies with good growth prospects and potential for dividends at reasonable prices and hold them for the long term. It is also referred to at times as value investing or growth at a reasonable price (GARP) investing. How long should one hold onto their stock investments? The renowned investor Warren Buffett was once asked what Berkshire Hathaway's favorite holding period was. He famously quipped, "Our favorite holding period is forever."

Let's revisit the wisdom of Jack Bogle, Founder and former CEO of the Vanguard Funds:

> *"An investor is a person who owns business and holds it forever and enjoys the returns that U.S. businesses, and to some extent global businesses, have earned since the*

> *beginning of time. They have capital, they earn a return on their capital and that capital grows over time. It's not complicated. That's the business of investing." – John "Jack" Bogle, Founder and former CEO of the Vanguard Group*

Obviously, Mr. Buffett and Mr. Bogle are engaging in a bit of mischief because no one lives forever. However, their advice makes sense. If you owned a shoe shop or a pizza restaurant, you would not sell it just because the price went up or down 10%. You would hold onto your business. When the time comes, you may decide to sell it and retire. You may also decide to hand it over to your heirs or ultimately bequeath it to them. But as long as the business is sound, you would want to hold on to it. The same can be true for your stock investments. They are businesses, after all. Don't lose perspective.

Income Strategy, aka Equity Income

A strategy that fits well with the buy and hold strategy is the income strategy, also known as the equity income strategy. Do you recall the equity income category of stock mutual funds from our previous chapter? Income oriented stock investors emphasize dividends over capital appreciation. Ideally, investors are seeking companies with rising earnings that will support rising dividends. Companies that pay consistently growing dividends tend to do well when the market as a whole does poorly and have been some of the best long-term investments. In general, this strategy is appropriate for conservative stock investors and works very well with Dividend Reinvestment Plans (DRIPs). Investors using the income strategy resemble the tortoise in the fabled race between the tortoise and the hare.

Growth Strategy

The growth strategy involves investing in stocks with above-average forecasts of earnings growth. Dividends are a secondary concern since growing companies usually need to use their earnings to reinvest and grow the business. As discussed, the stocks of these companies usually have high price to earnings ratios in expectation of higher earnings in the future. A growth-oriented investor should be prepared for a great deal of volatility. However, if the investor researches, chooses, and subsequently monitors their investments carefully – and does not panic when the markets fall! – a growth strategy can be very profitable in the long term.

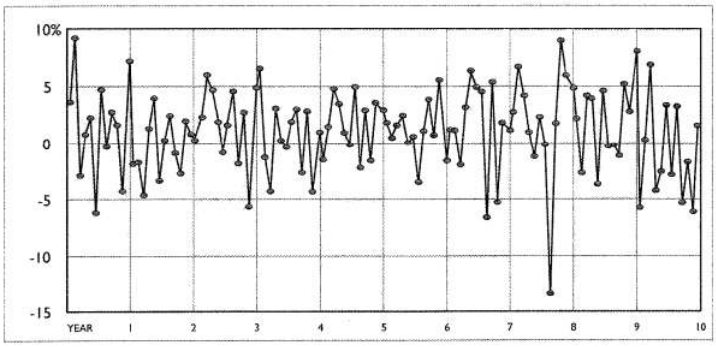
A well-respected group that advocates the growth investing strategy is the National Association of Investors Corporation (NAIC), now known as BetterInvesting.org. They have been in existence since 1951. BetterInvesting.org sponsors investment clubs which are groups of investors who are dedicating to educating themselves about investments while pooling their resources and collectively investing a portfolio of stocks. The investment clubs use a time-tested tool called the Stock Selection Guide (SSG). BetterInvesting.org says that their goal is to achieve a 15% annual rate of return. Joining an investment club is an excellent way to learn while you earn. We discuss BetterInvesting.org and the Stock Selection Guide in Addendum A.

Aggressive Growth Strategy

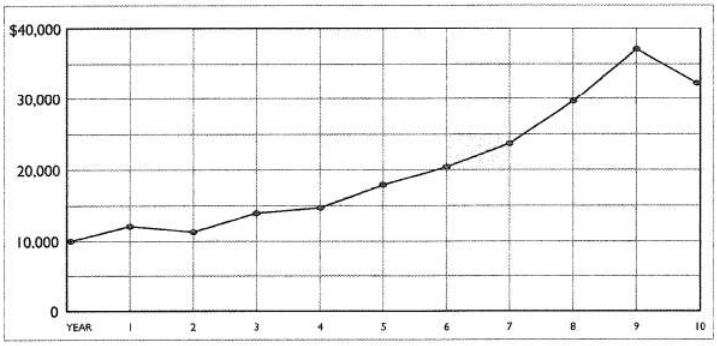
The aggressive growth strategy entails much speculation and short-term trading. An aggressive growth investor aggressively trades in and out of stocks in order to achieve eye-catching returns. They don't really ever want to own a stock; they are simply renting the stock. Instead of waiting 3 to 5 years for a stock to move, an aggressive stock trader would go after the same investment return in 6 months to a year or less. Some traders have time horizons in the weeks or days or hours or minutes. Recall that there are High Frequency Trading (HFT) companies who are using computers to make millions of trades per day. Aggressive growth investors somehow believe that they can outsmart and outgun these HFT firms.

The aggressive growth strategy is the strategy that many people think they are supposed to use when they start investing in stocks. They see images of traders behind four screens talking on two telephones at the same time and gesturing wildly with their colleagues. They believe they need to do the same. We refer you again to the phrase, "The Loser's Game," coined by the excellent investment author Charles "Charley" Ellis. Aggressive growth investing is fraught with perils and drawbacks, not the least of which are the serious transaction costs that can be generated as a result of frequent trading. Stockbrokers simply adore suckers, ooops!, uh, we mean speculators and traders who use this strategy.

Just in case you have not noticed, Your Humble Author sincerely hopes that you don't attempt this strategy. Remember, if you don't know who you are, the stock market is a very expensive place to learn. And if we haven't convinced you yet about the dangers of short-term trading, please take a look at the following graph.



These are the month-to-month percentage returns of the MSCI World index from 1991 to 2000. In the short term, stock movements appear random. Trying to predict what the next month will bring is futile. Let's now look at the same time period, except in this graph, we see the year-to-year results of a hypothetical $10,000 investment.



Source: The Capital Group

Contrarian Strategy

The contrarian strategy is a strategy that merits our attention, even though few of us will have the will to follow it unerringly. Contrarian investors invest in stocks that are out of favor with the market for some reason, as reflected by low price to earnings ratios and low prices compared to their fundamentals. It involves actively seeking stocks from companies with sound financial statements that the market has undervalued. A famed contrarian investor quipped, "I always try to be accommodating. I buy when others want to sell; I sell when others want to buy." Of course, this is easier said than done. Historically, the market goes up three or four years for every one year that it goes down. If you are always selling when others are buying, fairly soon, you won't have any stocks to sell. Likewise, one must wait until there is panic in the markets before stepping up to the plate and buying with abandon. When asked what it was like to be a contrarian investor, Howard Marks, CEO of Oaktree Capital, said, "[It's] not a steady business."

An example of a master contrarian investor in action was Warren Buffett in the mid-2000's. As the prices of stocks and, more ominously, real estate rose to nosebleed valuation, Mr. Buffett patiently sat on his hands and waited. In the Fall of 2008 as the wheels fell off the economy because of the real estate bubble bursting, Mr. Buffett penned an opinion piece in the New York Times. In his opinion piece, he encouraged his fellow countrymen and countrywomen to, "Buy American. I Am." Did Mr. Buffett follow through on his own advice? Yes, he did. He swooped in and bought $5 billion worth of General Electric and Goldman Sachs. He then subsequently invested $10 billion in Bank of America. All three purchases proved immensely profitable.

Long-term buy and hold investors can take a tip from contrarian investors. Typically buy and hold investors invest systematically, in good times and bad. However, when the organic matter hits the ventilating device and there is panic in the streets, prudent, long-term oriented investors can accelerate their investment program and purchase more than they normally would, assuming additional funds are available. They can then proudly state that they have something in common with the likes of Warren Buffett, even if that something in common is not the size of their investment portfolios.

Sector Rotation, Momentum Trading, and Market Timing Strategies

The last three strategies we will title, Tweedledumb, Tweedledumber, and Tweedledumbest, although their order is entirely up to you. Sector rotation involves buying stocks in the current "hot" sectors of the economy and selling those stocks in the stale ones. An investor attempting to utilize this strategy must determine which methods they will use to decide which sectors are hot and which are not and if and when those sectors will reverse themselves. Typically, the neophyte will choose a hot sector just as it is beginning to cool and turn downwards. Of course, they will stubbornly hold onto it just long enough for it to hit bottom. That is when they finally give up on the sector and move to another hot sector just in time for the first sector to start gaining and the second sector to start losing. If it were not for the fact that the unfortunate individual is losing real money, it would be comical.

Momentum trading is very similar to the aggressive growth strategy. The momentum trader buys stocks as they go up and sells stocks as they go down, often utilizing trading techniques that profit when stock prices go down. This is sometimes called the "Greater Fool" Theory. Momentum traders say to themselves, "Hey, it's okay if I buy high because somewhere out there is a greater fool than I am so I will be able to sell higher." This theory was utilized by far too many uninformed speculators in the dot-com bubble of the late 1990's and in the housing market mania of the mid-2000's with the subsequent Global Financial Crisis being the end result. Many market historians are saying that cryptocurrencies and NFTs (Non-Fungible Tokens) are exhibiting similar trends to what happened in the late 1990's and the mid-2000's but the similarities and analogies from one mania to the next are never perfect. In any event, whenever markets are moving higher or moving lower, the momentum traders will be there, attempting to realize short-term gains on the movement of the markets. We wish them well. They will need it.

The market timing strategy involves attempting to predict the future directions of the market. The hardest part of market timing is that you must be correct twice. You must time the fall and then time the subsequent rise of the market. Just picking one would be a Herculean feat! The famed mid-20th Century investor Bernard Baruch said, "Don't try to buy at the bottom and sell at the top. This can't be done … except by liars."

Obviously, which choice you make is up to you as it is your money that will be invested. However, Your Humble Author hopes that you will see that for the vast majority of us the aggressive growth, sector rotation, momentum, and market timing strategies should be avoided at all costs. Being a growth or contrarian investor is not easy but should be rewarding if executed well. The buy and hold and income strategies are the easiest to implement, not the least of which is because they help us to tame our emotions when we are confronted with adverse markets.

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3.S: Summary

Congratulations – You Have Finished Chapter 3 – Introduction to Stocks

You have reached the end of chapter 3, Introduction to Stocks. In this chapter, you have:

- Been introduced to the definition of stocks, their advantages and disadvantages, and historical returns
- Reviewed the rapidly changing universe of the various entities that constitute the stock market
- Investigated the various stock transactions and associated fees
- Explored the major stock market indices, the major characteristics of stocks, and various stock measurements
- Examined the major stock types, market capitalization, and stock investing strategies

You should now be able to:

1. Describe the various components, characteristics, benefits, advantages, and disadvantages of stocks and stock investing
2. Identify and describe the various major stock markets, stock transactions, and fees
3. Outline the major stock types and their risk/return aspects
4. Calculate stock measures including earnings per share, dividend payout ratio, price-to-earnings ratio, and market capitalization
5. Describe the advantages and disadvantages of the major stock investing strategies

There is much material in this chapter. Please read it again and study the concepts and terms every day. Remember that your family members, friends, and colleagues are counting on you!

Your Feedback, Please

Did you enjoy our introduction to stocks? As you rummaged about the Internet or library researching the companies in the two assignments, did you find yourself excited about stumbling upon detours into unanticipated intellectual alleyways and dark corners? Did you unexpectedly come across prized nuggets of information about a company that interested you? Or was the research process similar to watching paint dry or worse, visiting the dentist? How was listening to the earnings calls and working through the worksheets? Again, as you did with the mutual fund research, analyze how you felt and what you thought during your studying of the material about stocks and working on the stock assignments. For those enrolled in the class at Southwestern, please post your questions and thoughts and feelings about stocks and your relationship to them on *The Stock Steakhouse* discussion forum. All others, please contact us directly or join our GroupMe discussion group. Most of all, we hope you are proud of yourselves. As mentioned, there is a ton of material in this Introduction to Stocks chapter but it is of utmost importance for you to know it all thoroughly. Remember: You are one chapter away from being an official Investment Guru for your friends, family, and co-workers. It is a weighty responsibility. You can't let them down!

Lastly, it is my sincere desire that you are excited and ready for more analysis about stock investing. Why? Because, oh, boy, do we have a treat in store for you! We are going to learn techniques that should tilt the odds of being a successful prudent, long-term oriented stock investor in your favor. But as we will say over and over again, there are no guarantees! We will see you in our next chapter, Chapter 4: Fundamental Analysis: Valuation Models.

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CHAPTER OVERVIEW

Chapter 4: Fundamental Analysis: Valuation Models

> *"Value matters. You ignore value at your peril." – Greg Ireland, mutual fund manager with over 35 years of experience*
>
> *"It is a capital mistake to theorize before one has data." – Famed Detective Sherlock Holmes (Sir Arthur Conan Doyle)*

Learning Objectives

In this chapter, you will

- Be introduced to the definition and beginnings of stock valuation
- Explore various valuation models including the dividend discount models with an emphasis on the Gordon Growth Model and the Discounted Cash Flow Model
- Examine the strengths and weaknesses of the various stock valuation techniques
- Utilize an electronic spreadsheet to calculate the Internal Rate of Return from a series of cash outflows and inflows
- Be introduced to *The Value Line* stock research resource and how to utilize key research information from their periodic stock reports

By the end of this chapter, you should be able to

- Describe the inherent difficulties of predicting stock valuations
- Calculate the present value of the expected future stream of cash flow from various types of stocks using various valuation models
- Discuss the benefits and major limitations of various valuation models
- Given an electronic spreadsheet, calculate the Internal Rate of Return from given streams of cash flows
- Utilize key research data from *The Value Line* in our calculations of the various valuation models discussed

This is it, Dear Students! This is the heart of our course!

In this chapter, we will learn techniques that should tilt the odds in our favor and help us become successful, prudent long-term investors. We will learn how to predict the future price of a stock. Are our predictions guaranteed? Yes, indeed! They are guaranteed to be wrong! They will almost always be very far away from the actual price one, two, three, or four years from now. However, our predictions should help us identify companies that will allow us to build wealth slowly over time. Most of the companies that we identify with these techniques won't make us rich overnight. But on the other hand, they will help us to avoid large losses when the markets hit a downturn, a correction, a bear market, a crash, etc. We want you to eat reasonably well and sleep reasonably well.

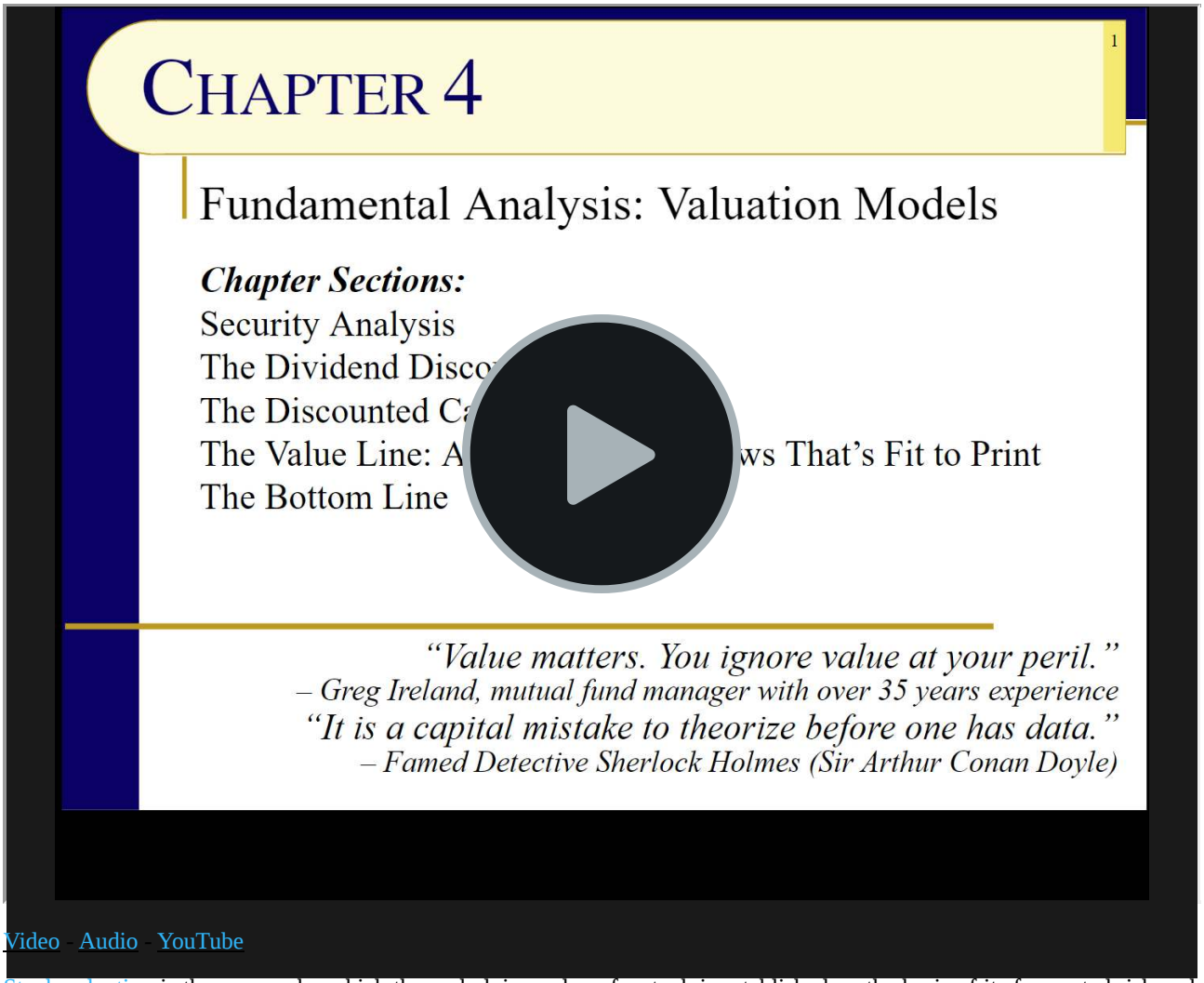
Presentation file - Study guide

4.1: Common Stock Valuation
4.2: Dividend Discount Models (DDMs)
4.3: The Discounted Cash Flow Model
4.4: The Value Line: All the Financial News That's Fit to Print
4.5: The Bottom Line
4.S: Summary

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4.1: Common Stock Valuation



Video - Audio - YouTube

Stock valuation is the process by which the underlying value of a stock is established on the basis of its forecasted risk and return performance. At any given time, the price of a share of common stock depends on investors' expectations about the future behavior of the security. A fundamental assertion of finance holds that the **value of a stock is based on the present value of its future cash flows**. The future cash flows of a company are determined by the expected earnings or the expected dividends or both the expected earnings and dividends. Simply put, the worth of a company is primarily based on the earnings the company will produce in the future. But if we knew what was going to happen in the future, it would not be called the future, would it? Professor Burton Malkiel sums up the dilemma perfectly in his acclaimed book *A Random Walk Down Wall Street*:

> *"The most fundamental influence on stock prices is the level and duration of the future growth of earnings and dividends. [However,] future earnings growth is not easily estimated, even by market professionals." – Burton Malkiel*

So, if someone were to ask you, "What is the most important factor in determining the future value of a company?" In a few words, you could respond, "Future earnings!" or, "Future dividends!" But do any of us know what is going to happen in the future? ***No!*** So, is valuing stock going to be easy? ***No!*** In fact, it is downright impossible to know what a company will be worth three, four, or five years from now. The best we can do is calculate imprecise estimates.

If it is so difficult, even for professionals, to predict the values of stocks, we might be tempted to just give up, pack it in, and go home. Why bother? Luckily for us, there are techniques that we will learn that will help tilt the odds in our favor. We know

beforehand that our predictions have a very low probability of being correct. However, our predictions will help us identify prudent investments that will help us build wealth slowly but surely over the long term. Stick with us, Rising Investment Gurus!

Security Analysis

We are going to embark on the process of security analysis. Security analysis is the process of gathering and organizing information and then using it to determine the value of a share of common stock. We are searching for the intrinsic value of a stock, the underlying or inherent value of a stock, as determined through our security analysis. What is the company worth? The question is, "What security analysis methods or measures does one use to determine the intrinsic value of a company?" Future earnings? Future dividends? Potential capital appreciation? Price/earnings ratio? Financial ratios? Past price performance? Amount of risk? Value is in the eye of the beholder.

Fundamental Analysis

There are two major forms of security analysis, fundamental analysis and technical analysis. We will first tackle fundamental analysis. Fundamental analysis is the examination of a firm's accounting statements and other financial and economic information to assess the economic value of a company's stock. Examples of some of the fundamentals are the competitive position of the company, who are their competitors, suppliers, and customers, the growth prospects for company and its market, their profit margins and company earnings, what assets are available, the company's capital structure, how much debt do they have, how much equity, etc. There are many other measures that are available to examine. Simply put, the value of a stock is influenced by the performance of the company that issued the stock. The fundamental analyst says, "You are buying companies, not stocks."

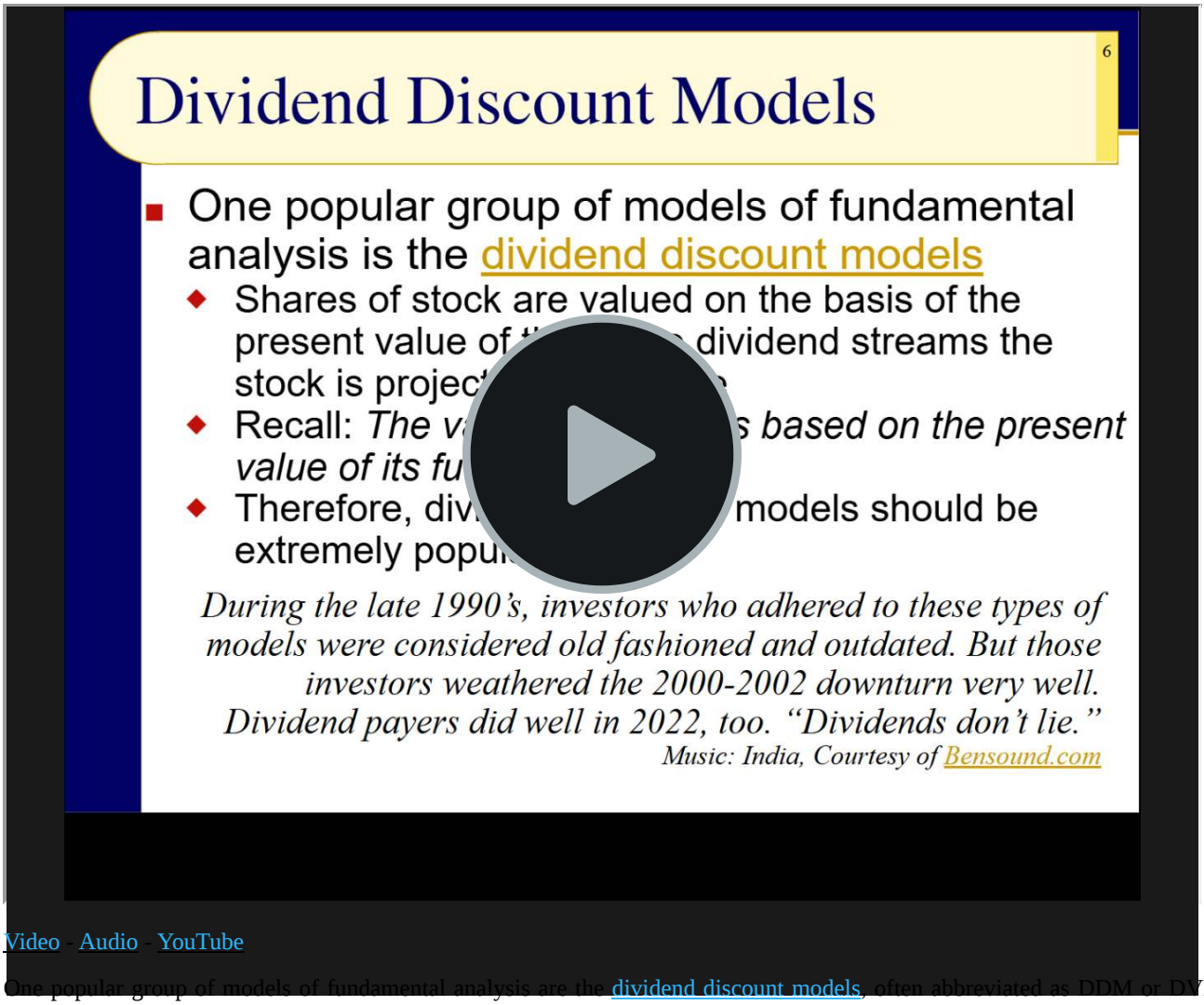
Technical Analysis

Technical analysis is the study of the various forces at work in the marketplace and their effect on stock prices. Those who adhere to technical analysis believe that they can predict the future price of a stock by analyzing the behavior of the stock price's history or the overall stock market or both. Simply put, the future price of a stock is influenced by factors other than the company's fundamental future outlook. The technical analyst says, "You are buying stocks, not companies." We will explore technical analysis much later on.

There are many fundamental analysis valuation models. We will cover a few of the more popular and powerful models. In your investing career, you will possibly want to branch out and experiment with others. Alternatively, you may find that the models we discuss here suit your needs. Either way, in the opinion of Your Humble Author, the use of these models will go a long way toward helping you choose prudent, long-term oriented investments that should withstand the test of time. Please keep in mind throughout our discussion that these models are simply crude guides and their results are not guaranteed. The one aspect that we can be fairly certain of is that our predictions will not be correct. Let's now get started with our first stock valuation models, the Dividend Discount Models.

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4.2: Dividend Discount Models (DDMs)



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One popular group of models of fundamental analysis are the dividend discount models, often abbreviated as DDM or DVM for dividend valuation model. According to the dividend discount models, shares of stock are valued on the basis of the present value of the future dividend streams the stock is projected to produce. Recall that we stated that the value of a stock is based on the present value of its future cash flows. The future cash flows from stocks come from their dividends. Therefore, dividend discount models should be extremely popular, right? During the late 1990's, investors who adhered to these types of models were considered old fashioned and outdated. But those investors weathered the 2000-2002 downturn very well. Dividends became important again to many investors. "Dividends don't lie," is a famous saying. This saying comes from the fact that all the numbers that a company reports on their financial statements could be total fabrications except for one, the dividends. You know the dividends are not a lie because they sent you a check. (Well, actually, they don't send you a check anymore. The dividends are electronically deposited into your brokerage account but you get the idea.)

The dividend discount models require a discount rate. The discount rate is the required rate of return that we choose to calculate the value of shares of a stock using the dividend discount models. The predicted valuations are very sensitive to our chosen discount rate. Our results will vary widely depending upon our choice. The fact that everyone has a different required rate of return means that different investors will expect and demand different stock prices. Someone might be happy with 6%. Another might expect 10%. A third wants 15%. Mark Twain is reported to have said, "It is the difference of opinion that makes horse races." This describes the stock market, too.

The term discount rate does cause some uncomfortable looks of confusion from new investors. It does sound a bit strange to many. "Does the discount rate have anything to do with shopping and buying items at a discount?" Uh, no. We will use the terms *required*

rate of return or *desired rate of return* or *expected rate of return.* They all mean the same thing as far as the models are concerned.

The Zero Growth Dividend Discount Model

The Zero Growth Dividend Discount Model assumes dividends will continue at a fixed rate indefinitely into the future. It is useful for very mature companies in slow growth or no growth environments. The poster child for the Zero Growth Model is a utility company. Do utility companies grow quickly? In the initial stages of the rapid growth of a city, yes, the local utility will also grow quickly. Think of San Diego County in the 1950's and 1960's and San Diego Gas and Electric. However, once the area's infrastructure is put in place, the utility will grow very slowly, if it grows at all.

The formula for the Zero Growth Model is actually very simple:

$$\text{Value of Stock} = \frac{\text{Annual Dividends}}{\text{Required Rate of Return}}$$

For an example, let's assume that a slow-growth company has been paying $3 of dividends per share for many years and we believe it will continue to do so in the future. If our required rate of return were 6% (0.06), the formula would be:

$$\text{Value of Stock} = \frac{\text{Annual Dividends}}{\text{Required Rate of Return}} = \frac{\$3.00}{0.06} = \$50 \text{ per share}$$

Does the Zero Growth Model look familiar? It is simply another way to view the Dividend Yield which we calculated in the previous chapter. Recall that the Dividend Yield was calculated as:

$$\text{Dividend Yield} = \frac{\text{Annual Dividends}}{\text{Market Price of Stock}}$$

For those of you who enjoy math, note that we simply swapped the Value of Stock with the Market Price of Stock and we swapped the Required Rate of Return with the Dividend Yield. (For those of you who don't enjoy math, just ignore the previous sentence and hide the Dividend Yield formula.) The take-away is that investors who emphasize the Zero Growth Model are valuing the stock almost exclusively for its dividend yield. What is the current income the stock is generating from its dividends?

For a real-life example, let's explore Consolidated Edison, symbol ED, the energy utility for New York City and environs. It started its life as the New York Gas Light Company in 1823 and started delivering electricity in 1882. As of February 4, 2025, ED was paying $3.40 in annual dividends and we believe it will continue to pay this dividend into the future. Let's assume our required rate of return is 8% (0.08). The formula becomes:

$$\text{Value of Stock} = \frac{\text{Annual Dividends}}{\text{Required Rate of Return}} = \frac{\$3.60}{0.08} = \$42.50 \text{ per share}$$

The current market price as of February 4, 2025, was $94.91 per share. However, the model is stating that we believe the stock is worth only $38.75. Therefore, the model says that the stock is overpriced for our required rate of return. Let's try a different required rate of return. How about 5%?

$$\text{Value of Stock} = \frac{\text{Annual Dividends}}{\text{Required Rate of Return}} = \frac{\$3.40}{0.05} = \$68.00 \text{ per share}$$

The model again is stating that we believe the stock is too expensive for us. With a market price of $94.91, the stock is yielding 3.58%. Investors who are happy with a 3.58% required rate of return would believe that ED was correctly priced. Again, the Zero Growth Model works well for stable, income-producing stocks.

Disclaimer: Although they do so very slowly, unlike some other utility companies, Consolidated Edison actually does grow their dividend payments. Therefore, we should really use the next model. However, we simply could not resist showcasing a company that has been in business for 200 years.

The Gordon Growth Dividend Discount Model

The Gordon Growth Dividend Discount Model was named after Myron J. Gordon of the University of Toronto. It is also referred to as the Constant Perpetual Growth Model. This model takes the Zero Growth Model one step further and assumes dividends will continue to grow at a specified rate perpetually into the future. The formula is:

$$\text{Value of Stock} = \frac{(\text{Annual Dividends} * (1 + \text{Dividend Growth Rate}))}{(\text{Required Rate of Return} - \text{Dividend Growth Rate})}$$

Compare the formula above with the Zero Growth Model. See how "**(1 + Dividend Growth Rate)**" has been added to the numerator and "**- Dividend Growth Rate**" has been added in the denominator. (If you substitute zero for the Dividend Growth Rate, you get the Zero Growth Model. That's yet another insight for you math-friendly folks.)

For an example, let's investigate a company that is paying $1 dividend per share. They have been growing their dividend at a constant rate of 5% per year for several years and we believe they will continue to do so going into the future. Our desired rate of return is 10%. Therefore, the formula becomes:

$$\text{Value} = \frac{(\$1 * (1 + 0.05))}{(0.10 - 0.05)} = \frac{(\$1 * 1.05)}{0.05} = \frac{\$1.05}{0.05} = \$21 \text{ per share}$$

The model is telling us that we believe the stock should be valued at $21 per share. This model is good for companies with consistent dividend growth. Companies with consistent dividend growth tend to be large, well-established companies with their roots deep in the economy. Historically, they have been some of the stock market's best performers over the long term. Remember: Dividends don't lie!

A note about the arithmetic: We must calculate the numerator and denominator before doing the division. That is why we use the parentheses in the formula. Remember to calculate what is inside the parentheses first.

Let's look at some real-life examples. Our first is the well-known discount retail chain Target, symbol TGT. As of February 4, 2025, their stock price was $135.60. They are paying $4.48 per year in dividends. Let's assume that they have been growing their dividend at 8% per year and that our required rate of return is 13%. The formula becomes:

$$\text{Value} = \frac{(\$4.48 * (1 + 0.08))}{(0.13 - 0.08)} = \frac{(\$4.48 * 1.08)}{0.05} = \frac{\$4.8384}{0.05} \approx \$96.77$$

Hmmm. The stock price is $135.60 and our model tells us that we believe it is worth only $96.77 if we desire a 13% rate of return. The model is telling us the stock is overpriced if we require a rate of return of 13%. What if we reduce our expected rate of return to 10%? The only change is to the required rate of return and the formula becomes:

$$\text{Value} = \frac{(\$4.48 * (1 + 0.08))}{(0.10 - 0.08)} = \frac{(\$4.48 * 1.08)}{0.02} = \frac{\$4.8384}{0.02} \approx \$241.92$$

What a big difference! Do you see how sensitive the model is to our required rate of return? By simply changing our required rate of return from 13% to 10%, Target now looks like a bargain. Do you think that Target is a good value? Would you want to own Target? Remember that whenever we research a company, we also need to investigate their competitors, their customers, their suppliers, the industry they are operating in, etc. We do not simply rely on the results from our models. That would be folly.

Our next example is AbbVie, symbol ABBV, a pharmaceutical company that was spun off from Abbott Laboratories several years ago. As of February 4, 2025, the market price was $189.89 and they are currently paying $6.56 in annual dividends. Again, let's assume the dividends are growing at approximately 8% per year. Let's again use an expected rate of return of 13%:

$$\text{Value} = \frac{(\$6.56 * (1 + 0.08))}{(0.13 - 0.08)} = \frac{(\$6.56 * 1.08)}{0.05} = \frac{\$7.0848}{0.05} \approx \$141.70$$

At this market price, AbbVie does not look attractive. Let's again reduce the desired rate of return down to 10%. Remember that the only change is to the required rate of return:

$$\text{Value} = \frac{(\$6.56 * (1 + 0.08))}{(0.10 - 0.08)} = \frac{(\$6.56 * 1.08)}{0.02} = \frac{\$7.0848}{0.02} \approx \$354.24$$

Wow! AbbVie looks like a screaming good deal! However, remember the model is pointing us to companies like AbbVie. As mentioned, this will tilt the odds in our favor. But we now have to spend a whole lotta' time researching their products, their competitors, customers, suppliers, etc. We can't rely on the model alone. No, no, no, no, no!

Our third example is Illinois Tool Works. Who or what is Illinois Tool Works? They are one of those companies that have been around for over 100 years and you never hear about them but you are surrounded by their products every day and don't even know it. Their market price as of February 4, 2025 was $254.80 and they were paying $6.00 in annual dividends. If we assume the same 8% per year dividend growth rate and the same required rate of return of 13%, the formula becomes:

$$\text{Value} = \frac{(\$6.00 * (1 + 0.08))}{(0.13 - 0.08)} = \frac{(\$6.00 * 1.08)}{0.05} = \frac{\$6.48}{0.05} \approx \$129.60$$

Again, at 13%, the model is saying the stock is overpriced. What happens if we again reduce the desired rate of return down to 10%:

$$\text{Value} = \frac{(\$6.00 * (1 + 0.08))}{(0.10 - 0.08)} = \frac{(\$6.00 * 1.08)}{0.02} = \frac{\$6.48}{0.02} \approx \$324.00$$

Maybe we ought to spend more time researching ITW and their competitors. Think of how impressed your friends and family members and colleagues will be when you wax eloquently about large companies important to our economy that they have never heard of.

Now it is your turn to do the calculations. Packaging Corporation of America, symbol PKG, is a company that has been making cardboard boxes … since 1867. As of February 4, 2025, the market price was $210.64. They were paying $5.00 annual dividends and we will assume that they are growing their dividends at 8% per year. Use the model to compute the predicted value at both a 13% and 10% required rate of return. (You should receive $108 for 13% and $270 for 10%.) When people ask me if they should invest in Amazon, I say, "Maybe. But why don't you research one of the companies that supplies Amazon with the cardboard boxes they use to ship their products?"

Our last example is McDonald's, symbol MCD, the purveyors of fine foods designed to clog your veins and arteries, encourage certain cancers, and spur Type 2 Diabetes Mellitus. They may even be switching back to pre-1970's days when beef tallow was the norm. This is a brilliant move that would guarantee many future patients for cardiologists since ingesting beef tallow is a great way to coat your arteries with a substance similar to candle wax. However, there's a whole lot of money to be made giving people heart disease, strokes, and diabetes. We can then can invest in the companies that then sell them the insulin and the stents! As of February 4, 2025, the market price of McDonald's was $289.77 and they were paying $7.08 in annual dividends. If we assume a dividend growth rate of 8% and desire a 13% required rate of return, the formula is:

$$\text{Value} = \frac{(\$7.08 * (1 + 0.08))}{(0.13 - 0.08)} = \frac{(\$7.08 * 1.08)}{0.05} = \frac{\$7.6464}{0.05} \approx \$152.93$$

Again, let's try 10%.

$$\text{Value} = \frac{(\$7.08 * (1 + 0.08))}{(0.10 - 0.08)} = \frac{(\$7.08 * 1.08)}{0.02} = \frac{\$7.6464}{0.02} \approx \$382.32$$

Here we see an example of an ethical dilemma that we investors must face from time to time. Here is a company that sells products that are contributing to our most prolific killers: heart disease, cancer, and diabetes. But we aren't forcing their consumers to buy

their products, right? And yet, we all pay for the mess that fast food restaurants create. The profits are privatized; the health costs are socialized. Nothing is perfect, not even capitalism. Would you buy McDonald's?

Now, after one hypothetical example and five real-life examples, you may be wondering if the Gordon Growth Model is very near and dear to your Humble Author's heart. You would be right. For all its many limitations, this model is an excellent place to start your research. Please, please, please do not ignore these calculations. They are very easy to do. They will be on exam #2, exam #3, exam #4, and the final exam. You can't leave BUS-123, Introduction to Investments, without being able to do these simple calculations. It is bad for my self-esteem!

Oh, by the way, you may also be wondering why we simply assumed that the dividend growth rate was 8% for all these companies. Shouldn't we find the actual dividend growth rates? The answer is, "Yes, of course, we should!" Not only is the model sensitive to our required rate of return, the model is also very sensitive to the dividend growth rate. The recent dividend growth rates of Target, AbbVie, Illinois Tool Works, Packaging Corporation of America, and McDonald's are all 8.0% or higher. AbbVie is 8.0%, McDonald's is 8.5%, Target is 8.7%, Packaging Corporation of America is 10.0%, and Illinois Tool Works is 13.1%. All these companies are growing their dividends 8% or higher per year. However, the model does not work if the required rate of return is equal to or less than the dividend growth rate. You get bizarre and anomalous results such as division by zero or negative expected prices. Therefore, we should actually raise our expected rates of returns for all of these companies! According to the model, all these companies are actually better buys than what our initial results were telling us for our required rates of return. Note that these are blue chip companies with long histories of rising dividends. But they are not alone.

The Constant Growth Dividend Discount Model

The Constant Growth Dividend Discount Model assumes dividends will continue to grow at a specified rate for a specified number of years. This model takes the Gordon Growth Model one step further, adding a term to account for constant growth for a set number of years. This is similar to how the Gordon Growth Model evolved from the Zero Growth Model, adding an additional term to account for the consistent growth of dividends. We are going to use a fancy equation editor to display the model. Relax. Before you drop the class, know that we are *not* going to use this model. We are only showing it to you so you can see how much energy has been put into building these models. The Constant Growth Dividend Discount Model formula is:

$$\text{Value} = \underbrace{\frac{D(1+g)}{r-g}}_{\text{Gordon Growth Model}} \underbrace{\left[1-\left(\frac{1+g}{1+r}\right)^{T}\right]}_{\text{Added term to account for growth for a number of years}} ?$$

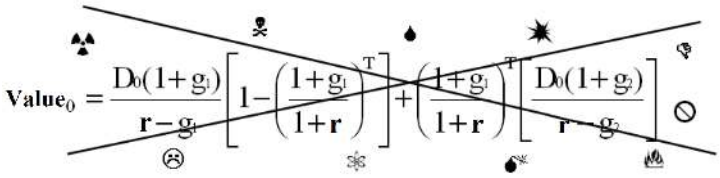
Aye! Scary math stuff! Just gotta' love those math folks, eh? They use single characters to denote quantities when we normal folks would use an entire descriptive word. The equation is using **D** as the annual dividend, **g** as the dividend growth rate, **r** as the required rate of return, and **T** as the number of years of growth. The formula computes what we believe the **Value** of the stock is worth. The **?** means that we are afraid that this equation is going to scare students away. Remember we are not going to use this model. Please keep reading. Please don't drop the class.

Do you see what they have done? The left side of the formula is the Gordon Growth Model that we just studied. To the Gordon Growth Model, they have added another term that takes into account the growth for a set number of years. When using this model, you are asked to estimate just how long the company will be growing their dividends. That is a dubious speculation at best.

Wait. It gets worse.

The Two-Stage Dividend Growth Discount Model

The Two-Stage Dividend Growth Discount Model, also known as the Variable Growth Model, assumes dividends will continue to grow at a specified rate into the future (presumably the fast-growth stage) and then grow at a second (presumably slower growth rate once the company matures). Here it is, Friends:



Are you impressed? Well, this model may look very impressive, especially to those who love math, but it has some serious problems. It is very difficult to accurately predict future dividend growth during the initial fast growth stage of a stock. Usually, companies do not pay significant dividends while they are growing quickly because they need the earnings to reinvest in the growth of the company. Again, we show you this model not because we believe it is actually a worthwhile model. We don't use it and we certainly don't want you to use it! We show it to you to demonstrate the lengths to which investors have gone to determine the value of companies. Many decades ago in *The Intelligent Investor*, author Benjamin Graham warned against using overly sophisticated mathematical models to value stocks.

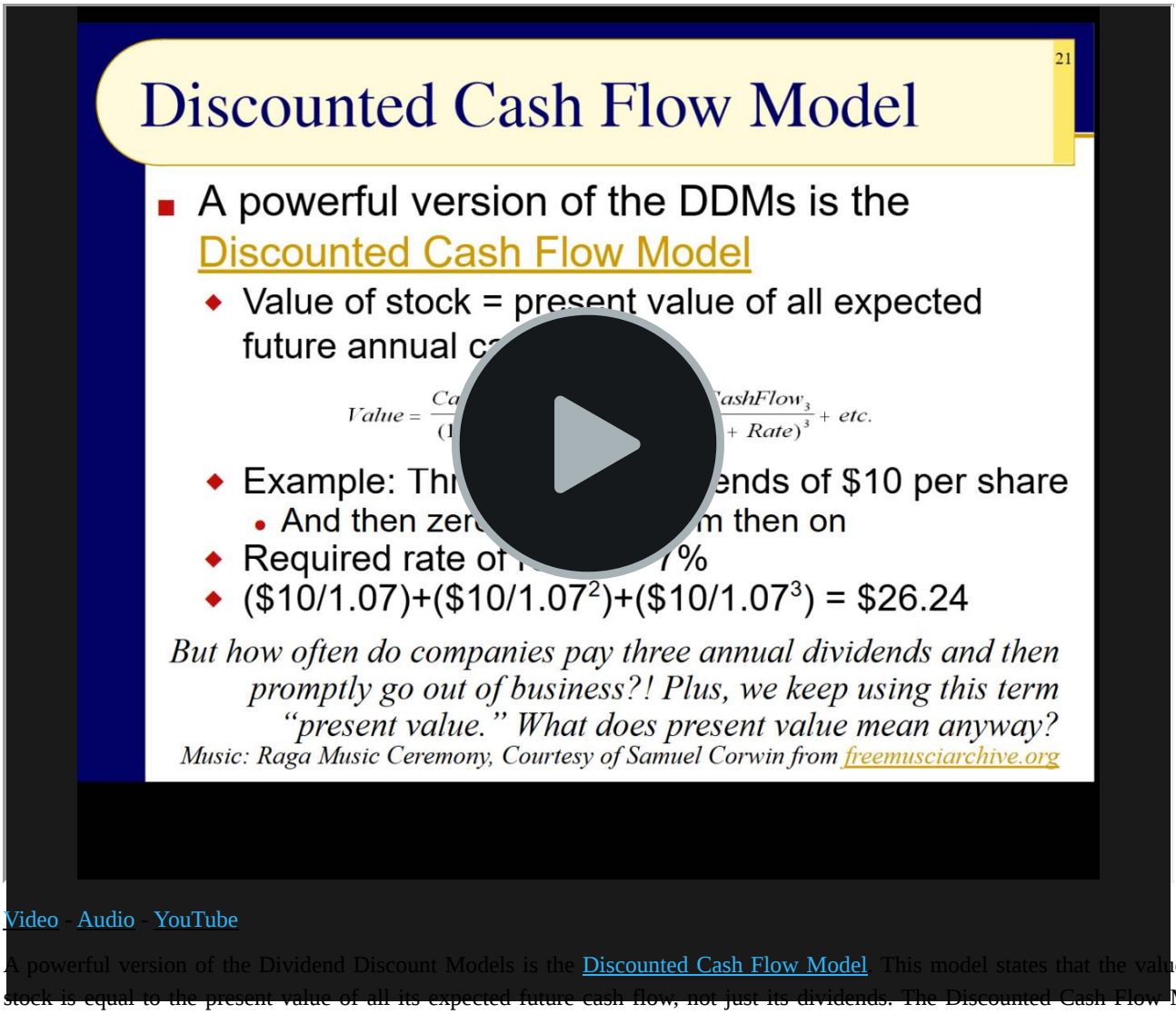
Observations of the Dividend Discount Models

Let's take a few moments to reflect upon the various Dividend Discount Models that we have covered. One serious issue with the models is that dividend growth rates are very difficult to estimate. With large, well-established companies that have consistently been growing their dividends for a significant period of time, historical growth rates may be useful. But with fast growing companies in new industries, it is almost impossible. However, a more important question arises: How do you use these versions of the models for companies that aren't paying any dividends? The simple answer is, "You can't!" If a company is not paying dividends, then the present value of the future stream of no dividends is zero! These models say that a company that does not pay any dividends is worthless. This is obviously not true. The problems of the previous Dividend Discount Models notwithstanding, repeat after me: "The value of a stock is based on the present value of its future cash flows."

Now, if only there were a model that could value a company that is not paying dividends. Ah, Dear Students, read on. You are all about to become full-fledged Investment Gurus!

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4.3: The Discounted Cash Flow Model



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A powerful version of the Dividend Discount Models is the Discounted Cash Flow Model. This model states that the value of a stock is equal to the present value of all its expected future cash flow, not just its dividends. The Discounted Cash Flow Model formula is:

$$Value = \frac{CashFlow_1}{(1+Rate)} + \frac{CashFlow_2}{(1+Rate)^2} + \frac{CashFlow_3}{(1+Rate)^3} + etc.$$

The cash flow for each year, $CashFlow_1$, $CashFlow_2$, $CashFlow_3$, etc., is divided by the quantity $(1 + Rate)^1$, $(1 + Rate)^2$, $(1 + Rate)^3$, etc., for as many years as we can reasonably estimate the future cash flows. Relax. **We promised you that you did not have to do any exponentiation and we are not going back on that promise.** We will do the exponentiation for the following example and then show you how we avoid the exponentiation. Your 99¢ calculator will still suffice.

Let's say a company is going to pay their shareholders three annual dividends of $10 per share and from then on, there will be no more dividends. Let's set our required rate of return to 7%. The calculations are:

$$Value = \frac{\$10}{1.07} + \frac{\$10}{1.07^2} + \frac{\$10}{1.07^3} = \frac{\$10}{1.07} + \frac{\$10}{1.1449} + \frac{\$10}{1.2250} \cong \$26.24$$

The model is saying the company's stock is worth $26.24. But how often do companies pay three annual dividends and then promptly go out of business?! Plus, we keep using this term "present value." *What does present value mean anyway?*

What is Present Value?

Present value is the value today of a lump sum principal or series of payments to be received at some future date. It is the opposite of future value. Present value and future value are inverse operations. We say that present value and future value are "two sides of the same coin." Future value tells you what a single investment or series of investments made today will be worth in the future. Present value tells you what a single quantity or series of quantities that you receive in the future is worth today in the present. The present value tells us what cash flows received in the future are worth today.

There were some optional future value calculations in chapter 1. One of the problems asked you to compute the future value of a $10,000 lump sum investment in 10 years if we received an 10% average annual rate of return. We could use the exponential formula but instead, we use the future value multiplier from the future value table. We go across to 10% and move down to 10 years and find that the future value multiplier is 2.594.

Future Value of $1 Lump Sum Principal at Compound Rate of Return

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.110	1.120
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.232	1.254
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.368	1.405
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.518	1.574
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.685	1.762
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.870	1.974
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.076	2.211
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.305	2.476
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.558	2.773
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	2.839	3.106
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.152	3.479

We then multiply the $10,000 investment by the future value multiplier of 2.594 and that gives us a result of $25,940. The future value of $10,000 at a 10% average annual rate return for 10 years is $25,940. If we invest $10,000 today and receive a 10% rate of return, in 10 years, we will have $25,940.

What if we wanted to do the opposite? What if we wanted to determine how much a result that we receive in the future is worth to us today in the present? In other words, what is the present value of that payment that we will receive in the future? Again, there is an exponential formula but we promised you that you would not have to use exponents. We compute the present value using the same technique as the future value calculation except we will use the present value table. Let's say we are going to receive $25,940 in 10 years. If we desire a 10% annual rate of return, what is that $25,940 worth to us today? In the present value table, go across to 10% and down to 10 years. The present value multiplier is 0.386.

Present Value of $1

	5%	6%	7%	8%	9%	10%	11%	12%
1	0.952	0.943	0.935	0.926	0.917	0.909	0.901	0.893
2	0.907	0.890	0.873	0.857	0.842	0.826	0.812	0.797
3	0.864	0.840	0.816	0.794	0.772	0.751	0.731	0.712
4	0.823	0.792	0.763	0.735	0.708	0.683	0.659	0.636
5	0.784	0.747	0.713	0.681	0.650	0.621	0.593	0.567
6	0.746	0.705	0.666	0.630	0.596	0.564	0.535	0.507
7	0.711	0.665	0.623	0.583	0.547	0.513	0.482	0.452
8	0.677	0.627	0.582	0.540	0.502	0.467	0.434	0.404
9	0.645	0.592	0.544	0.500	0.460	0.424	0.391	0.361
10	0.614	0.558	0.508	0.463	0.422	0.386	0.352	0.322
11	0.585	0.527	0.475	0.429	0.388	0.350	0.317	0.287

We multiply the $25,940 by the present value multiplier of 0.386 and the result is $10,012.84. The result is not exactly $10,000 because the table is only using three digits of accuracy. If we had used 7 or 8 digits after the decimal point, we would receive $10,000 exactly as our result.

So, what would you rather have, $10,000 today or $25,940 in ten years? If our required rate of return is 10%, they are equivalent. The future value of $10,000 in 10 years at 10% is $25,940. The present value of $25,940 in 10 years at 10% is $10,000. They are

two sides of the same coin! Calculating the future value of investments made today is called compounding. Calculating the present value of payments received in the future is called discounting. Oh, no! There's yet another weird sounding phrase! I know. I know. "Discounting a stream of future cash flows" sounds kinda' dumb but get used to it because those are indeed the words we use. Look, all it means is that we are going to look up numbers in the present value table and then multiply them. You Can Do It! Again, all you need is a 99¢ calculator and the present value table.

What is Discounting a Stream of Future Cash Flows?

We are going to take payments that we receive in the future and calculate what those future payments are worth today. We say that "we are discounting those future payments" back to the present. The process is actually very easy but the words get in the way. Let's use the present value table and redo the example above of three annual dividends of $10 at an annual rate of 7%. We go to the present value table and find the present value multipliers for years 1, 2, and 3 at 7%.

	Present Value of $1						
	5%	**6%**	**7%**	**8%**	**9%**	**10%**	**11%**
1	0.952	0.943	0.935	0.926	0.917	0.909	0.901
2	0.907	0.890	0.873	0.857	0.842	0.826	0.812
3	0.864	0.840	0.816	0.794	0.772	0.751	0.731
4	0.823	0.792	0.763	0.735	0.708	0.683	0.659
5	0.784	0.747	0.713	0.681	0.650	0.621	0.593
6	0.746	0.705	0.666	0.630	0.596	0.564	0.535

The present value multipliers are 0.935, 0.873, and 0.816. We then multiply the future cash flows of $10 per year by each of the three present value multipliers:

```
Value = $10*0.935 + $10*0.873 + $10*0.816 = $9.35 + $8.73 + $8.16 = $26.24
```

Now that wasn't so bad, was it? For many students, doing the calculation is often much easier than understanding what the terms present value and discounting actually mean. So please do not worry if you are still a bit confused about what the words mean. Just do the calculations … over and over and over again. The meanings will shine through soon. Another way of displaying the problem involves using a table:

Year	**Future Cash Flows**	**Present Value Multipliers$_{7\%}$**	**Discounted Cash Flows**
#1	Dividend of $10	0.935	$9.35
#2	Dividend of $10	0.873	$8.73
#3	Dividend of $10	0.816	$8.16
Total:			$26.24

Many find the table format is much easier to use. You multiply each year's future cash flow by the year's present value multiplier to get the discounted cash flow. You then compute the sum of the discounted cash flows. That gives you the present value of the future stream of cash flows.

Examples of the Discounted Cash Flow Model

We are ready to put the Discounted Cash Flow Model into practice. Our first example did not take into account that the stock will still have worth at the end of the three years. To make the model more useful, we simply add our predicted market price of the stock at the end of the three years to the present value calculations. We treat the price of the stock at the end of the three years as a future

cash flow that needs to be discounted. What if the current stock price were $125 and we predicted the stock price to be $135 at the end of three years? We add the price of the stock in the last year to the table above:

Year	Future Cash Flows	Present Value Multipliers$_{7\%}$	Discounted Cash Flows
#1	Dividend of $10	0.935	$9.35
#2	Dividend of $10	0.873	$8.73
#3	Dividend of $10	0.816	$8.16
#3	Expected stock price of $135 at the end of year #3	0.816	$110.16
Total:			$136.40

Notice that the present value multiplier for the expected stock price is the same as the dividend future cash flow in year #3. This is because the dividend in year #3 and the expected stock price at the end of the third year are both cash flows that we receive in the third year. We therefore use the same present value multiplier. When we sum the discounted cash flows in the last column, we compute a present value of $136.40. The current stock price is $125. The model is telling us that if we require a 7% annual rate of return, the stock is worth $136.40 while the marketplace is offering us the stock at $125. The model is saying that this stock is a potentially good investment for us if our desired rate of return is 7%.

DISCLAIMER: WARNING: REPUDIATION: DISAVOWAL: REFUTATION: ABNEGATION: RENUNCIATION: In no way should we make a final decision, either yea or nay, about whether or not we should buy or sell any stock simply based on the results of this or any other model. We are using these models to point us in the right direction. We are attempting to tilt the odds in our favor. We have a whole lot more research that we need to do before we actually decide to choose a stock as one of our investments. Got it? Good. Just wanted to make sure. Let's continue.

Example #2: Pretzels Unlimited, symbol PU, is a stolid, imaginary company that has been making pretzels and other baked goods for almost 100 years. Their stock is currently selling for $22 per share and will pay $2.00 per share in dividends in 2025. PU expects to increase their dividends to $2.20 in 2026, $2.30 in 2027, and $2.30 in 2028. We will be selling the stock at the end of 2028 and we expect the price to be $27 per share at that time. Our required rate of return is 12%. We put the years in the first column and the future cash flows in the second column.

Year	Future Cash Flows	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
2025	$2.00	0.893	$1.786
2026	$2.20	0.797	$1.7534
2027	$2.30	0.712	$1.6376
2028	$2.30 + $27 = $29.30	0.636	$18.6348
Total:			≅ $23.81

Find the present value multipliers for years 1 through 4 at 12% in the present value table. Did you find 0.893, 0.797, 0.712, and 0.636? The present value multipliers go in the third column. With your 99¢ calculator, multiply the future cash flows by the present value multipliers to compute the discounted cash flows in the last column. Last, sum up the discounted cash flows in the last column to compute the present value. The model is saying that PU is worth $23.81 if we require a 12% rate of return. However, the price of the stock is only $22. The model says that this stock is possibly an attractive investment for us. We need to do much more research but this is a good start. PU is a stock that might just make it into our portfolio.

Notice that we added the expected stock price in the last year to the dividend in the last year. This allowed us to skip a multiplication. But more importantly, it also allows us to utilize a very powerful spreadsheet function to calculate the Internal Rate

of Return.

The Internal Rate of Return

The Internal Rate of Return is a measure of what rate of return we expect to get from a series of cash flows, including positive and negative flows. In other words, we required a 12% rate of return from Pretzels Unlimited, but what do our numbers tell us will be our expected rate of return? Someday, when you take an upper-level or graduate finance or investment class, you will learn how to manually compute Internal Rate of Return. Hopefully, you will not have a sadistic professor who will require you to calculate it manually more than once! We are simply going to enter the numbers into the spreadsheet formula and press the [Enter] key, okay?

For those not familiar with an electronic spreadsheet, know that they are just like our 99¢ calculator, just a whole lot more powerful. We use Google Docs which is free to anyone who has a Google account. You may use Microsloth Excuse or maybe even LibreOffice or OpenOffice. They all work the same, kinda' like a giant Bingo game. The spreadsheet formula is:

`=IRR(`**`values`**`,`**`approximate-rate-of-return`**`)` where
`values` is the block of cells containing the cash flows, both positive and negative, and
`approximate-rate-of-return` is our guess as to what the Internal Rate of Return will be

	A	B	C	D	E
1		Discounted Cash Flow Example - Pretzels Unlimited - Internal Rate of Return			
2					
3		Year	Cash Flows		Comments
4			$ (22.00)		Our initial outlay is $22.00 - enter any outflows as negative numbers
5		2025	$ 2.00		$2.00 dividend – enter cash inflows as positive numbers
6		2026	$ 2.20		$2.20 dividend
7		2027	$ 2.30		$2.30 dividend
8		2028	$ 29.30		$2.30 dividend + $27.00 proceeds from sale of stock
10			14.51%		Internal Rate of Return =IRR(values C4 through C8,approximate-rate-of-return 12%)

In cell C10, the formula is =IRR(C4:C8,0.12) This tells the spreadsheet to use the cash flows in cells C4, C5, C6, C7, and C8. The 0.12 (12%) is our guess of what the result will be. We can just leave it as zero and ask the spreadsheet to do its best to find the result. Notice that we must include in the initial price of the stock as a cash outflow, a negative number, in cell C4. Internal Rate of Return calculations require all cash flows, both inflows and outflows. So, what is the result from the Internal Rate of Return calculation telling us? If we pay $22 for the stock today and then we receive the expected dividends over the next four years and the stock is worth $27 at the end of the four years, our Internal Rate of Return will be 14.51%, better than our 12% desired rate of return.

Here is the spreadsheet on the class website. You will notice that it has two pages. The first page allows us to simply put in the cash flows and the spreadsheet will automatically calculate the present value. There is no need for us to look up the present value multipliers, multiply, and then sum the results. The second page automatically calculates the Internal Rate of Return formula calculation. Pretty handy, these electronic spreadsheets! And they are free, too, if we use Google Docs or OpenOffice or LibreOffice. Who needs to pay some company that shall remain unnamed (Micro$oft) that treats its customers like vermin, continually requiring them to endure painful and costly upgrades in the hopes that someday, somehow, their programs might actually work? (I know. I have a pathological disgust of that unnamed company. Nobody's perfect, eh?)

But What If a Company is Not Paying Any Dividends?

When we reviewed the problems with the initial Dividend Discount Models, we found that they simply did not work if the company was not paying any dividends. The present value of nothing received in the future is zero. This is not the case with the Discounted Cash Flow Model. Unlike the other Dividend Discount Models, the Discounted Cash Flow Model can still be used if there are no dividends. We simply treat the expected future price of the stock as a single future cash flow. Very cool!

Example 3: Genes 'R' Us, symbol GRUS, an exciting, dynamic, make believe San Diego-based biotechnology company, is currently selling for $21 per share. It pays no dividends and is currently losing money. They are working on a drug that will cure baldness. We believe that GRUS will sell for around $50 per share in five years. Our required rate of return is 13%. How can we determine if this is a potentially good investment?

Let's construct the the cash flow table:

Year	Future Cash Flows	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
2025	$0	0.885	$0
2026	$0	0.783	$0
2027	$0	0.693	$0
2028	$0	0.613	$0
2029	$0 + $50 = $50	0.543	$27.15
		Total:	$27.15

Actually, we did not need to construct the entire cash flow table. All we really needed was 2029, year #5, since the present value of zero dividends is zero. We could have simply multiplied $50 by the present value multiplier for 13% for 5 years, 0.543. $50 future value times 0.543 equals $27.15. The model is telling us that we believe GRUS is worth $27.15 while it is selling for only $21 per share. Once again, the model is pointing us in the direction of the company as a potentially worthwhile investment.

Unlike the table above, when we use an electronic spreadsheet to calculate the Internal Rate of Return, we are forced to include all the years, even those with no cash flow:

Year	Cash Flows	Internal Rate of Return
	($21.00)	Initial cash outflow is negative $21.00
2025	$0	There are no dividends
2026	$0	
2027	$0	
2028	$0	
2029	$50.00	Expected price of stock in 5 years
	18.95%	=IRR(B2:B7,0.13)

If Genes 'R' Us does reach $50 in five years, then we will have achieved almost a 19% rate of return. Pretty awesome!

Wait a minute! Hopefully, by now, you can now look at both Pretzels Unlimited and Genes 'R' Us and make some simple observations. Which company is the safer alternative? Which company is offering their investors cash each year and growing that stream of income? If you answered, Pretzels Unlimited, you have been paying close attention. Which company is the riskier investment? Which company offers the potential for great reward but also could fall down, crack open, and dissolve into a pool of tears? If you answered, Genes 'R' Us, give yourself a gold star for today's very important lesson.

Pretzels Unlimited could easily be one of the blue-chip or income-oriented companies, big, stodgy, growing at a very slow pace or simply not growing at all and throwing off gobs of cash to their investors because they just don't need the money to reinvest in the company anymore. Genes 'R' Us, on the other hand, could easily turn our $500 or $1,000 investment into $50,000 if they hit the big time because their drug works and is approved by the authorities as safe and effective and everyone who is bald is going to fork over gobs of cash to buy it. However, Genes 'R' Us could also easily turn our $500 or $1,000 into 50¢ when it turns out the drug doesn't work or turns people's livers into pate. If the truth be told, a half million years ago, Your Humble Author was a sucker for these small, biotechnology startups based here in San Diego. I would go to the annual meetings and talk to the employees. The technology was so cool and was going to change the world and, uh, well, it didn't always work out the way it was supposed to. Luckily for me and my wife, I only put a tiny percentage of our investments into these very speculative ventures. I called it our

"Vegas Fund" … and it lived down to its name. Now I concentrate on companies like Pretzels Unlimited and call the account our "Benjamin Graham Fund."

We are not saying that you should never choose a Genes 'R' Us as one of your investments. We are not saying that you should only choose companies like Pretzels Unlimited. However, for the vast majority of us individual investors without the benefit of global research teams based all around the world speaking dozens of languages, the Pretzels Unlimited's of the world are more likely to help us successfully build prudent, long-term wealth. How 'bout this strategy? For every one Genes 'R' Us you find, choose four or five Pretzels Unlimited's. Would that work for you?

What is most important from this discussion is that you learn to identify the risks inherent in the companies you research. We want you to have your eyes wide open. If you do choose a speculative issue such as Genes 'R' Us, have the courage of your conviction and we wish you the best of luck and success. But realize that you are assuming a large risk. You are taking a big gamble. Be prepared for volatility. (Translation from personal experience: "I bought it at $11.88 and I sold it at 30¢." That was Alliance Pharmaceuticals. They were working on artificial blood! No more blood banks or pleas for people to donate blood! Uh, don't bother looking for them. Alliance Pharmaceuticals is gone, not the blood banks. The SEC officially revoked their securities in 2013 but they were long gone way before then. That was one of my speculative issues. Remember that speculation is our industry euphemism for, "Aye! I lost a lotta' money!")

You know what is next, right? We once again revisit Mr. Benjamin Graham's definition of an investment:

> *"An investment operation is one which, upon thorough analysis promises safety of principal and an adequate return. Operations not meeting these requirements are speculative." – The Intelligent Investor, Benjamin Graham*

We also revisit our original definition of an investment:

> *"An investment is any vehicle into which resources can be placed with the expectation that it will generate positive income, or that its value will be preserved or increased, or both."*

So now when you approach a potential investment, you will look at it with fresh eyes. You will investigate what type of cash flows the investment will return to you in the form of income or capital gains or both. You also now have the tools to value those future cash flows, the Dividend Discount Models, including the very powerful Discounted Cash Flow Model, and the equally powerful Internal Rate of Return calculation, given to you courtesy of an electronic spreadsheet. You will also be able to estimate the relative risk of the investment. Congratulations, Dear Students, you are now official Investment Gurus!

You Must Learn How to Discount a Future Stream of Cash Flows!

We know that for some individuals, as soon as they see numbers and formulas and symbols and calculations, their mouths become dry, their eyes gloss over, and they vow to completely ignore whatever they see in front of them. Don't do it! Don't Give Up! Never Give Up! Go back and read the above sections again. Listen to or watch the accompanying presentation. Practice the calculations and the worksheets. There are answer keys and commentaries. Do them. If they don't make sense and you are confused and you get the wrong results, go play volleyball or walk the dog or ride your bike. Then come back and do it all over again. You Can Do It! The calculations are very easy once you do them a few times. Remember that all you need is a 99¢ calculator and the present value table. Learn to use the free electronic spreadsheets and you don't even need the calculator or present value table. You can't leave BUS-123, Introduction to Investments, without knowing how to discount a future stream of cash flows. These calculations are going to be on exam #2, exam #3, exam #4 and the final exam so you may as well learn how to do them now. *You must learn how to discount a future stream of cash flows!* (Please. Remember it is really bad for my self-esteem if you don't.)

Other Valuation Models

As mentioned, there are numerous valuation models. We have concentrated on the Dividend Discount Models. One of my favorite aspects of investing is that a person will never, ever learn all that there is to know about investments. You have the rest of your life

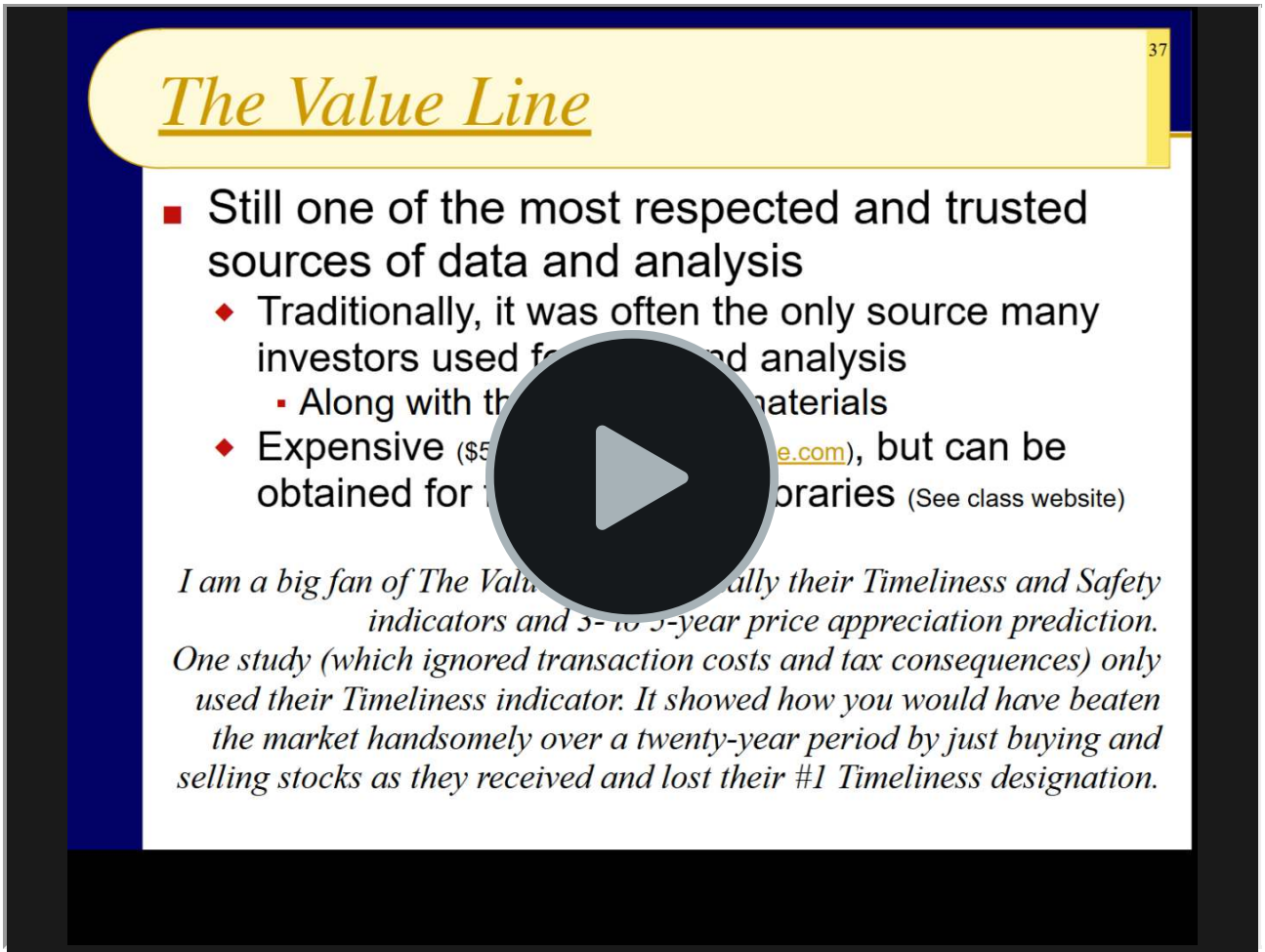
to explore the various models. Please contact me when you find a model that is as good or better than the Discounted Cash Flow Model, okay?

You may be thinking, “Okay, Mr. Know-It-All, this is all great, but just where are we supposed to get all this historical information, anyway? And just who decides what next year’s earnings or dividends per share, the dividend growth rate, etc. are going to be, let alone the expected price of a stock in 3 to 5 years?!”

Before the Internet (BI?), this information was not readily available. Normally, you would ask your broker for it or you would use one of the securities industry’s trusted information sources. Traditionally, the most respected source was *The Value Line*, the subject of our next section.

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4.4: The Value Line: All the Financial News That's Fit to Print



Video - Audio - YouTube

The Value Line is an investment research company that collects data and analyzes the performance of thousands of companies. They have been around for decades and are still one of the most respected and trusted sources of data and analysis. Traditionally, it was often the only source many investors used for data and analysis of a stock, along with the company's annual and quarterly reports, the 10K's and 10Q's. *The Value Line* is expensive but can be obtained for free at various libraries. Your Humble Author is a big fan of *The Value Line*, especially their Timeliness and Safety indicators. One study which ignored transaction costs and tax consequences only used their Timeliness indicator. It showed how you would have beaten the market handsomely over a twenty-year period by just buying and selling stocks as they received and lost their #1 Timeliness designation.

Recently, *The Value Line* has switched to the so-called "freemium" business model that is very popular with Internet websites. An individual has access to some of their data for free on their website but must subscribe to one of their packages to get all the data on companies.

A Sip from the Financial Fire Hose

Let's take a sip from the financial fire hose. Scan through the *The Value Line* December 27th, 2024, report for Johnson 'n' Johnson, the medical company. Can you find the following?

- *The Value Line* indicators?
- The future price projections?
- The historical data?
- The cash assets, receivables, inventory, and other assets?

- The description and analysis of the business?
- The historical annual rates?
- The insider and institutional buying & selling?
- The amount of debt and number of shares outstanding?
- The company's financial strength, stability, price growth, and earnings predictability ratings?

Find a library that has *The Value Line* and find the Johnson and Johnson report for December 27, 2024.

The Value Line so far has not seen the tremendous benefit they would reap from the enormous amount of good will engendered from allowing us to use their reports in our FREE Open Educational Resources textbook. Oh, well.

Do you see the highlighted historical yearly dividends? From them, we can easily compute the dividend growth rate. Do you see the predicted price in three, four, or five years? Yes, they are giving us a range and we must use our own judgment but at least now we have a prediction from a company with a long track record of excellent results. By the way, do you remember when we were discussing mutual funds and we said approximately a 20%, 25%, or 30% annual turnaround was recommended? That means the mutual fund managers are holding on to their stocks for an average of 3, 4, or 5 years. That is about as far into the future that anyone would dare predict, including *The Value Line*.

Plus, did you look at the Annual Rates section? *The Value Line* has already computed the dividend growth rate for the past 5 and 10 years and is giving us their prediction for the dividend growth rate for the next three to five years. We could compute our own historical growth rate for whatever number of years we wanted or we could use their computed historical growth rates. And we could use our own judgment for the dividend growth rate going into the future or use theirs. Last, read the analyst's report. It gives you a very good idea of where the company is and where they are heading. Your Humble Author does not make any decision about an individual stock without consulting *The Value Line*!

Example Stock Predictions using Our Models and Data from *The Value Line*

Now let's use the data from *The Value Line* to compute the Gordon Growth Model, the Discounted Cash Flow Model, and the Internal Rate of Return for Johnson 'n' Johnson. The data is from February 5, 2025. We are breaking the spreadsheet into three parts below. However, when you use the spreadsheet, you will see all three parts on one page.

Johnson & Johnson - 5 February 2025

Year	Enter Historical Dividends per Share	Yearly Dividend Growth Rates	Enter data in shaded cells. Unshaded cells contains are formulas. (Do not enter data in the unshaded cells. Those are formulas.)		
2025	$5.20	5.26%	Enter Current Price:	$ 153.83	Source: *Google Finance -- 5 February 2025*
2024	4.94	5.11%	Enter Predicted Price:	$ 210.00	Source: *The Value Line (midpoint of $190 & $230)*
2023	4.70	5.62%	Enter Predicted Dividend Growth Rate:	5.00%	Source: *The Value Line*
2022	4.45	6.21%			
2021	4.19	5.28%	Average Dividend Growth Rate:	5.60%	(average of the yearly dividend growth rates)
2020	3.98	6.13%			(computed from values at left)
2019	3.75				

Gordon Growth Model = (Annual Dividends * (1+Dividend Growth Rate)) / (Required Rate of Return - Dividend Growth Rate)

	Average Growth Rate	Predicted Growth Rate			
	5.60%	5.00%			
Prediction:	$85.81	$78.00	12%	12% Required Rate of Return	Required rates of return must be
	$124.81	$109.20	10%	10% Required Rate of Return	greater than dividend growth rates
	$228.84	$182.00	8%	8% Required Rate of Return	

In the shaded areas, we enter the historical dividends per share, the current price, the predicted price in 3, 4, or 5 years, and *The Value Line*'s predicted dividend growth. The spreadsheet does the rest! This part calculates the Gordon Growth Model predictions. Note how our choice of required rate of return changes the prediction results drastically.

Johnson & Johnson - 5 February 2025

Year	Enter Historical Dividends per Share	Yearly Dividend Growth Rates	Enter data in shaded cells. Unshaded cells contains are formulas. (Do not enter data in the unshaded cells. Those are formulas.)			
2025	$5.20	5.26%	Enter Current Price:	$	153.83	Source: *Google Finance -- 5 February 2025*
2024	4.94	5.11%	Enter Predicted Price:	$	210.00	Source: *The Value Line (midpoint of $190 & $230)*
2023	4.70	5.62%	Enter Predicted Dividend Growth Rate:		5.00%	Source: *The Value Line*
2022	4.45	6.21%				
2021	4.19	5.28%	Average Dividend Growth Rate:		5.60%	(average of the yearly dividend growth rates)
2020	3.98	6.13%				(computed from values at left)
2019	3.75					

Discounted Cash Flow Model = present value(future dividends) + present value(predicted price of stock at end of last year)

Years	Future Cash Flows	$PVM_{10\%}$	Discounted Cash Flows		$PVM_{8\%}$	Discounted Cash Flows	
2025	$ 5.20	0.909	4.72680		0.926	4.81520	Using Our Average
2026	$ 5.49	0.826	4.53575		0.857	4.70598	Dividend Growth Rate
2027	$ 5.80	0.751	4.35486		0.796	4.61581	
2028	$ 216.12	0.683	147.61236		0.735	158.85078	
	Present value (PV) at 10%:		161.22977	$161.23	PV at 8%:	172.98776	$172.99

Discounted Cash Flow Model = present value(future dividends) + present value(predicted price of stock at end of last year)

Years	Future Cash Flows	$PVM_{10\%}$	Discounted Cash Flows		$PVM_{8\%}$	Discounted Cash Flows	
2025	$ 5.20	0.909	4.72680		0.926	4.81520	Using *The Value Line's*
2026	$ 5.46	0.826	4.50996		0.857	4.67922	Predicted Dividend
2027	$ 5.73	0.751	4.30548		0.796	4.56347	Growth Rate
2028	$ 216.02	0.683	147.54142		0.735	158.77444	
	Present value (PV) at 10%:		161.08366	$161.08	PV at 8%:	172.83233	$172.83

Here we calculated the predictions from the Discounted Cash Flow Model using both the average dividend growth rate of 5.6% over the past seven years and *The Value Line*'s predicted dividend growth rate of 5.0%. They yield very similar results.

Johnson & Johnson - 5 February 2025

Year	Enter Historical Dividends per Share	Yearly Dividend Growth Rates	Enter data in shaded cells. Unshaded cells contains are formulas. (Do not enter data in the unshaded cells. Those are formulas.)			
2025	$5.20	5.26%	Enter Current Price:	$	153.83	Source: *Google Finance -- 5 February 2025*
2024	4.94	5.11%	Enter Predicted Price:	$	210.00	Source: *The Value Line (midpoint of $190 & $230)*
2023	4.70	5.62%	Enter Predicted Dividend Growth Rate:		5.00%	Source: *The Value Line*
2022	4.45	6.21%				
2021	4.19	5.28%	Average Dividend Growth Rate:		5.60%	(average of the yearly dividend growth rates)
2020	3.98	6.13%				(computed from values at left)
2019	3.75					

Internal Rate of Return	Average Growth Rate	Predicted Growth Rate	
	$ (153.83)	$ (153.83)	Current price of Stock (outflow)
2025	$ 5.20	$ 5.20	Future cash flows (inflows)
2026	$ 5.49	$ 5.46	Dividends and predicted
2027	$ 5.80	$ 5.73	price of stock at end of
2028	$ 216.12	$ 216.02	last year
	11.36%	11.33%	Internal Rate of Return

The Internal Rate of Return calculations using both average dividend growth rate and *The Value Line*'s predicted dividend growth rate again give us similar results. Would you consider owning Johnson 'n' Johnson? You may have gotten their Covid-19 one-dose vaccine.

I can hear you saying, "*Aye, Paiano! Do we have to use the spreadsheet? It's so confusing!*" We promised that you could perform all the calculations in this course with a 99¢ calculator and we have kept that promise. You can do all these calculations manually but wouldn't you rather bang away at the spreadsheet until you figure out how to use it. It really ain't that hard! Again, spreadsheets are kinda' like a big Bingo calculator: **B**3 + **I**2 + **N**5 + **G**4 + **O**1 … and so forth. The real prize here is that all we need to do is consult *The Value Line* for the data to go into our spreadsheets or to use in our manual calculations. Are you excited? Are you ready? Good! Because, ...

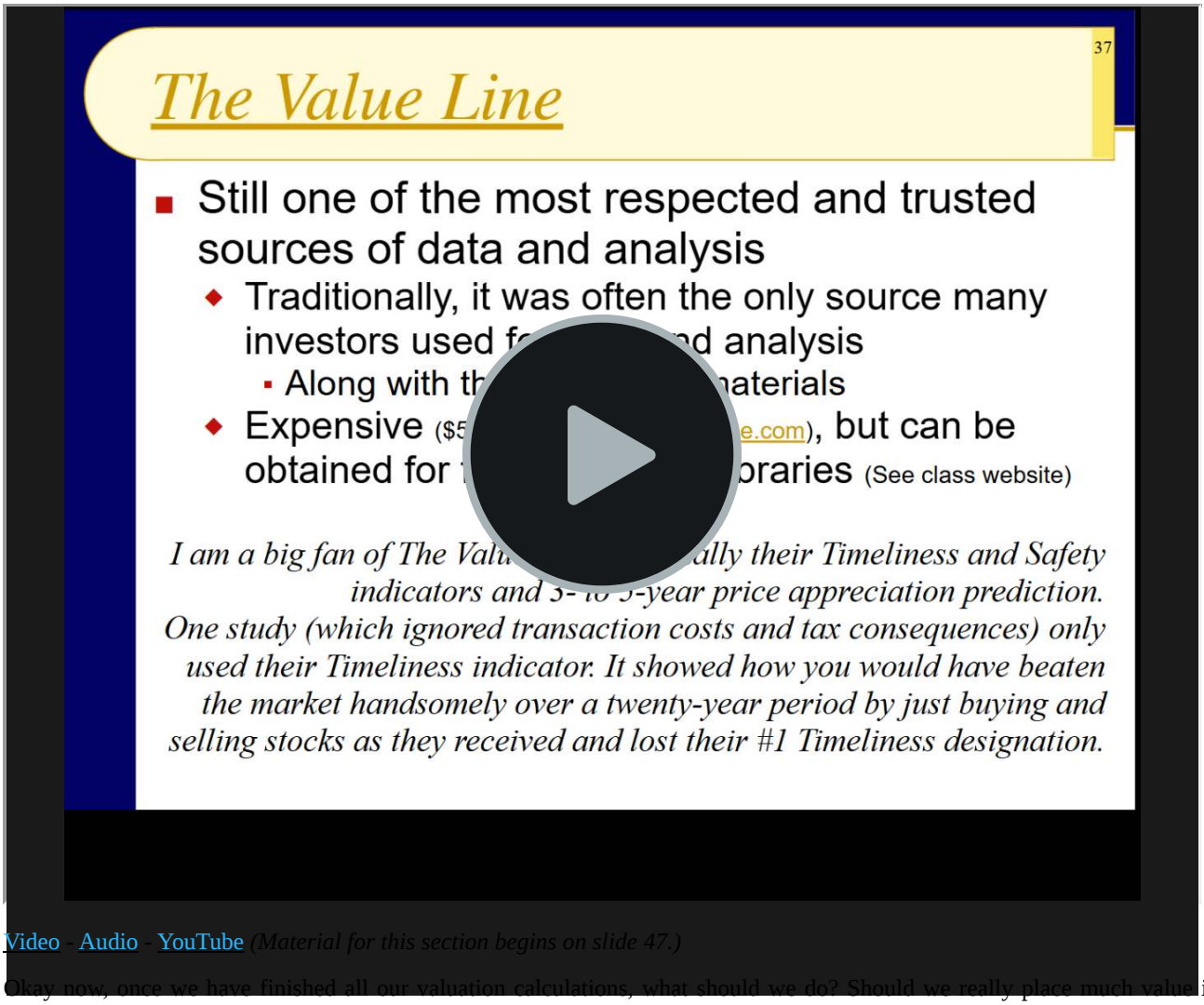
Now it's your turn! Find a library near you that has *The Value Line*. Before you go, think of a few companies that you would like to research, maybe downloading their annual reports from their websites beforehand. Ask the reference librarian for *The Value Line* packages. Find the Index of companies in alphabetical order. The Index will tell you which packet contains the company you are

seeking. *The Value Line* groups competitors close to one another so you can easily look at the competition. Get lost! Ah, in a nice way, that is. Have fun! Before you leave the library, flip through *The Value Line* Index and gawk at the sheer number of publicly traded companies. Could any one person ever become qualified to give advice on more than a small percentage of the companies available? Is it any wonder that mutual fund companies have entire global research teams of highly qualified individuals? In my humble opinion, this is a great opportunity for us individual retail investors. There will never be an end to how much you can learn! You now have a lifelong, fun-filled, profitable hobby. You're welcome, by the way.

Some speculators and traders love to trash *The Value Line*. "They are old-fashioned! They are stodgy and out-of-touch!" *The Value Line* makes mistakes, too, just like everybody else. But it would be very illuminating how their long-term results stack up against the long-term results of *The Value Line*. Who do you think would have the better results?

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4.5: The Bottom Line



Video - Audio - YouTube *(Material for this section begins on slide 47.)*

Okay now, once we have finished all our valuation calculations, what should we do? Should we really place much value in our predictions? The answer is an emphatic, "***NO!***" Rather, we should…

- Hurl them into the vast ocean along with the ashes of our dead pets and relatives, *or*
- Shred them into millions of little pieces and use them as confetti at our next party, *or*
- Burn them in a huge bonfire as we dance naked under the full moon, *or* all three!

We know beforehand that as we make these calculations that there is a 99.99% chance that they will be inaccurate. So why do we perform them? We do these calculations to simply tilt the odds in our favor. These calculations help us identify companies that are prudent, long-term oriented investments. They won't make us wealthy quickly, but they will make us wealthy. To quote a very wise, long-term investor, "I don't have to win big. I just have to win."

Instead of placing any significance in our predictions, after we have finished all our calculations and predictions and soothsaying and tea-leaf reading and magical prestidigitations, we should ignore out predictions and ask ourselves a very simple question: Do I want to own this company? Mr. Warren Buffett suggests asking yourself, "If I had the resources to buy the entire company, would I want to own it outright?" If the answer is yes, go ahead and buy 10 shares or whatever you believe is prudent or whatever you can afford. (Ah, he *can* buy the entire company and he often does!) In his excellent books, *One Up On Wall Street* and *Beating the Street* (which you are going to read soon, right?), Mr. Peter Lynch detailed how after he had done all his research and calculations and placed them all in a three-ring binder, he would hold the three-ring binder up in front of himself and give himself the 60- to 90-

second story about the company. Why did he want to buy or sell or hold the company? That usually sealed his decision, one way or the other.

Recall how Mr. Benjamin Graham wanted us to avoid any investment strategy that removed human judgment from the process? Your judgment is the ultimate valuation method. You will make some mistakes. You will make some very good choices. As time goes by, your experiences will hone your judgment skills and you will become excellent, prudent, long-term investors. Be kind to yourself and, as Mr. Benjamin Graham states, have the courage of your conviction.

We will let the famed investor, Mr. Seth A. Klaman, have the last word on valuation methods:

> *"The problem is that it is easy to confuse the capability to make **precise** forecasts with the ability to make **accurate** ones. **Any attempt to value businesses with precision will yield values that are precisely inaccurate.**" – Margin of Safety, Seth A. Klaman*

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4.S: Summary

Congratulations – You Have Finished Chapter 4 – Fundamental Analysis: Valuation Models

You have reached the end of chapter 4, Fundamental Analysis: Valuation Models. In this chapter, you have:

- Been introduced to the definition and beginnings of stock valuation
- Explored the various valuation models including the dividend discount models with an emphasis on the Gordon Growth Model and the Discounted Cash Flow modet
- Examined the strengths and weaknesses of the various stock valuation techniques
- Utilized an electronic spreadsheet to calculate the Internal Rate of Return from a series of cash outflows and inflows
- Been introduced to *The Value Line* stock research resource and how to utilize key research information from their periodic stock reports

You should now be able to:

1. Describe the inherent difficulties of predicting stock valuations
2. Calculate the present value of the expected future stream of cash flow from various types of stocks using various valuation models
3. Discuss the benefits and major limitations of various valuation models
4. Given an electronic spreadsheet, calculate the Internal Rate of Return from given streams of cash outflows and inflows
5. Utilize key research data from *The Value Line* in our calculations of the various valuation models discussed

You Have Risen, Dear Student. You are now an official Investment Guru!

You have been initiated into the Sacred Temple of the Dividend Discount Models. It is a great privilege and honor, Dear Student, but it also carries tremendous responsibility. Never again can you look at a potential stock investment the same. You now will look at any potential stock investment through the eyes of one who understands how to value a future cash flow, whether it be from the dividends that the company pays or the expected future stock price or both. Congratulations! Go forth into the world, rejoicing in the power that you have been given. Help yourself and others! Identify and choose prudent, long-term stock investments that have done well in the past and should continue to do well into the future. Oh, and by the way, you are welcome.

Work through the examples and worksheets in this chapter over and over again until you can do them in your sleep. Then get out there and find companies that interest you and use these same models on them. What do the models say the companies' stocks are worth? How is the market pricing their stocks? Finally, throw away all your calculations and ask yourself, "Do I want to be a partner in this company? Do I want to own a piece of this business?" We wish you the best of luck and success. It is our sincere desire that you become the best investors the world has ever seen!

There is a Future for You in the Investment Services Industry

Yeah, yeah, we know. You have heard it before. We want you to consider a career in the industry. Ah, we did mention that salaries in the financial and investment industries are well above the national norms, right? Okay, we just wanted to be sure.

Your Feedback Please

Yeah, yeah, we know. We've already asked you to give your feedback. So why do it again? Because we value your feedback greatly. Are you getting an education? Is the material too difficult? Too easy? What could we do better? What did we do well? For this to be the best class you have ever taken, we need your input!

Now that you have been introduced to a few valuation models, it is time to spend a bit of effort learning how to read financial statements. Relax, you Accounting students! We don't do any journal entries or trial balances or any other accounting procedures. We just use the financial statements that the company's accountants have created. See you in our next chapter, Chapter 5: Fundamental Analysis: Financial Statements and Ratio Analysis.

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CHAPTER OVERVIEW

Chapter 5: Fundamental Analysis: Financial Statements and Ratio Analysis

> *"If an accountant's spouse cannot sleep at night, all he or she has to say is, "Dear, tell me about your day at work."*

Learning Objectives

In this chapter, you will

- Explore the three quarterly and annual financial statements that every publicly traded company must produce: the balance sheet, the income statement, and the cash flow statement (aka statement of cash flows)
- Investigate Regulation FD (Fair Disclosure) and how financial statements and other important data about companies are disseminated
- Review some common stock ratios first discussed in chapter 3 and be introduced to new common stock ratios and price ratios
- Utilize an electronic spreadsheet to calculate the Internal Rate of Return from a series of cash outflows and inflows
- Be introduced to profitability ratios, liquidity ratios, activity ratios, and leverage ratios

By the end of this chapter, you should be able to

- Describe the uses of the three quarterly and annual financial statements
- Research or calculate various financial ratios for publicly traded companies
- Analyze and compare and contrast the various financial ratios for publicly traded companies with their competitors and the stock market as a whole

Ratio Analysis Rounds Out the Investigation of Our Potential Stock Investments

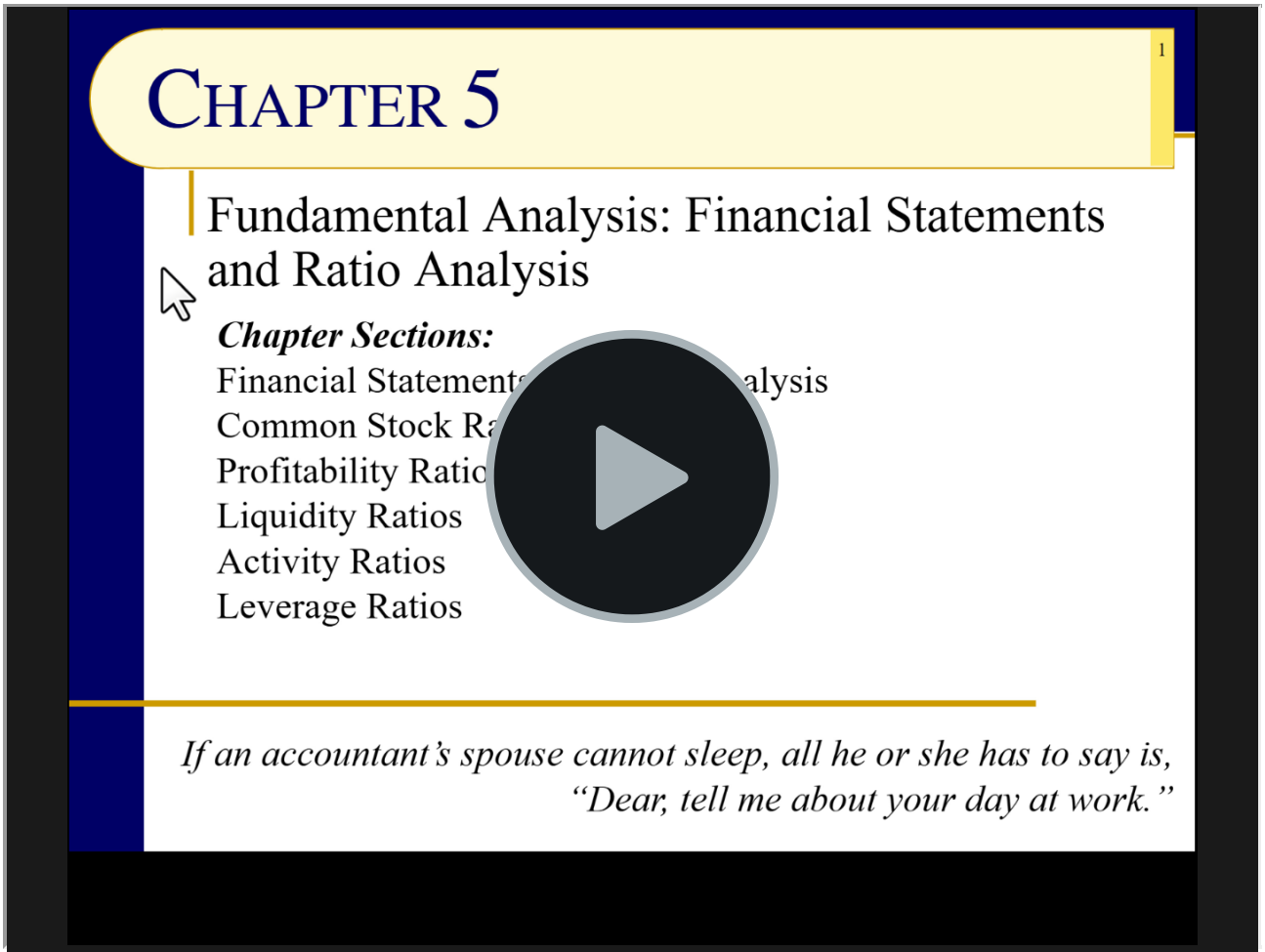
In the previous chapter, we learned some powerful techniques that give us a "yes/no, continue researching/don't continue researching" kind of answer, even though we know that we should never place much credence in the result. In this chapter, we learn how to compute and analyze many financial ratios using the financial statements that a public company must publish quarterly. Financial ratios do not give us a "yes/no" answer about an individual stock. Rather, we treat financial ratios like a stew of information that gives us a more rounded analysis of our potential investment and allows us to compare our stock with its competitors and the market as a whole. The financial statements that we utilize to compute our financial ratios are also very handy whenever we are experiencing a bit of sleeplessness. Just ask any accountant's spouse!

Presentation file - Study guide

5.1: Financial Statements
5.2: Common Stock Ratios
5.3: Profitability Ratios
5.4: Liquidity Ratios
5.5: Activity Ratios
5.6: Leverage Ratios
5.S: Summary

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5.1: Financial Statements



Video - Audio - YouTube

Financial Statements come from the world of Accounting, which has established so-called Generally Accepted Accounting Principles (GAAP) to guide their actions. The financial statements are created using GAAP techniques to communicate to the world the financial situation and financial performance of a company. Fortunately, we investors don't have to perform any of the accounting. We rely on the accountants to create the financial statements for us. However, the more we know and understand Accounting, the better we will be able to understand and analyze the companies we are researching using the financial statements and other reported financial data.

Recall from our Introduction to Stocks discussion that once a company "goes public," it is now a public entity and as such, has certain responsibilities and obligations that private companies do not have to concern themselves with. One of the most important obligations is publishing the financial statements every quarter. Accounting firms pride themselves in following the rules and there is rarely ever any controversy with regard to the financial statements of most all bona fide companies and their accounting firms.

However, this is not always the case. From time to time, you will hear in the news that a company must "restate their earnings" or "refile their financial statements." Something somewhere went wrong. Given the complexity of large, multinational corporations, it is only a matter of time before some unintentional errors will snake their way into the numbers. However, there are times when the corporations and the accountants aren't always on the up and up. In fact, some corporations, in collusion with their accounting firms, have used gimmickry and trickery and downright fraud to "cook the books." One of the most egregious examples of this was the case of Enron, formerly Houston Natural Gas.

Enron Corporation was an American energy, commodities, and services company. At the time, the bankruptcy of Enron was the largest bankruptcy in recorded history. The company, with the help of their accounting firm, was engaging in accounting fraud. Their accounting firm, Arthur Anderson dissolved as a result of their association with the fraud and their confessed accounting sleight-of-hand and trickery. When the scandal hit, the corporate executives at Enron claimed ignorance. "We didn't know that there was any accounting hanky-panky going on!" The executives were subsequently called to Congress to testify. One of those executives was Jeffrey Skilling, the former CEO of Enron, who had previously bragged about creating value out of thin air when Enron was flying high. He was now feigning ignorance about the whole misadventure, under oath and in front of Congress. There was one exchange with Senator Barbara Boxer from California about one of the more egregious accounting maneuvers Enron had used. Mr. Skilling firmly proclaimed that he was totally unaware that the maneuver was illegal. Senator Boxer asked, "Where did you go to school?" Mr. Skilling replied flatly, "Harvard Business School." Those in attendance burst out laughing.

As a result of Enron and other scandals of the time, including WorldCom, Tyco, HealthSouth, and Global Crossing, the United States Congress passed the Sarbanes-Oxley Act of 2002. Under this law, corporate executives can be held responsible for the published financial statements of their accounting firms.

Now you understand why we love to say that, "Dividends don't lie." All the numbers on the following three financial statements could be, and on rare occasions are, completely made up, picked directly out of thin air, stupid wild fantasy guesses. All, except one. And that is the dividend. We know the dividend number is not a lie because the company wrote us a check. (Well, not exactly. The money is deposited electronically into our brokerage account. But you get the idea.) Even so, financial statement manipulation, accounting gimmickry and trickery, and outright fraud have always been with us. They will always be with us. That is also why we recommend large companies with their roots deep in the economy and long histories and earnings and dividends as the bulk of your investment portfolio.

Note: The following financial statements for Sprouts Family Market (symbol SFM) have been sourced directly from the Security and Exchange Commission's EDGAR system. Companies must publish their financial directly to EDGAR. However, it is typical for various media sources to present financial statements in slightly different manners. Most investor believe that the most reliable source is the company's annual and quarterly submissions to EDGAR.

The Balance Sheet

The Balance Sheet is a snapshot in time of a company's assets and debts. What assets does the corporation own? How much debt has the corporation incurred and will have to pay back with interest? The accountants enumerate the assets of the corporation and then compute the total value of the assets. They do the same for the debts, also known as liabilities. They then make a simple calculation to compute what is left over after the debts are subtracted from the assets. The result is called Stockholders' Equity. This is how much of the corporation is owned by the shareholders.

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Stockholders' Equity = Total Assets - Totals Debts
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The accountants will sometimes simplify and rearrange the formula thusly:

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Asset - Liabilities = Equity
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In our BUS-121, Financial Planning and Money Management, class, at Southwestern, we cover a very simplified version of the Balance Sheet. We call it our Net Worth Statement in personal financial planning. Similar to the accountants' Stockholders' Equity, we compute our Net Worth by subtracting our debts from our assets. The procedures involved in creating a Balance Sheet using Generally Accepted Accounting Principles are vastly more complicated than how we create a personal Net Worth Statement. Also, the numbers are a whole lot bigger. However, the idea is exactly the same. How much do we own? How much do we owe? What is left over? That is our equity, our ownership, our net worth.

There is one major difference between a Balance Sheet and Net Worth Statement that should be noted. When we assess the value of an asset in our personal Net Worth Statement, we use the Fair Market Value of the asset. Usually, the Fair Market Value is easy to find. How much is a 2015 Toyota Corolla worth? Consult any of a number of industry publications such as Kelly Blue Book or Edmunds or just take a look at Craigslist to see what people are asking for them. Assessing the Fair Market Value of other items is much more difficult for some assets such as furniture or baseball card collections. Often, individuals have an overly optimistic idea of the value. It is only when they endeavor to sell the items that the current Fair Market Value can be ascertained.

The values of assets on the Balance Sheet of corporations are assessed in a totally different manner. Accountants use a procedure called Depreciation. The value of the assets are reduced using any one of many depreciation methods until finally the value of the asset is reduced to zero or a predetermined Salvage Value. The current value of an asset as it is being depreciated is called the Book Value. This is the value of the asset "on the books," the accountants' records. The Book Value may or may not have any relation to the actual Fair Market Value of the asset. In other words, just because the Balance Sheet says that a particular asset is worth a certain amount does not mean that the asset would demand that price if it were sold. More likely, the value in the marketplace is very different from the Balance Sheet. This is yet another reason why we must be wary when we utilize and interpret the numbers we find on the Balance Sheet.

Another difference to take note of is the time frame of assets. In accounting, any asset that will be utilized within one year is called a Current Asset. All other assets are considered Long-Term Assets. This is very different to how we in finance and investments category assets with our short-term, intermediate-term, and long-term time frames.

Below is the Balance Sheet for Sprouts Family Market as of December 31, 2024.

Sprouts Farmers Market (SFM) — **Balance Sheet**

Period Ending (All numbers in thousands)	12/31/2024	12/31/2023	12/31/2022	12/31/2021	12/31/2020	12/31/2019
Assets						
Current Assets						
Cash and Cash Equivalents	265,159	201,794	295,190	247,000	171,440	86,780
Short-term Investments	-	-	-	-	-	-
Accounts Receivables	30,901	30,313	34,260	33,210	23,640	15,710
Inventory	343,329	323,198	310,550	265,390	254,220	275,980
Other Current Assets	36,131	48,467	33,800	22,120	16,650	9,360
Total Current Assets:	675,520	603,772	673,800	567,720	465,950	387,830
Long Term Investments	1,466,903	1,322,854	1,830,000	1,790,000	1,770,000	1,770,000
Property, Plant, and Equipment	895,189	798,707	394,390	354,930	-	-
Goodwill	381,750	381,741	-	-	-	-
Intangible Assets	208,094	208,060	553,840	553,840	553,840	553,470
Accumulated Amortization	-	-	-	-	345,510	76,970
Other Assets	13,243	12,294	13,970	13,510	14,700	11,730
Deferred Long Term Asset Charges	-	-	-	-	-	-
Total Assets:	3,640,699	3,327,428	3,466,000	3,280,000	3,150,000	2,800,000
Liabilities						
Current Liabilities						
Accounts Payable	213,414	179,927	172,900	145,900	139,340	122,840
Short / Current Long Term Debt	151,721	164,887	136,600	152,830	136,700	106,910
Other Current Liabilites	314,833	202,055	212,880	214,740	220,100	187,070
Total Current Liabilties:	679,968	546,869	522,380	513,470	496,140	416,820
Long Term Debt	1,520,272	1,399,676	1,400,000	1,360,000	1,330,000	1,630,000
Other Long Term Liabilities	38,259	36,270	12,680	12,910	17,620	17,460
Deferred Long Term Liability Charges	73,059	133,685	61,120	57,900	58,070	54,360
Deferred Income Tax Liability	7,248	62,381	23,660	23,390	23,290	24,060
Negative Goodwill	-	-	360,160	352,450	344,880	57,300
Total Liabilties:	2,318,806	2,178,881	2,380,000	2,320,120	2,270,000	2,200,000
Stockholders' Equity						
Common Stock (Total)	808,140	774,834	1,050,000	959,880	881,290	581,950
Retained Earnings (Included in Common Stoc	513,654	373,612	320,010	258,820	203,000	(84,450)
Additional Paid-in Capital	99	101	-	-	-	-
Misc Stocks Options Warrants	-	-	-	-	-	-
Redeemable Preferred Stock	-	-	-	-	-	-
Treasury Stock	-	-	-	-	-	-
Preferred Stock	-	-	-	-	-	-
Other Stockholder Equity	-	-	-	-	-	-
Total Stockholders' Equity:	1,321,893	1,148,547	1,050,000	959,880	881,290	581,950

Notice the phrase "All numbers in thousands." This means we must add three zeros to every number. For example, Sprouts did not have only $265,159 in Cash and Cash Equivalents on December 31, 2024. They had $265,159,000. That's two hundred and sixty-five million, one-hundred and fifty-nine thousand dollars.

The Income Statement

The Income Statement lists the revenue and expenses of a corporation in order to report the earnings of the corporation. Whereas the Balanced Sheet is a snapshot in time, the Income Statement is more similar to a movie and reports the difference between a company's revenues and expenses over a set time period, usually either a three-month quarter or an entire year. An older term for the Income Statement that is still used by many is the Profit and Loss Statement. The ultimate goal of the Income Statement is to compute the net income of the business. The formula boils down to:

Net Income = Revenue - Expenses

The Income Statement, however, breaks down this simplistic formula into many steps. Although there are many calculations and entries regarding revenues and expenses, two of the entries on the Income Statement are followed more closely than the others, the "top line" and the "bottom line."

The "top line" of the Income Statement refers to the revenues, also known as sales, of the corporation. The "bottom line" of the Income Statement refers to the net income, also known as the earnings, net earnings, profit, or net profit. Although Income Statements may vary depending upon the source, the revenue/sales are always at the top of the Income Statement and the net income/earnings/profit are always at the bottom of the Income Statement. During earnings calls, research articles, or discussions in the media about companies, the executives, authors, and analysts will invariably discuss the relationship and differences between the top line growth and the bottom line growth as they discuss the past and future performance of the company.

The bottom line net income is used by the corporation to pay dividends to stockholders. However, as we have learned, corporations are under no obligations to pay dividends. If the earnings are not paid to shareholders, they are referred to as retained earnings and are kept within the company to finance future growth.

Here is the Income Statement for Sprouts Family Market as of December 31, 2024.

Sprouts Farmers Market (SFM)	Income Statement					
Period Ending (All numbers in thousands)	12/31/2024	12/31/2023	12/31/2022	12/31/2021	12/31/2020	12/31/2019
Revenue						
Total Revenue (aka net sales, annual sales, "top line")	7,719,290	6,837,384	6,400,000	6,100,000	6,468,759	5,634,835
Cost of Revenue	4,777,799	4,315,543	4,018,000	4,010,000	4,089,470	3,740,017
Gross Profit:	2,941,491	2,521,841	2,382,000	2,090,000	2,379,289	1,894,818
Operating Expenses						
Research and Development	-	-	-	-	-	-
Selling, General, and Administrative	2,291,350	2,000,437	1,860,000	1,750,000	1,863,869	1,549,707
Non Recurring	12,896	39,280	11,030	5,920	124,124	120,491
Others	132,748	131,893	158,390	-	-	-
Total Operating Expenses:	2,436,994	2,171,610	2,029,420	1,755,920	1,987,993	1,670,198
Operating Income (Loss)	504,497	350,231	352,580	334,080	391,296	224,620
Income from Continuing Operations						
Total Other Income / Expenses Net		-	7,800	5,780	369	(7,260)
Earnings Before Interest and Taxes	504,497	350,231	360,380	339,860	391,665	217,360
Interest Expense	(2,201)	6,491	11,070	17,460	14,787	21,192
Income Before Tax	506,698	343,740	349,310	328,180	377,247	188,908
Income Tax Expense	126,097	84,884	88,150	78,240	89,428	46,539
Minority Interest	-	-	-	-	-	-
Net Income from Continuing Operations:	380,601	258,856	261,160	244,160	287,450	149,629
Non-recurring Events						
Discontinued Operations	-	-	-	-	-	-
Extraordinary Items	-	-	-	-	-	-
Effect of Accounting Changes	-	-	-	-	-	-
Other Items	-	-	-	-	-	-
Net Income (aka net profit, the "bottom line"):	380,601	258,856	261,160	244,160	287,450	149,629

The bottom line net income is computed using the same GAAP procedures mentioned above. Hence, we find that there are some entries in the Income Statement that are not always received or paid in cash. One of the most important of these types of entries is our old friend, depreciation. As with the Balance Sheet, depreciation can obscure the numbers behind the Income Statement. Depreciation can complicate and obscure how much cash a company is actually being earned from their operations. Depreciation and other accounting entries can create a situation where the earnings that are reported by a company are widely different from the amount of cash that flows in or out of the company. That is why there is the Cash Flow Statement.

The Cash Flow Statement

The Cash Flow Statement, also known as the Statement of Cash Flows, follows the age-old advice, "Follow the money." It peers into the corporation's checkbook to see all the cash inflows and outflows. Depreciation is one of the biggest reasons for the potential differences between the earnings and the cash flow of a company. A company does not write a check for depreciation. No cash was paid. However, the depreciation amount reduced the company's earnings. That amount is still contained within the company's checking account. Other entries in the Cash Flow Statement refer to the cash and non-cash inflows and outflows from its ongoing operations and non-operating financial and investment transactions.

Here is the Cash Flow Statement for Sprouts Family Market as of December 31, 2024.

Sprouts Farmers Market (SFM)	Cash Flow Statement				
Period Ending (All numbers in thousands)	12/31/2024	12/31/2023	12/31/2022	12/31/2021	12/31/2020
Net Income	**380,601**	**258,856**	**261,160**	244,160	287,450
Operating Activities, Cash Flows Provided By or Used In					
Depreciation	**274,087**	**265,087**	**244,380**	234,060	225,780
Adjustments to Net Income	**45,124**	**45,618**	**3,230**	14,570	(79,470)
Changes in Accounts Receivables	**30,007**	**3,173**	**1,050**	(16,390)	(25,980)
Changes in Accounts Payable	**27,986**	**12,215**	**27,000**	4,520	20,180
Changes in Other Assets / Liabilities	**54,272**	**19,461**	**1,850**	(7,260)	(18,850)
Changes in Other Operating Activities	**(166,863)**	**(139,342)**	**(34,450)**	178,000	(3,720)
Total Cash Flow From Operating Activities:	**645,214**	**465,068**	**504,220**	651,660	405,390
Investing Activities, Cash Flows Provided By or Used In					
Capital Expentitures	**(230,375)**	**(238,342)**	**(124,010)**	(102,380)	(121,970)
Investments	**-**	**-**	**-**	-	-
Other Cash Flows from Investing Activities	**-**	**-**	**-**	-	-
Total Cash Flow From Investing Activities:	**(230,375)**	**(238,342)**	**(124,010)**	(102,380)	(121,970)
Financing Activities, Cash Flows Provided By or Used In					
Dividends Paid	**-**	**-**	**-**	-	-
Purchase of Stock	**(228,472)**	**(203,496)**	**(194,940)**	-	-
Sale of Stock	**1,976**	**-**	**-**	2,170	1,340
Net Borrowings	**(125,000)**	**(114,552)**	**(137,080)**	(121,170)	(408,840)
Other Cash Flows from Investing Activities		**-**	**-**	-	-
	(351,496)	**(318,048)**	**(332,020)**	(119,000)	(407,500)
Effect of Exchange Rate Changes	**-**	**-**	**-**	-	-
Change in Cash and Cash Equivalents:	**63,343**	**(91,322)**	**48,190**	430,280	(124,080)

The Cash Flow Statement can be especially important when there are situations that are obviously conflicting and contradictory. For example, how could a company be reporting record earnings but at the same time, the cash balance of their checkbook was going down? This was the situation of many high-flying technology companies such as Lucent Technologies during the late 1990's as the Internet dot-com bubble was raging.

Lucent Technologies was spun off from the old AT&T. It had originally been the manufacturing arm of AT&T and was known as Western Electric and Bell Labs, the folks that invented the transistor, the laser, photovoltaic cells, and Unix, which later became Linux. They built the best telephone equipment in the world. During the Internet mania, many new companies sprung up to carve out a niche for themselves in the burgeoning world of telecommunications. Lucent was eager to sell wireless and Internet equipment to these new companies. However, the companies did not have the cash to pay for the equipment nor any earnings that would help them finance the purchase using a bank or other form of borrowing. In order to facilitate the transactions, Lucent agreed to sell these companies their equipment and accept payments over many years. In essence, Lucent became their banker. Hence, Lucent's sales were enormous and they were reporting record earnings. However, since only a small part of the payment was being realized each year, the cash position was falling. When the dot-com bubble burst, events did not end well for Lucent. Many of these companies failed to ever achieve profitability and went bankrupt. In the bankruptcy, Lucent received the equipment back but now the equipment was obsolete and could not be sold again except at salvage prices. Its stock price fell from a high of $84 down to $2.13. Close examination of Lucent's Cash Flow Statement during the heady years of the dot-com mania would have warned prudent, long-term investors of the dangers ahead for Lucent. "Hey, Lucent! How come you are recording record earnings but your checkbook balance is declining?"

SEC EDGAR

As a central repository for the financial statements of corporations, the Securities and Exchange Commission (SEC) uses a system called EDGAR, the Electronic Data Gathering, Analysis, and Retrieval system. Annually and quarterly, publicly traded corporations are required to file their financial statements with this system. The annual reports are called 10-K's and the quarterly reports are called 10-Q's. Anyone with Internet access is free to download the statements. Before Internet technology made the dissemination of information to anyone around the world readily and easily available, it was typical for analysts and other Wall Street professionals to be apprised of the upcoming financial information coming from a company. With the advent of the new

technologies, in the year 2000, the SEC instituted Regulation FD, Fair Disclosure. Companies were prohibited from sharing any information before the material was submitted to the EDGAR system. Subsequently, companies now schedule an Earnings Call for when the material is available on EDGAR and all parties are privy to the information at the same date and time.

EDGAR and the financial statements are just the beginning. We must also take advantage of the company's annual report and other materials found on their website. And don't forget *The Value Line!* However, there are countless reliable and scrupulous and not-so-reliable and not-so-scrupulous sources. These days, it is common to hear investors complain that there is just too much information. A quote from the author Nick Murray is useful here. When discussing the value of a financial advisor, Nick Murray once quipped, "Wisdom sold separately." Yes, there is no end to the information available. Deciding what information is important and how to make sense of it is a very different matter.

Starting in the heady dot-com mania days and continuing to this day, much attention was and still is focused on the whisper number, the unofficial, unregulated, unsubstantiated, presumed company earnings. For some short-term traders and speculators, what passes for intelligent investing is gambling whether or not a company will beat the whisper number or not. If the company's official earnings beat the whisper number, the stock price might zoom higher. If not, the stock might be punished. Should a prudent, long-term investor ever pay attention to the whisper number? If you have been paying attention, you already know the answer.

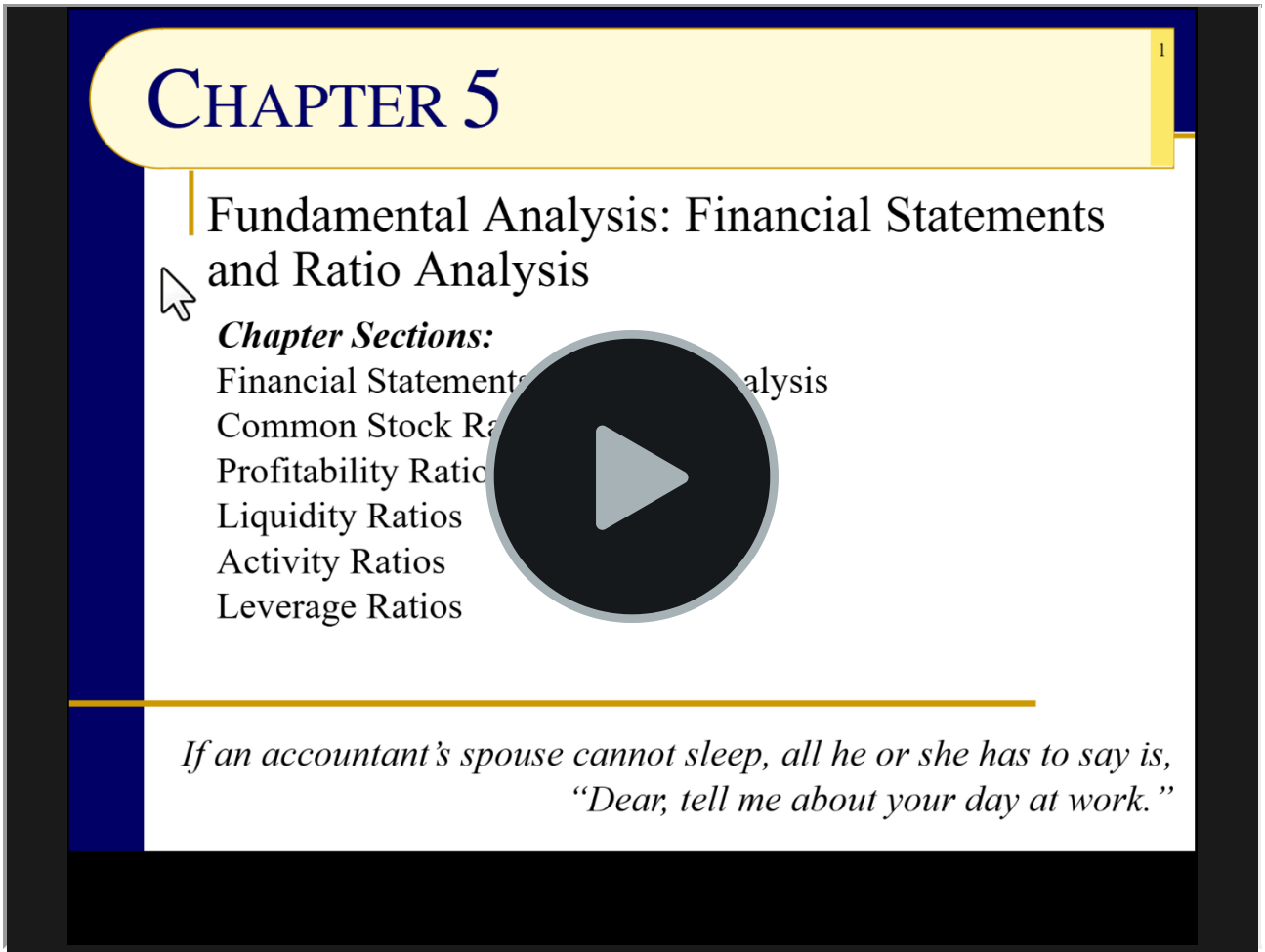
Financial Ratios and Ratio Analysis

We will use the financial statements to compute financial ratios. Financial ratios are simply the relation between two financial quantities expressed as the quotient of one divided by the other. We have already covered a few such as the Price-to-Earnings Ratio, Earnings Per Share, Dividends per Share, and Dividend Payout Ratio. We will then utilize the various financial ratios to perform ratio analysis, the study of the relationships between financial statement accounts. Does it sound as exciting as the Dividend Discount Models and the Discounted Cash Flow Model? Ah, yeah, right, it does not sound that exciting and to be honest, it really isn't. However, ratio analysis is important and it helps us get a more complete picture of the companies that we are researching and investigating as potential investments.

The more important point to keep in mind is that there is no one ratio that can accurately sum up the overall general state of a company. Each ratio must be considered in the context of all the information gathered. Plus you must consider any ratio in the context of the industry the company exists within. We will see an example of this as we investigate the most popular financial ratio, the Price-to-Earnings Ratio, also known as P/E or just PE. (No, not Physical Education.)

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5.2: Common Stock Ratios



Video - Audio - YouTube *(Material for this section starts on slide #8.)*

The common stock ratios are popular financial ratios that convert key information about a firm to a per share basis. They are also known as market ratios. We introduced a few in our Introduction to Stock in chapter 3. Others are new. These ratios use data from the Balance Sheet or the Income Statement or both.

Earnings per Share (EPS)

Earnings per Share is the amount of annual earnings available to common stockholders, as stated on a per share basis. We can think about each share that we own as a business entity in and of itself, earning X amount of dollars. Earnings per Share was one of the key statistics that we asked you to research in our chapter 3 assignment. It is readily available and a subject of much discussion and speculation, especially with regard to companies that are growing their earnings.

$$\text{Earnings Per Share} = \frac{\text{Net Income}}{\text{Number of Shares Outstanding}}$$

The Earnings per Share is subsequently used in combination with current market price to compute the most important stock market statistic, the Price-to-Earnings Ratio (P/E).

Price-to-Earnings Ratio (P/E, PE)

The Price-to-Earnings Ratio is the most popular stock market statistic. It is often abbreviated as either P/E or just PE. A simple Internet search will yield tons of materials dedicated to the study, investigation, scrutiny, and dissection of the P/E ratio of a company or the stock market as a whole. The calculation is easy.

$$\text{Price-to-Earnings Ratio} = \frac{\text{Market Price per Share}}{\text{Earnings per Share}}$$

Historically, P/E ratios were in the 5 to 12 range for mature companies and 14 to 20 range for growing companies. Greater than 20 was unusual. Today, it is commonplace. Assuming no changes in earnings, the P/E ratio also tells you how long it will take in years for the company to earn back its price. A P/E of 3 will take three years; a P/E of 20 will take twenty years. In the heady dot-com mania days, eBay once had a P/E of 10,000 associated with the stock. In the early 2020's, Tesla's P/E was over 1,000.

Let's take a look at the P/E ratios for a random set of companies:

Price-to-Earnings Ratios for a random set of companies

Shell Oil	13.27		Google	23.24
Biogen	12.28		US Bank	12.60
General Mills	12.79		Merck	12.32

These companies are all in very different industries. It would not be proper to compare the P/E ratios – or any of the financial ratios that we will cover – of these companies to one another. What we need to do is compare these companies to their competitors:

Price-to-Earnings Ratios for a similar companies in various industries

Shell Oil	13.27		Google	23.24
ConocoPhillips	12.33		Facebook	30.86
ExxonMobil	13.81		Apple	38.76
Chevron	15.98		Amazon	41.35
BP	250.00		Nvidia	54.88
Biogen	12.28		US Bank	12.60
Amgen	38.46		J. P. Morgan Chase	14.00
AbbVie	80.70		Bank of America	14.63
Illumina	n/a		Wells Fargo	14.89
General Mills	12.79		Merck	12.32
Kraft Heinz	12.80		Pfizer	18.11
Hormel	19.36		Bristol Myers	n/a
W K Kellogg	24.10		Eli Lilly	71.91

All data as of February 17, 2025

We must always compare any financial ratios with companies within the same industry. Sometimes the ratios will vary wildly as in the drug companies above. Other times, they will be within a very narrow range such as the energy, food, and banking companies. When we encounter a situation such as the outsized P/E ratio of Eli Lilly or the much lower P/E ratio of Merck, it is a signal to us that we must do much more research. Why is this company so different from its peers? Why are P/E ratios of Illumina and Bristol Myers reported as "n/a?" This signifies that these companies are losing money. Rather than display a negative P/E ratio, the industry typically uses "n/a" for not applicable or "nmf" for no meaningful figure. And what about that P/E of BP?

How can we account for the wide P/E disparity between different industries and different companies within industries? It is the expectation of future earnings and dividend growth by investors. The following quote is attributed to Jack Dreyfus, the founder of The Dreyfus Funds, which are now owned by The Bank of New York Mellon. (The Bank of New York, incidentally, was the first stock that was traded on the New York Stock Exchange in 1792.)

> *"Take a nice little company that has been making shoelaces for 40 years and sells at a respectable six times earnings ratio. Change the name from Shoelaces, Inc. to Electronics and Silicon Furth-Burners. In today's market, the words "electronics" and "silicon" are worth 15 times earnings. However, the real play comes from the word "furth-burners" which no one understands. A word that no one understands entitles you to double your entire score. Therefore, we have six times earnings for the shoelace business and 15 earnings for electronics and silicon, or a total of 21 times earnings. Multiply this by two for furth-burners and we now have a score of 42 times earnings for the new company." – Jack Dreyfus, Founder, Dreyfus Funds, as quoted in A Random Walk Down Wall Street*

Today, you replace *furth-burners* with *cryptocurrency* or *Artificial Intelligence* and replace *electronics and silicon* with *NFT and meme stocks*. Technology changes rapidly; human nature, not so much.

Price-to-Earnings to Growth Ratio (PEG)

The Price-to-Earnings to Growth Ratio, also known as the PEG ratio, compares the P/E ratio with the company's earnings growth rate. The formula is:

$$\text{PEG Ratio} = \frac{\text{Stock's P/E Ratio}}{\text{3-year or 5-year Growth Rate of Earnings}}$$

A PEG Ratio of 1.0 means that P/E Ratio matches its growth rate. Historically, a PEG Ratio of 1.0 was desirable since it meant that the P/E Ratio equaled the growth rate. Anything above 1.0 was considered high and therefore, risky. However, greater than 1.0 is common as of this writing. This is another indication that stocks are generally on the expensive side of March 2023, even after many of the high flying "disruptive" companies have fallen from great heights such as Netflix and Shopify.

Dividends per Share

The Dividends per Share tells us how much dividends each share of stock will receive.

$$\text{Dividends per Share} = \frac{\text{Annual Dividends Paid to Shareholders}}{\text{Number of Shares Outstanding}}$$

As we discussed, dividends became taboo during the 1990's. Since the 2000-2002 bear market, many investors have changed their minds about dividends. Dividends can be discussed in polite company again. Remember: Dividend Don't Lie!

Dividend Yield

The Dividend Yield is the important measure of how much dividends are as a percentage of the stock price.

$$\text{Dividends Yield} = \frac{\text{Dividends per Share}}{\text{Market Price per Share}}$$

This important statistic allows an investor to compare a company to other forms of investments that pay income such as savings accounts or bonds. Traditionally, 4% to 6% was considered good. According to the Nasdaq, as of December 2024, the S&P 500 as a whole was yielding 1.27%. After many years of meager returns from savings accounts and bonds, yields have risen for both. As of February 2025, the 10-year Treasury bond was yielding approximately 4.298%. In early 2022 before interests began to rise, the 10-year Treasury bond was yielding approximately 2%. Many savings accounts that were yielding far less than 1% began paying upwards of 4%. We will see if the yield of stocks rises along with the yields of bonds and savings accounts. Of course, for this to happen, either stocks must pay higher dividends (the numerator increases) or stock prices must fall (the denominator decreases). There are many experts who have exclaimed that stock prices have been too high for too long and that stock prices must come

down to more reasonable levels so that the dividend yields will be more in line with historical returns. Since the Great Recession, they have been wrong. We shall see what the future brings. Stay tuned for further developments.

Dividend Payout Ratio

The Dividend Payout Ratio tells us how much of a company's earnings are being paid out to shareholders in the form of dividends.

$$\text{Dividends Payout Ratio} = \frac{\text{Dividends per Share}}{\text{Earnings per Share}}$$

More mature companies often pay out almost all their earnings in the form of dividends. Growing companies retain their earnings (called Retained Earnings) to support the growth of the company.

Book Value per Share

The Book Value per Share is a measure of the net worth of a company on a per share basis. The formula is:

$$\text{Book Value per Share} = \frac{\text{Common Stockholders' Equity}}{\text{Number of Shares Outstanding}}$$

Book Value per Share tells an investor how much assets are behind each share of stock. In other words, if all the assets of the company were liquidated, how much would each shareholder receive? It is common for the actual market price of a share to be more than the book value per share since a company is typically worth more intact than if it were dissolved. Today, it is common for the market price to be far above the book value. Remember that the actual Fair Market Value of a corporation's assets may be very different from what the accountant's declare the value of the asset to be worth "on the books" because of the various methods of depreciation.

There are rare occasions when the market price of a share of stock falls below the Book Value per Share. Usually, these are very mature companies in declining or disappearing industries. When this happens, there is a real danger of the company becoming a target for corporate raiders. The corporate raiders are also known as private equity groups, activist investors, and takeover artists. Depending upon the company, through various methods, the corporate raiders might attempt to liquidate the assets of the company, pay the remaining debts, and walk away with whatever is left over. They might attempt to sell off various valuable pieces of the company, profiting from the sale but leaving the remaining company unable to compete.

Understandably, the employees of the company and citizens of the community in which the company does business don't normally take too kindly to this. They complain to their elected representatives and calls to rein in unbridled capitalism are heard. Imagine if you had worked at the same company for 22 years and were now out of job because someone flew in on their private jet, sold off all the assets of the business, and closed its doors forever. This is the reason, Dear Readers, that we have unemployment insurance. A society wants its capital – physical and human – to be employed as efficiently as possible. If a business is failing for whatever reason, that capital needs to be redeployed. However, when you are trying to feed your family and keep a roof over your heads, those high ideals are not your first priority. Hence, we created unemployment insurance to help individuals stay afloat as they find new work, or in other words, as their human capital is redeployed.

Price-to-Book Value per Share

The Price-to-Book Value per Share ratio compares the market price of the stock to the Book Value per Share. This calculation makes it easy for us to see if the market price is above, the same, or below the Book Value per Share.

$$\text{Price-to-Book Value per Share} = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

Given that the Book Value per Share is often less than the market price, the Price-to-Book Value per Share tells an investor how far above the book value the market value is. If the Price-to-Book Value per Share is equal to 1, they are the same. Today, Price-to-Book-Values per Share of 3 to 6 are not uncommon and some are much higher.

Price-to-Cash Flow per Share (P/CF)

The Price-to-Cash Flow per Share ratio is very similar to the Price-to-Earnings Ratio. The exception is that we use Cash Flow per Share instead of Earnings per Share.

$$\text{Price-to-Cash Flow per Share} = \frac{\text{Market Price per Share}}{\text{Cash Flow per Share}}$$

As we discussed above in the section on the Cash Flow Statement, the Earnings per Share can differ dramatically from the Cash Flow per Share for various reasons. During discussions by analysts and market pundits, you may hear talk of the quality of earnings of the company and whether the earnings are "good quality" earnings or "bad quality" earnings. What they are trying to identify is what is happening to the cash flow of the company. Is the company reporting record earnings and at the same time their cash flow is falling? As we saw with Lucent Technologies, this type of situation can end badly for investors.

Price-to-Sales per Share (P/S)

The Price-to-Sales per Share ratio is another attempt to compare the market price with a number associated with the running of the business. In this case, we use the company's Sales per Share.

$$\text{Price-to-Sales per Share} = \frac{\text{Market Price per Share}}{\text{Sales per Share}}$$

During the Internet mania, many analysts used Price-to-Sales instead of Price-to-Earnings since most of the new high-flying technology companies never generated any earnings.

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5.3: Profitability Ratios



Video - Audio - YouTube

The Profitability Ratios are popular measures used to evaluate a firm's returns by relating profits to sales, assets, or equity. Profitability Ratios allow an investor to measure the ability of a firm to earn an adequate return on sales, total assets, equity, and invested capital. As with all financial ratios, the profitability ratios must be compared to a company's competitors as well as the market as a whole.

In the ratios that follow, we will be using the financial statements for Sprouts Family Market (SFM) that were introduced above. So, get out your 99¢ calculator and have the financial statements available. It will also be helpful to have the chapter 5 formula street available. The formula sheet tells you which financial statement or statements we need to consult.

Net Profit Margin, also known as After-tax Profit Margin

The Net Profit Margin, also known as the After-tax Profit Margin, is the rate of profit being earned from earnings after expenses and taxes.

$$\text{Net Profit Margin} = \frac{\text{Net Income}}{\text{Total Revenue}} \text{ or } \frac{\text{Net Profit}}{\text{Total Sales}}$$

'The Net Profit Margin compares the two most popular entries from the Income Statement, the "top line" Total Sales, also referred to as Total Revenue, and the "bottom line" Net Income, also referred to as Net Profit. The higher the result, the better. But we

repeat that we must always compare this result with similar companies because the Net Profit Margin varies greatly from one industry to the next.

Consulting the Income Statement for December 31, 2024, we see that the Net Income for Sprouts was 380,601 and the Total Revenue was 7,719,290. The Net Profit Margin, therefore, is 4.93%. Is that good? Ah, we don't know. We need to compare this result with their competitors. What would you expect the Net Profit Margins would be for grocery stores? Would they command higher margins than the stock market as a whole? Or would the fact that there is such tremendous competition in the grocery retail industry result in net profit margins that are depressed when compared to the stock market as a whole? Much more research is needed!

Gross Margin

The Gross Margin reports the rate of profit being earned from Gross Profit. Gross Profit differs from Net Income (also called Net Profit). Looking carefully at the Income Statement, we can see that Gross Profit is simply the Total Revenue minus the Cost of Goods Sold.

$$\text{Gross Margin} = \frac{\text{Gross Profit}}{\text{Total Revenue}} \text{ or } \frac{\text{Gross Income}}{\text{Total Sales}}$$

This ratio is not as popular as the Net Profit Margin. However, it can help us compare a company against its competitors. The Gross Margin tells us how efficiently it was able to produce a profit from the goods or services provided by the company. A Gross Margin higher than their competitors demonstrates the company is better adept at being able to earn money from its business activities. As with the Net Profit Margin, it varies greatly from industry to industry.

For Sprouts, we see that their Gross Profit is 2,941,491. Dividing that by the Total Revenue gives us 38.11%. That is typical of most retail outlets. In general, unless it is a very high-end retail outlet with exclusive and expensive items, you can expect that the store will be paying anywhere between 30% and 40% less than the retail prices. On some high-volume items, it is far less. Sure, they only make a few percent on high-volume items such as milk, eggs, and bread. But they sell you milk, eggs, and bread every week, sometimes every few days.

Operating Margin

The Operating Margin takes the Gross Margin one step further. The Operating Margin uses the Operating Income, also called Operating Profit or Income from Operations.

$$\text{Operating Margin} = \frac{\text{Operating Income}}{\text{Total Revenue}} \text{ or } \frac{\text{Operating Profit}}{\text{Total Sales}}$$

The Operating Income starts with the Gross Profit above and then subtracts the overhead expenses such as research and development, sales, administrative, and general expenses. As with the previous two ratios, the higher the better but remember to compare the result with companies in the same industry as the results will vary widely from industry to industry.

The Operating Income for Sprouts is 504,497. Dividing the Operating Income by the Total Revenue gives us an Operating Margin of 6.54%, a number that would need to be compared to their competitors.

Return on Assets (ROA)

Return on Assets is a measure of how profitable a company is relative to its total assets. It looks at the amount of resources a company needs to support operations and reveals how effective the company is in generating profits from the assets it has available. The previous three ratios only used the Income Statement. The Return on Assets uses both the Income Statement and Balance Sheet. The Balance Sheet numbers are also from December 31, 2024.

$$\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Return on Assets and the next two ratios are very popular ratios. Obviously, the higher the better. For Sprouts, the Net Income of 380,601 divided by the Total Assets of 3,640,699 results in a Return on Assets of 10.45%.

Return on Equity (ROE)

Return on Equity relates the overall profitability of a company in relation to the shareholders' equity.

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Total Stockholders' Equity}}$$

Because Return on Equity uses Stockholders' Equity instead of Total Assets for the denominator, Return on Equity is sensitive to the amount of debt a company is carrying. Specifically, if a company carries a great amount of debt, Return on Equity will be much larger than Return on Assets. This is often referred to as leverage. You will hear investors say, "You are using other people's money to make your money." You are using borrowed money as a lever to enhance your profits. Some investors view this positively; others are worried about the possible negative consequences of too much debt. Looking at the data for Sprouts, the Net Income of 380,601 divided by the Total Stockholders' Equity of 1,321,893 gives a Return on Equity of 28.79% that we would compare with their competitors.

Return on Invested Capital (ROIC)

Return on Invested Capital measures the overall profitability of a company in relation to both debt and equity.

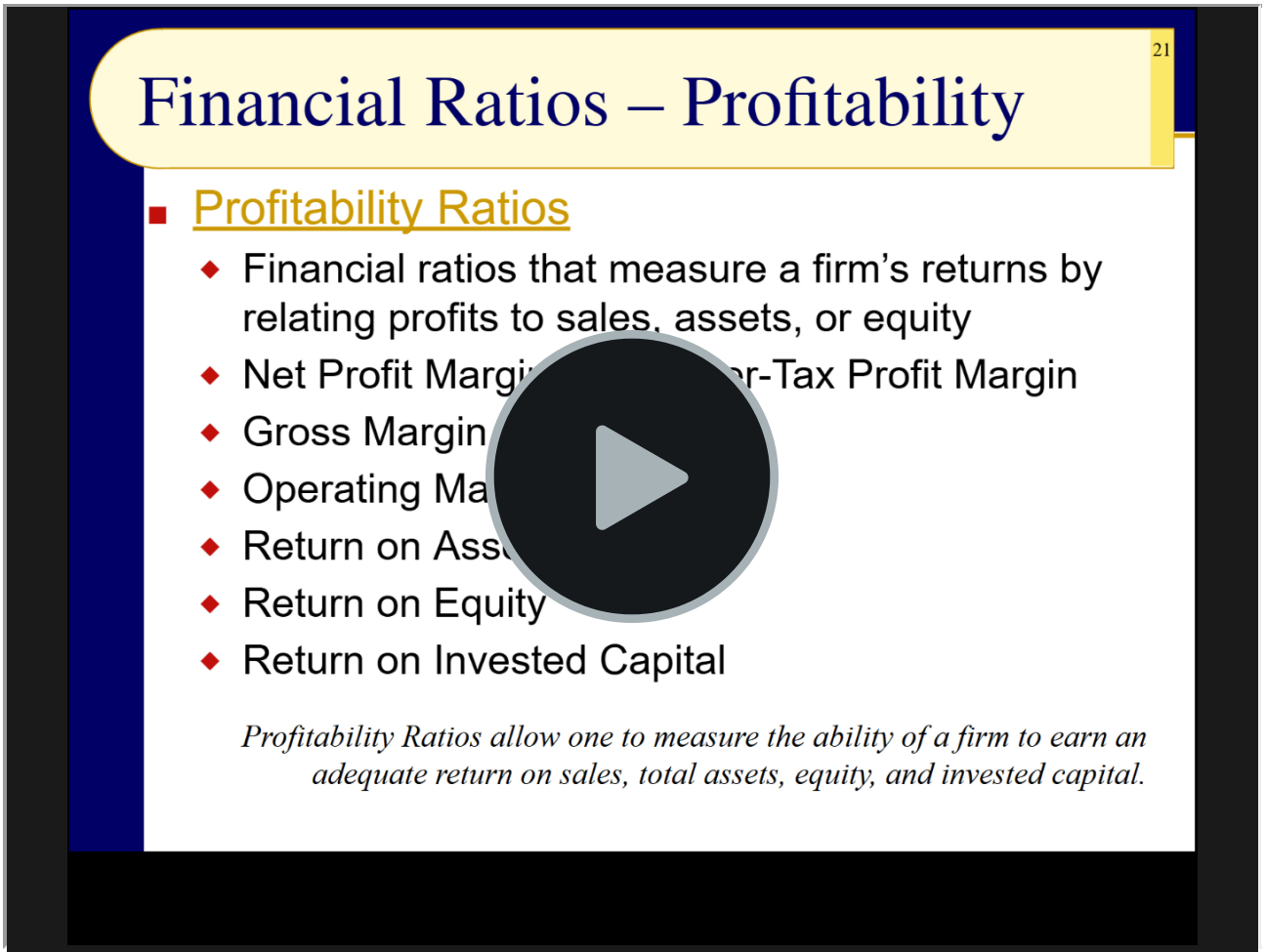
$$\text{Return on Invested Capital} = \frac{\text{Net Income}}{\text{Long-term Debt + Total Stockholders' Equity}}$$

Return on Invested Capital is used by many long-term investors such as Warren Buffett. However, there are a few different ways of calculating ROIC. We are using the most simplistic version. By using both long-term debt and stockholders' equity, ROIC measures how well a company is managing all the capital the company needs to earn its profits.

Adding the Long-term Debt of 1,520,272 and the Total Stockholders' Equity of 1,321,893 gives us a denominator of 2,842,165. Then dividing Net Income of 380,601 by the 2,842,165 denominator gives us a Return on Invested Capital of 13.39% for Sprouts. Note that Sprouts is not currently paying dividends.

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5.4: Liquidity Ratios



Video - Audio - YouTube *(Liquidity Ratios start on slide 28.)*

The Liquidity Ratios are financial ratios concerned with a firm's ability to meet its day-to-day operating expenses and satisfy its short-term obligations as they come due. These ratios ask critical questions: Can the company meet payroll? Can they pay the bills that are due? Are they in danger of being forced into bankruptcy? These ratios use entries from the Balance Sheet.

Current Ratio

The Current Ratio is a very popular ratio. It compares the Current Assets with the Current Liabilities. Recall that accountants use the term current to mean any assets or debts that are due within one year.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The Current Ratio is a good indicator of how stable a company is. Anything over 1.0 is normally considered acceptable. If your Current Assets equal or exceed your Current Liabilities, you should be able to satisfy your short-term obligations without any problems. Obviously, the greater the number is, the better. On the December 2024 Balance Sheet of Sprouts, we see that the Current Assets are 675,520 and the Current Liabilities are 679,968. The resulting Current Ratio for Sprouts is 0.993. This is close to 1.0 and indicates that Sprouts is able to pay its short-term debts. We don't have to worry about them not being able make payroll or being hauled off to bankruptcy court.

Net Working Capital

Net Working Capital is the one oddball in our group. It is not a ratio. Instead of dividing, we subtract. It is the result of subtracting the Current Liabilities from the Current Assets. In essence, it is the Current Ratio in absolute dollar terms. Net Working Capital is often discussed when discussing the Current Ratio and our next liquidity ratio, the Acid-test Ratio, but it is not as popular as the two ratios.

$$\text{Net Working Capital} = \text{Current Assets} - \text{Current Liabilities}$$

If the Current Ratio is greater than 1.0, then Net Working Capital will be positive since Current Assets will be greater than Current Liabilities. Conversely, if the Current Ratio is less than 1.0, then Net Working Capital will be negative. The higher the Net Working Capital, the better. This statistic is less popular than the Current Ratio. Since the Current Ratio of Sprouts is 0.993, we should expect their Net Working Capital to be negative. Taking the Current Assets of 675,520 and subtracting the Current Liabilities of 679,968 gives us a negative 4,448 for the Net Working Capital. Remembering that all numbers are in thousands, this means their Current Liabilities exceed their Current Assets by approximately $4.5 million dollars. For their size, this is a small amount and Sprouts is in no danger defaulting on its short-term obligations.

Acid-test Ratio, also known as the Quick Ratio

What a great name, the Acid-test Ratio! The Acid-test Ratio is a stricter version of the Current Ratio. For the Acid-test Ratio, we remove the Inventory from the Current Assets.

$$\text{Acid-test Ratio} = \frac{\text{Cash} + \text{Accounts Receivables} + \text{Short-term Investments} + \text{Other Current Assets}}{\text{Current Liabilities}}$$

Unlike the Current Ratio, the Acid Test Ratio excludes inventory. This ratio measures the ability of the company to meet its short-term obligations even if its current inventory becomes obsolete or undesirable and hence, difficult or impossible to be turned into cash. Anything greater than 1.0 is considered adequate. It is also called the Quick Ratio. (We don't know where the name Quick Ratio came from but it certainly reminds us of one of the early founders and eventually the third CEO of the Intel Corporation, Andrew Grove, who loved to say that there were only two types of companies, the Quick and the Dead. He also used to quip that, "only the paranoid survive." Mr. Grove was instrumental in building Intel into the world's largest semiconductor company.)

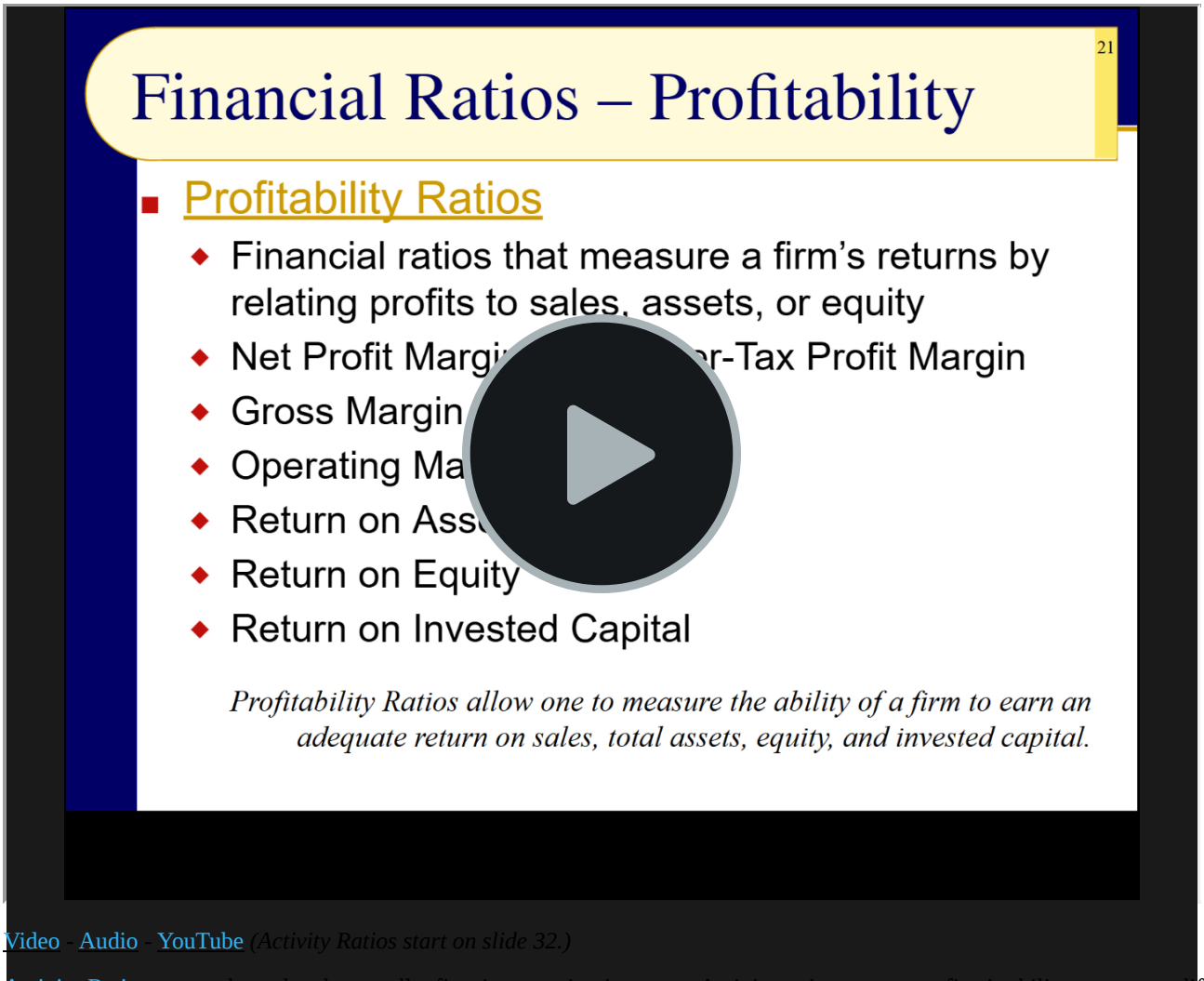
An easier form of the Acid-test Ratio formula is:

$$\text{Acid-test Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

We will take the easier route to calculate the Acid-test Ratio for Sprouts. The Current Assets of 675,520 minus the Inventory of 343,329 gives us a numerator of 332,191. Dividing the numerator of 332,191 by the Current Liabilities of 679,968 gives us an Acid-test Ratio of 0.489. This number is more concerning than the Current Ratio. We need to take a good, long look at the Inventory for Sprouts and ask if there is a danger of the Inventory becoming obsolete or otherwise undesirable. We would combine that analysis with another ratio that we will discuss below, the Inventory Turnover, to determine if this is something that should give us pause. At first blush, though, we might intuitively surmise that the majority of products that a grocery such as Sprouts carries are not going to become obsolete or otherwise undesirable barring any natural catastrophe. Everybody got's t' eat, right?

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5.5: Activity Ratios



Video - Audio - YouTube *(Activity Ratios start on slide 32.)*

Activity Ratios are used to relate how well a firm is managing its assets. Activity ratios measure a firm's ability to convert different accounts within their balance sheets into cash or sales. Companies will try to turn their production into cash or sales as fast as possible because this will generally lead to higher revenues. These ratios utilize entries from both the Balance Sheet and Income Statement. Again, we are using the financial statements from December 31, 2024.

Accounts Receivable Turnover

Accounts Receivable Turnover is a measure of how well Accounts Receivable are managed. Businesses often will deliver goods or services but accept payment later. Accounts Receivable are the amounts that are owed to the business for those goods and services.

$$\text{Accounts Receivable Turnover} = \frac{\text{Total Revenue}}{\text{Accounts Receivable}}$$

The higher the number, the better. It indicates the return a company is getting from its investment in accounts receivable. By maintaining accounts receivable, firms are indirectly extending interest-free loans to their clients. A high ratio implies that the company operates either on a cash basis, or its extension of credit and collection of accounts receivable is efficient. A low ratio implies that the company should reassess its credit policies in order to ensure the timely collection of imparted credit not earning interest for the firm. Or that may just be how that industry operates. An example of this is the Defense industry. Uncle Sam will eventually get around to paying you for that aircraft carrier you built for him. But he does take his good old sweet time. The large Defense contractors are used to this but smaller contractors often have a difficult time waiting since they simply do not have the

same amount of resources. Some years ago, the small contractors complained bitterly and it is our understanding that the government has stepped up the payment time frame.

Initially, we could guess that a retail grocer such as Sprouts would not have a significant sum in Accounts Receivable and we would be correct. Accounts Receivable for Sprouts is only 30,901. Dividing the Total Revenue of 7,719,290 by the Accounts Receivable of 30,901 gives us an Accounts Receivable Turnover of 249.807. This means that almost 250 times per year, Sprouts turns over their Accounts Receivable. That is more than every two days. There is no problem here!

Inventory Turnover

Inventory Turnover is very important to many industries. It is a measure of how a company manages its Inventory.

$$\text{Inventory Receivable Turnover} = \frac{\text{Total Revenue}}{\text{Inventory}}$$

The higher the number, the less time an item spends in inventory and the better the return the company is able to earn from funds tied up in inventory. As with all ratios, this ratio must be compared against industry averages. A low turnover implies poor sales and, therefore, excess inventory. A high ratio implies either strong sales or ineffective inventory buying or maintenance. High inventory levels are unhealthy because they represent an investment with a rate of return of zero. It also potentially exposes the company to trouble in the case of falling prices or obsolete products.

With a Total Revenue of 7,719,290 divided by the Inventory of 343,329, we see that the Inventory Turnover for Sprouts is 22.484. Sprouts is turning over their Inventory approximately every two and a half weeks. If you shop at Sprouts and come back two or three weeks later, virtually all the products you see on the shelves have been replaced. Obviously, some high-volume products are being replaced daily while others are replaced much less frequently. However, you get the idea. The high Inventory Turnover relieves much of the concern we initially had with the low Acid-test Ratio above.

Total Assets Turnover

Total Asset Turnover measures how well the company manages its total assets.

$$\text{Total Assets Turnover} = \frac{\text{Total Revenue}}{\text{Total Assets}}$$

The Total Assets Turnover Ratio measures the firm's efficiency at using assets to support sales and revenue, the higher the number the better. Companies with low profit margins tend to have high asset turnover, those with high profit margins have low asset turnover. For Sprouts, we take the Total Revenue of 7,719,290 and divide the Total Assets of 3,640,699 and get a Total Asset Turnover of 2.12. Sprouts is turning over their total assets about twice a year.

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5.6: Leverage Ratios



Video - Audio - YouTube *(Leverage Ratios start on slide 36.)*

The last group of financial ratios we will cover are the Leverage Ratios. Leverage Ratios are used to measure the amount of debt being used to support operations and the ability of the firm to service its debt. They are also referred to as Solvency Ratios and are similar to the Liquidity Ratios except they focus on long-term debt instead of short-term debt. Debt is often referred to as leverage. The idea is that you are using other people's money to make money. You are using the borrowed money as a "lever" to increase your earnings. When one firm buys another firm using borrowed money, it is often referred to as a "leveraged buyout."

Debt-to-Equity Ratio

The Debt-to-Equity Ratio is a measure of a company's financial leverage calculated by dividing long-term debt by shareholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

$$\text{Debt-to-Equity Ratio} = \frac{\text{Long-term Debt}}{\text{Total Stockholders' Equity}}$$

A higher Debt-Equity Ratio generally means that a company has been aggressive in financing its growth with debt. This can result in lower earnings as a result of the additional interest expense and hence, lower taxes. Sometimes investors use total liabilities instead of long-term debt. The lower the result, the better for the more risk averse investors. Of course, debt levels vary widely from industry to industry so, as with all ratios, we must always compare our results with competitors and what is customary for the particular industry.

One noticeable event that we can see on the Balance Sheet of Sprouts is the change in Long-term Debt from 2018 to 2019. Long-term Debt jumped from $310 million to $1.63 billion. Sprouts joined a long list of companies who loaded up on Long-term Debt. Why? Interest rates had not been this low in generations. Many companies took advantage of the ultra-low interest rates to borrow. Will this mountain of debt come back to haunt them? That is something investors need to be aware of and do their best to anticipate. Currently, with a Long-term Debt of 1,520,272 and Total Stockholders' Equity of 1,321,893, the Debt-to-Equity Ratio of Sprouts is 115.01%. Typically, businesses and individuals want to keep this ratio to no higher than 1.0 or 100%. Many individuals, Your Humble Author included, want it to be less than 0.5 or 50%. Obviously, the management of Sprouts does not seem concerned about this. We would want to consult what their management had to say about their debt situation in the annual report and other filings with the SEC.

Times Interest Earned

Time Interest Earned was Benjamin Graham's favorite financial ratio. It measures the ability of a company to meet its fixed interest payments. A company can choose to stop paying dividends but interest payments on debt must be paid or else the company will be hauled off to bankruptcy court.

$$\text{Times Interest Earned} = \frac{\text{Earnings before Interest and Taxes}}{\text{Interest Expense}}$$

Times Interest Earned is used to determine how frequently interest payments are earned by the company during a year. The higher, the better. Normally, 3 or 4 is considered adequate. When you read *The Intelligent Investor*, you will see the master in action. Mr. Graham deftly shows how investors who pay special attention to this ratio can avoid some nasty surprises in the form of bankruptcies of the companies that they invest in.

Earnings before Interest and Taxes for Sprouts was 504,497. Their Interest Expense was a negative 2,201. What? Their net Interest Expense was negative? Yes, with their cash situation, they earned more money in interest than they paid in 2024. That means their Times Interest Earned ratio is a negative 229.21. Now we see why the management of Sprouts is not concerned with their debt level. This is similar to an individual earning from their savings enough money to their mortgage payments for the entire year and still have some interest left over.

Total Debt-to-Total Assets Ratio

The Total Debt-to-Total Assets Ratio relates how much of the company's total assets have been financed by debt.

$$\text{Total Debt-to-Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

Total Debt-to-Total Assets includes both short-term and long-term debt and assets. If it varies substantially from the Debt-Equity Ratio, the company may be relying heavily on short-term debt. A heavy reliance on short-term debt can denote more risk. Relying on short-term debt to finance a long-term operation is akin to someone financing their start up business using credit cards. Although it might be the only way they can get financing, it is very pricey and dangerous.

Sprouts has Total Liabilities of 2,318,806 and Total Assets of 3,640,699. The resulting Total Debt-to-Total Assets ratio is 63.69%. For investors with an aversion to too much debt, this might be something of concern. Generally, investors concerned about excessive debt want to see this number less than 0.5 or 50%.

Total Debt-to-Capitalization Ratio

Finally, the Total Debt-to-Capitalization Ratio is used to measure the total amount of outstanding company debt as a percentage of the firm's total capitalization.

$$\text{Total Debt-to-Capitalization} = \frac{\text{Short-term Debt + Long-term Debt}}{\text{Short-term Debt + Long-term Debt + Shareholders Equity}}$$

Similar to the Total Debt-to-Total Assets ratio. As with the other debt ratios, the higher the debt level, the more risk of insolvency. However, some industries with high rates of debt such as utilities also have more reliable earnings. As always, we must compare our results with the competitors and the industry as a whole.

For Sprouts, we add the Short-term Debt of 151,721 to the Long-term Debt of 1,520,272 to get a subtotal of 1,671,993 for the numerator. In the denominator, we add the Short-term Debt of 151,721 and Long-term Debt of 1,520,272 to the Total Shareholders' Equity of 1,321,893 to get 2,993,886. Dividing the numerator by the denominator gives us a Total Debt-to-Capitalization Ratio of 55.85%, a bit less than the Total Debt-to-Total Assets Ratio above.

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5.S: Summary

Congratulations – You Have Finished Chapter 5 – Fundamental Analysis: Financial Statements and Ratio Analysis

You have reached the end of chapter 5, Fundamental Analysis: Financial Statements and Ratio Analysis. In this chapter, you have:

- Explored the three quarterly and annual financial statements that every publicly traded company must produce: the balance sheet, the income statement, and the cash flow statement (aka statement of cash flows)
- Investigated Regulation FD (Fair Disclosure) and how financial statements and other important data about companies are disseminated
- Reviewed some common stock ratios first discussed in chapter 3 and been introduced to new common stock ratios and price ratios
- Been introduced to profitability ratios, liquidity ratios, activity ratios, and leverage ratios

You should now be able to:

1. Describe the uses of the three quarterly and annual financial statements
2. Research or calculate various financial ratios for publicly traded companies
3. Discuss the benefits and major limitations of various valuation models
4. Analyze and compare and contrast the various financial ratios for publicly traded companies with their competitors and the stock market as a whole

We Have Finished Our Coverage of Fundamental Analysis of Stocks

Dear Investment Gurus, we have done the heavy lifting with regard to stocks. It is now time to step back and take a look at much of the research that has been done regarding whether or not any of what we have learned will actually do us any good. In our next chapter, we discuss Efficient Market Theory and ask a simple question, “Who Can Beat the Market?” We will also focus on the research that has been done regarding behavioral finance and what it can tell us about ourselves as investors and as human beings. Last, we review some of the All Stars of Investing. If you want to do something well, why not study and learn from those who have shown that they can do it well? See you in our next chapter, Chapter 6: Efficient Market Theory: *"Who Can Beat the Market?"*

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CHAPTER OVERVIEW

Chapter 6: Market Efficiency Theory: "Who Can Beat the Market?"

> *"I can calculate the movement of the stars, but not the madness of men." – Sir Isaac Newton*
>
> *"The investor's chief problem, and even his worst enemy, is likely to be himself." – Benjamin Graham*

Learning Objectives

In this chapter, you will

- Be introduced to the concepts and theories of market efficiency
- Discuss the difficulties involved in "beating the market"
- Examine market manias, also known as bubbles, and market crashes, also known as panics, and the behaviors and the common weaknesses that typical investors exhibit
- Reexamine the advantages and disadvantages of passive (a.k.a. index) investing and active management
- Review famous and infamous investors and their characteristics
- Be introduced to some famous myths and stupid sayings

By the end of this chapter, you should be able to

- Identify the three main efficient market hypotheses and the random walk hypothesis
- Describe the characteristics of market manias, also known as bubbles, and market crashes, also known as panics, and the behaviors of and common weaknesses that typical investors exhibit
- Describe the characteristics of intelligent, prudent, long-term oriented investors during manias and crashes
- Compare and contrast passive management investing, also known as index investing, versus active management investing
- Discuss some of the more famous investors and their characteristics
- Relate various famous market myths and stupid market sayings

Are Markets Efficient? Can Investors "Beat the Market?"

This chapter discusses the various theories about market efficiency. The proponents of the efficient market theories believe that no one can "beat the market." The fly in their ointment is that there are many investors who have beaten the market over statistically significant periods of time. We will take a look at just a few of those successful investors who have proven that the efficient market theories are wrong. We will also review some of the research from behavioral finance and what it says about us as investors and as human beings as well as revisit the controversy surrounding active versus passive management. We end with a few famous market myths and stupid sayings. Enjoy!

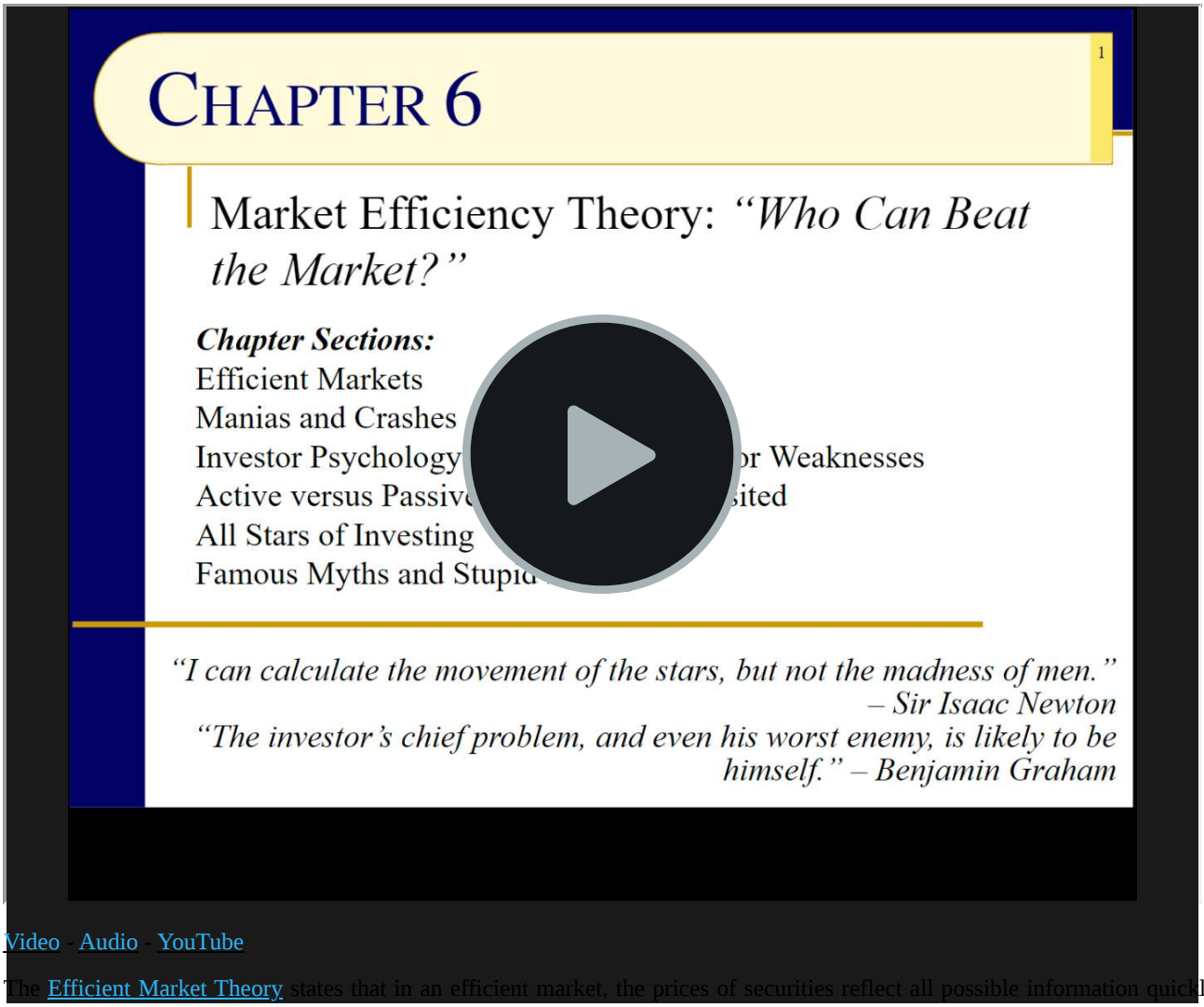
Presentation file - Study guide

6.1: Efficient Markets
6.2: Manias and Crashes
6.3: Investor Psychology and Common Investor Weaknesses
6.4: Active versus Passive Management Revisited
6.5: All Stars of Investing
6.6: Famous Myths and Stupid Sayings
6.S: Summary

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6.1: Efficient Markets



Video - Audio - YouTube

The Efficient Market Theory states that in an efficient market, the prices of securities reflect all possible information quickly and accurately. What is an efficient market? The New York Stock Exchange and the NASDAQ are examples of efficient markets. These are markets where there are large numbers of rational, knowledgeable investors who react quickly to new information. Hence, the theory claims that security prices will always adjust quickly and accurately. Rational investors will immediately buy any stocks that are undervalued and immediately sell any stocks that are overvalued.

Associated with the Efficient Market Theory is the Random Walk Theory. This theory states that stock price movements are random. There is plenty of evidence that in the short term, this hypothesis is correct. Stock prices movements are random in the short term. However, so far, long-term price movements are anything but random as the global economy has grown exponentially over the last 200 years. Some critics believe that capitalism has emphasized growth of the economy at all costs and that this growth cannot possibly continue. The reality is that we as a species have a long way to go until every human can live a dignified, healthy, and fruitful life with sufficient food, clothing, and shelter – and Internet access! The trick will be to share more equitably in the wealth generated by our combined endeavors. The current distribution of wealth here in the United States is unconscionable and cannot continue.

For a thorough discussion of the Efficient Market Theory, please read *A Random Walk Down Wall Street* by Professor Burton Malkiel. It is one of two books that we recommend for your first book to read about stock investing. (The other is *One Up On Wall Street* by Peter Lynch. We will discuss Mr. Lynch later in this chapter.) We have already quoted and referenced Professor Malkiel's classic text. It is a whole lot o' fun. Professor Malkiel skewers Fundamental Analysis (which we covered in chapters 4 and 5),

Technical Analysis (which we will cover in our next chapter), and the Efficient Market Theory, even though he was one of the early pioneers of the theory. Nobody gets away without being jabbed, needled, or harpooned. Read it!

The theory was initially put forth in 1970 and developed throughout the 1970's. At the same time, the physics world was working on their own set of theories and were using terms like weak and strong. This spilled into the world of the Efficient Market Theory and we wound up with three forms, the weak, semi-strong, and strong hypotheses.

The Weak Efficiency Hypothesis

The Weak Efficiency Hypothesis states that past data on stock prices are of no use in predicting future prices. Although statistically, stock price movements in the short term are random, there are times when stock prices do tend to demonstrate momentum in one direction or the other. Stock prices tend to rise more often than they fall and they tend to move far higher than is usually justified resulting in a mania or bubble, or fall far lower than is usually warranted resulting in a crash or panic. An oft-told story is that a group of investors was convinced the stock market was overvalued and they eventually turned out to be correct; the market was overvalued. They asked the famed economist, Sir John Maynard Keynes, how the market could stay so overvalued for so long. He famously quipped, "The market can stay irrational longer than you can stay solvent." (This story has been repeated thousands of times. However, there is doubt as to its accuracy and whether or not Sir John actually was the origin of the famous quote. No matter. It's a great story to remember when prices become wildly overvalued or undervalued.)

Contrary to the Weak Efficiency Hypothesis, many speculators and traders believe they can use recent stock price movements to predict the market. If this theory is true, then Technical Analysis is useless. We will cover Technical Analysis in our next chapter.

The Semi-Strong Efficiency Hypothesis

The Semi-Strong Efficiency Hypothesis states that abnormally large profits cannot be consistently earned using publicly available information. In an efficient marketplace, prices instantly adjust rapidly to any new information available. In other words, no amount of analysis that you do to determine the future price of a stock will help you achieve a return that is better than the market as a whole. Both Technical Analysis that we will cover in the next chapter and Fundamental Analysis that we covered in the previous two chapters will not help us. According to the Semi-Strong Efficiency Hypothesis, no one can beat the market!

There is only one problem with this theory. There are many seasoned investors who have beaten the market over statistically significant periods of time. How do the Efficient Market Theorists respond to this obvious failing of their theory? Their response is that those people are just lucky. If you have sufficiently large numbers of investors, then a few will be lucky enough to beat the market. This is reminiscent of the famous quote that is attributed to many different individuals. The usual story goes like this: Famous Golfer X does something fabulous and a reporter comments, "Gee, you were really lucky today." The Famous Golfer X quips, "Ya' know, you are absolutely right. And the funny thing is, the more I practice, the luckier I get." We will investigate some of the "lucky" All Stars of Investing later in this chapter and see how much of it we can attribute to luck and how much to skill and practice.

The Strong Efficiency Hypothesis

The Strong Efficiency Hypothesis asserts that no information, public or private, will allow investors to earn abnormally large profits consistently. This is obviously false. If you had material nonpublic information about a company, you could make a fortune overnight! If you do not get caught and wind up in jail, that is, since what you were doing is quite illegal. Material nonpublic information is the legal term for what is normally referred to as insider information. An example of material nonpublic information would be if you were the CEO of a drug company that was applying to have their soon-to-be blockbuster for approval by the Food and Drug Administration and you learned that the drug was going to be denied. If you made any trades that would benefit you from this information, you would be guilty of insider trading. This is exactly what happened in the infamous case surrrounding the celebrity Martha Stewart. That case, and others like it, are rarely found and prosecuted. Because of this, some industry observers believe it would just be better to make insider trading legal again. However, a return to legal insider trading is unlikely to ever occur.

Efficient Market Rational

The Efficient Market and Random Walk theorists are often also major proponents of index funds. They point to the fact that many professional money managers simply do not “beat the market,” especially during bull markets. From 1963 to 1998, the S&P 500 index outperformed the average equity mutual funds 22 out of 36 times. They reason that you are better off accepting close to the market’s return with low-cost index funds since their theory tells them that no one can consistently “beat the market.”

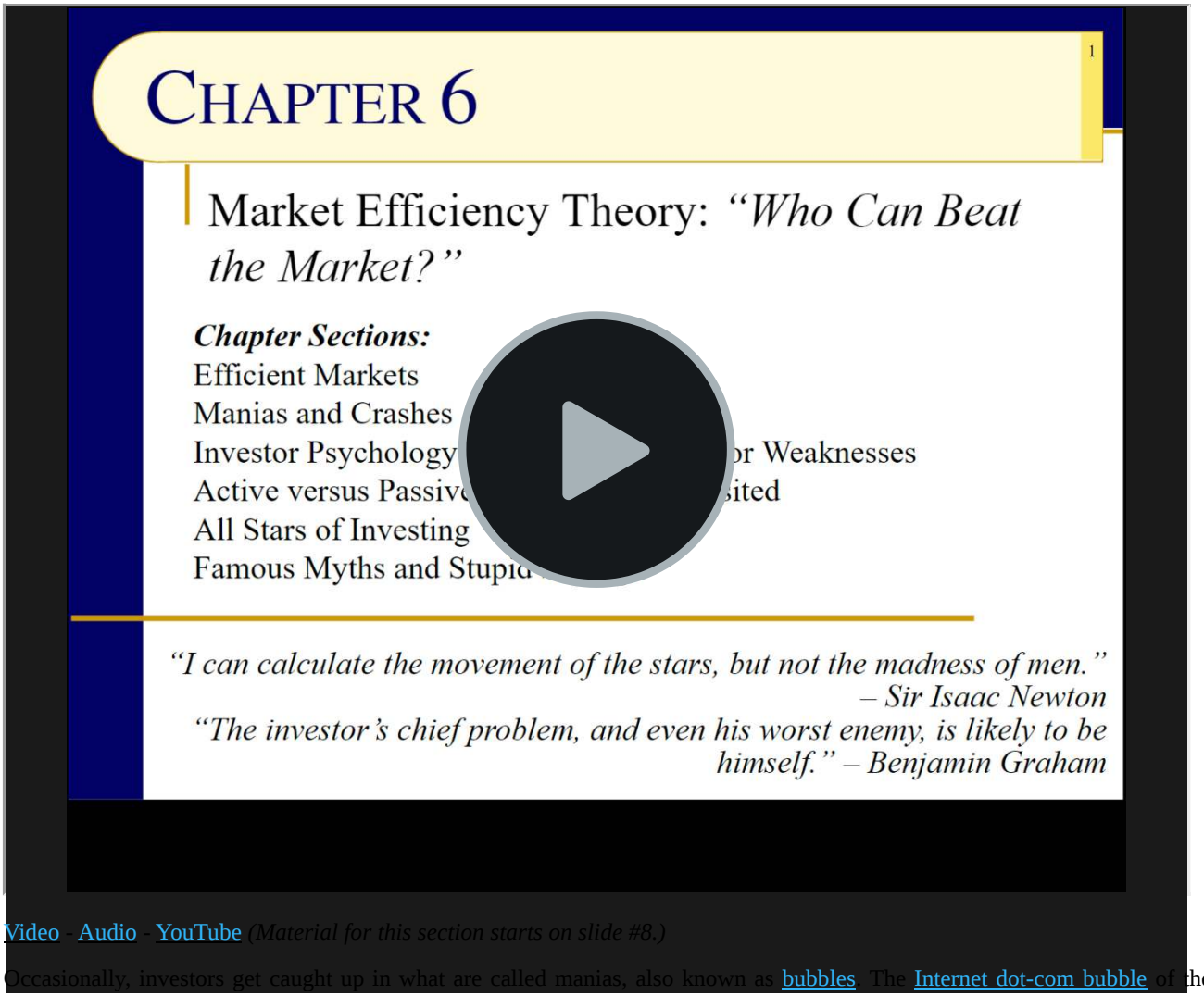
Why can’t many pros beat the averages? To start with, many mutual funds have high annual operating expenses. The mutual fund must beat the index by the annual fees just to break even with the index. That is why lower fee mutual funds tend to do better over the long term than higher fee mutual funds. In addition, since many mutual fund managements have a very short time horizon, many mutual fund managers have a very short lifespan. Therefore, if you are a new mutual fund manager, you are often tempted to trade often and take undue risks. You then will have subsequently high turnover and associated costs. Why invest in this manner, especially if you know that it is not the best long-term strategy? You reason, “If I do well, great! I get to keep my job and I will be showered with love and attention and a whole lot of money. If I don’t perform, oh, well, they are going to fire me anyway so why not just shoot for the moon and see what happens.” So much for efficient and rational market behavior! Here we have money managers doing what they know is not in the best interests of their shareholders simply because the incentives are misplaced. Luckily, more and more mutual fund companies are evaluating their managers over longer time frames.

However, the final nail in the coffin of efficient and rational markets came from the world of psychology. Two psychologists, Daniel Kahneman and Amos Tversky, spent their careers studying how humans make decisions. Even though he was a psychologist, Mr. Kahneman won the Nobel Prize for Economics Science in 2002 because their work challenged the assumption of human rationality prevailing in economics. Sadly, Mr. Tversky had passed away in 1996 and the Nobel Prize is not awarded posthumously. In Daniel Kahneman’s ground-breaking book, *Thinking Fast and Slow*, he describes their research and how it came to be used by economists. Read it!

In the final analysis, the premises and casual observations of the Efficient Market theories show them to be patently absurd. Many money managers have “beaten the market,” over statistically significant long periods of time. “The more I practice, the luckier I get.” Plus, if markets are efficient and rational, how do you explain manias and crashes? Read on, Dear Student!

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6.2: Manias and Crashes



Video - Audio - YouTube *(Material for this section starts on slide #8.)*

Occasionally, investors get caught up in what are called manias, also known as bubbles. The Internet dot-com bubble of the late 1990's was one of the most famous stock manias. The NASDAQ hit a high of over 5,000 in March of 2000 only to fall approximately 80% to around 1,100 by October 2002. Before that, there was the "Nifty-Fifty" of the early 1970's. An investor needn't worry about valuation. These companies will go up no matter what. Predictably, it ended badly for many of those stocks and their investors. The mania of the late 1920's resulted in the Crash of 1929. At the peak in September 1929, Radio Corporation of America – you know it as RCA – sold for over $500 per share. In three years, it would sell in the teens, a loss of approximately 98%. The Goldman Sachs Trading Corporation investment trust, a precursor to modern mutual funds, went from over $200 to $1.75. Before then, in the 1840's, there were 400 railroad firms. Now there are only a handful. In bubbles, a few fortunes are made, many more fortunes are lost.

The greatest bubble of all time will always be remembered as the Dutch tulip bulb craze of the early 1600's. Although there is controversy over the exact nature of the mania, speculators did drive the price of tulip bulbs to insane levels. One poor fellow who had just arrived in The Netherlands and had no idea of what was happening mistakenly ate one of the bulbs thinking it was an onion and wound up in jail. There are two wonderful books that chronicle the events, *Extraordinary Popular Delusions and the Madness of Crowds* and *The Botany of Desire*. The first book discusses the various instances of mob psychology gone mad. It was written in 1841 but is still shocking to today's readers. The second book discusses our relationships with plants and turns the tables on the human race. Are we controlling the plants or are they controlling us? Great question! Read both books!

During each bubble, the phrases were, "It's a New Era," or, "It's different this time," or, "The old ways of valuing stock are gone." And each time, they were wrong! Again, so much for Efficient and Rational Markets!

Why do manias occur over and over again? Why haven't investors learned their lesson? Leonard Kaplan, president of commodities brokerage firm Prospector Asset Management in Evanston, Illinois, believes that, "[market manias] will happen over and over again because the public is infinitely stupid."

In his 1972 edition of *The Intelligent Investor*, Benjamin Graham opined, "The speculative public is incorrigible. It will buy anything, at any price, if there seems to be some 'action' in progress. It will fall for any company identified with 'franchising,' computers, electronics, science, technology, or what have you, when the particular fashion is raging. … the abuses are so largely the result of the public's own heedlessness and greed." Replace "franchising," computers, etc. with Internet, biotechnology, etc. and Good Ol' Ben could have been writing in 2000 instead of 1972. Today, the buzz words are cryptocurrencies, Artificial Intelligence, and NFTs.

Are we in a mania/bubble now? Many believe we are. Certainly, some stocks are trading at extreme valuations. However, some other stocks are still valued at reasonable levels. What makes the current investment environment seem like a bubble is the pandemonium over cryptocurrencies, Artificial Intelligence, and NFTs. "Quick! Hurray! They are giving away free money! Go get yours now! Bitcoin will be $1,000,000 soon!" Our technology changes quickly but our psychology has barely budged since we invented civilization. We want to believe that we can get rich quickly. In any bubble, a few do become fabulously wealthy. Most lose. Some lose everything. When you hear, "Ooo, ooo, ooo! Is it too late to get in?" then the answer is invariably, "Yes, it's too late to get in." It shouldn't be long before we hear, "Ooo, ooo, ooo. Is it too late to get out?" Because …

How do most manias end? Yes, you guessed it! They invariably end with a crash, also known as a panic. "The bigger the party, the bigger the hangover." They are not fun but the odds are you will live through at least one or two during your investing career. What we hope we have convinced you by now is that you must take a long-term perspective and not panic. It won't feel good. In fact, it will feel as if someone punched you in the gut. Provided you did not succumb to the siren's call of quick fortune and chose prudent, long-term oriented companies with their roots deep in the economy – and the world does not end – your portfolio should recover as the global economy recovers.

The following quote is from Jon Lovelace, a mutual fund money manager and the individual who oversaw the exponential growth of The Capital Group, the parent company of The American Funds, in the 1950's through to the 1990's. Mr. Lovelace uttered these words in August 1999, a heady time in the stock market when articles and books were touting an imminent "melt up" for stock prices, some predicting a four-fold rise.

> *"With this many strong years, I have the concern that there are a vast majority of companies that are significantly overvalued on a long-term basis." – Jon Lovelace*

Mr. Lovelace would retire in 2000 with 50 years of experience, just as the bubble was bursting. His words fell on deaf ears. Speculators and traders spent two and a half years from March of 2000 to October of 2002 learning the painful truth about manias and crashes, bubbles and panics.

Oh, by the way, the 2008/2009 market crash was not caused by a stock market bubble. It was a real estate bubble and the mortgage-backed bonds that were tied to the real estate mortgages. We will discuss this later when we get to bonds.

A History of Bear Markets

The table below contains a history of bear markets of the Standard and Poor's 500 since the Great Depression.

A History of Bear Markets of the Standard and Poor's 500

High	Low	S&P 500 at High	S&P 500 at Low	Percent Decline	Months to Recover		S&P 500 P/E at High	S&P 500 P/E at Low	P/E Percent Decline
Sep 1929	Jul 1932	32	4	-88%	267		27	4.3	-84%
Jul 1957	Oct 1957	49	39	-20%	11		15.4	10.6	-31%
Dec 1961	Jun 1962	73	52	-29%	14		16.1	12.3	-24%
Feb 1966	Oct 1966	94	73	-22%	6		19.1	15.7	-18%
Nov 1968	May 1970	108	69	-36%	21		20.2	13.1	-35%
Jan 1973	Oct 1974	120	62	-48%	69		18.6	9.2	-51%
Nov 1980	Aug 1982	141	102	-28%	2		10.3	7.2	-30%
Aug 1987	Dec 1987	337	224	-34%	19		17.3	12.5	-28%
Jul 1990	Oct 1990	369	295	-20%	3		15.3	12.9	-16%
Jul 1998	Oct 1998	1,184	959	-19%	1		34.5	30	-13%
Mar 2000	Oct 2002	1,527	777	-49%	55		37.4	18.8	-50%
Oct 2007	Mar 2009	1,565	667	-57%	66		23.6	9.7	-59%
Feb 2020	Mar 2020	3,386	2,237	-34%	6		25.4	22.2	-13%
Jan 2022	Jan 2024	4,797	3,577	-25%	24		23.1	20.3	-12%

Scanning the table, you will find that there is no typical bear market. The percentage declines, the time to recover, and the declines in the Price-to-Earnings ratios do not follow any particular pattern. Some experience deep declines; some do not. Some take years to recover; some recover quickly. Again, the key point to remember is that bear markets will come and – assuming the world does not end – bear markets will go. Prudent, long-term prepare themselves emotionally for these events and do not panic. In fact, history tells us these have been the best times to allocate more resources to your investments. But as we cautioned, it jest ain't gonna' be fun to live through them. Oh, well. We did warn you, didn't we? Do you want to eat well or do you want to sleep well?

Note: As mentioned beforehand, a bear market is generally defined as a 20% decline in prices. Many histories of bear markets do not include the late 1998 market downturn since it did not actually decline 20%. When will the next crash, bear market, downturn, correction, etc. occur? For prudent, long-term investors, a better question is, "Which companies will do well over the next 3 to 5 years and beyond and do I want to partner with them for the long term?"

October is the Cruelest Month

With all due respect to T. S. Eliot, we beg to differ. April is not the cruelest month. October is. The following table shows a very interesting and puzzling characteristic of severe one-day declines in the stock market.

Date	Net Change	Close	% Decline
19-Oct-1987	-508.00	1,738.74	-22.61%
16-Mar-2020	-2,997.10	20,188.52	-12.93%
28-Oct-1929	-38.33	260.64	-12.82%
29-Oct-1929	-30.57	230.07	-11.73%
12-Mar-2020	-2,352.60	21,200.62	-9.99%
6-Nov-1929	-25.55	232.13	-9.92%
18-Dec-1899	-5.57	58.27	-8.72%
12-Aug-1932	-5.79	63.11	-8.40%
14-Mar-1907	-6.89	76.23	-8.29%
26-Oct-1987	-156.83	1,793.93	-8.04%
21-Jul-1933	-7.55	88.71	-7.84%
15-Oct-2008	-724.00	8,577.91	-7.78%
18-Oct-1937	-10.57	125.73	-7.75%

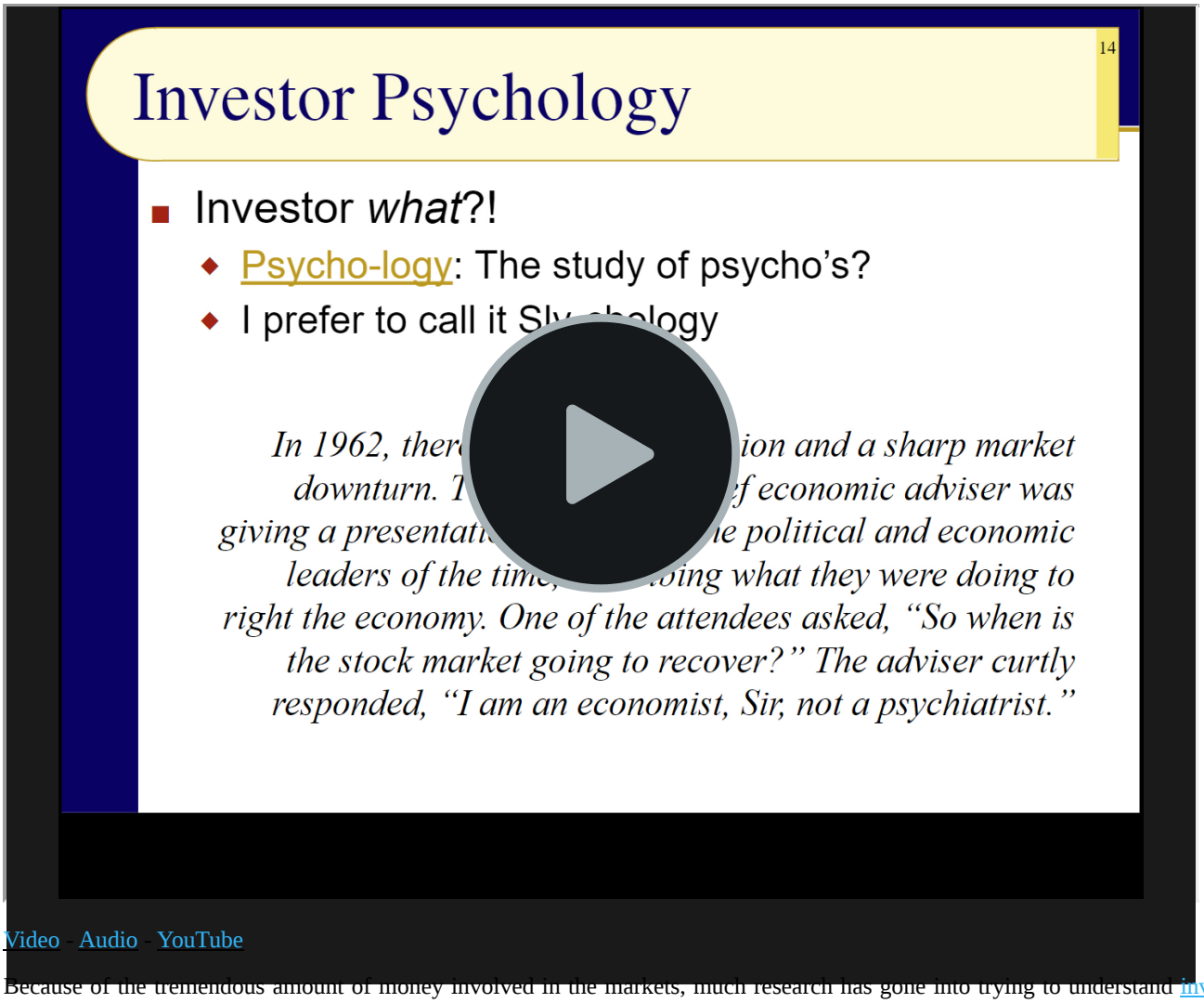
Notice how out of the thirteen worst days in the market, six of them were in mid- to late-October and one was in early November. Two of the days were in March of 2020 and were caused by the Covid-19 panic. We should really discard those days from this list. Therefore, we are left with the fact that seven of the worst eleven days occurred at the same time of the year. This is the October effect, as it is sometimes called. Why? Why have so many more severe market declines happened in this period?

The reality is that there is no good explanation for this that can be tested and proven. Most likely the best explanation goes back hundreds of thousands of years. The season is not called the fall for nothing. We saw the leaves change and the plants die off. We saw the days growing shorter and the nights growing longer. The temperature dropped. We looked around and knew that some of us weren't going to make it to the next spring. There is a very good reason that All Soul's Day, the Day of the Dead, All Hallows' Eve, and Halloween are in this season. As much as we like to believe that we are masters over nature – flip a switch, push a button, shelter in our climate-controlled cocoons – the truth is we are still animals, slaves to the natural world around us. The belief is that these animal instincts spill into the stock market from time to time. This leads us to our next section on Investor Psychology and Common Investor Weaknesses.

FOOTNOTE: You may be wondering why these remembrances and festivals would not occur in December and the winter solstice, instead of the fall. The winter solstice begins the return of the sun's journey back to us. This is the reason the end of December was chosen to celebrate the birth of the Christ child. Jesus Christ was called the Light of the World. The winter solstice marks the birth of the light. For more about the symbols that permeate our world and how they affect us, please consider reading *The Hero with a Thousand Faces* by Joseph Campbell. If there is one book you should read in your lifetime, it is this one. Mr. Campbell has created a "how-to" manual for humans. In *The Hero with a Thousand Faces*, we learn that we are all heroes on an adventure. That adventure is what we call life. We see how the world's major religions are calling to us from thousands of years ago. They hope we learn how not to waste this precious gift that we have been given. And if that does not pique your interest, it is also the book that George Lucas used to create *Star Wars*. Mr. Campbell was on the sets of the first three *Star Wars* movies as a consultant. He was the man behind the Force. Oh, by the way, although they won't acknowledge it publicly, Disney has stolen from Mr. Campbell many times, the most egregious being *The Lion King*. Dear Students, *The Hero with a Thousand Faces* is a life-changing book. Read it!

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6.3: Investor Psychology and Common Investor Weaknesses



Video - Audio - YouTube

Because of the tremendous amount of money involved in the markets, much research has gone into trying to understand investor psychology. Some of the research is very revealing about who and what we are, not only as investors but also as a species in general.

> *"There are three factors that influence the markets: Fear, Greed, and Greed." – Old Wall Street Saying*
>
> *In 1962, there was a brief recession and a sharp market downturn. The President's chief economic adviser was giving a presentation to many of the political and economic leaders of the time, describing what they were doing to right the economy. One of the attendees asked, "So when is the stock market going to recover?" The adviser curtly responded, "I am an economist, Sir, not a psychiatrist."*

What follows is a list of the common investor weaknesses.

Reading Too Much into the Recent Past

Even though there are countless examples of investors "getting on the bandwagon" just as the wagon was about to veer into a ravine, we trick ourselves into believing that, "It's different this time," or, "It's a New Era." Remember that markets move in cycles. Andrew Tobias succinctly and playfully warned, "Beware the permanent trend." (That's an oxymoron. There is no such thing as a permanent trend.)

The problem here is that we are hard-wired to follow the herd. We are social animals. Twenty thousand years ago, when you saw a group of your fellow humans running in a certain direction, you ran that way. The ones who didn't were eaten by the tiger and did not get to pass on their genes. Fast forward to the modern world and this behavior can kill you, financially, that is.

Examples of this are eToys, TheGlobe.com, or CMGI in 1999. Do any of you remember these stocks? How about condo conversions in 2006 or oil in mid-2008 or gold in 2012? Will we add cryptocurrencies, SPACs, and NFTs to this list 5 or 10 years from now? I think so.

Misperceiving Randomness

Even though stock price movements in the short term are random, our brains will trick us into seeing a pattern. We humans are "heuristic." That means we look for patterns, even if we know that there aren't any to be found. For example, in a series of a million random digits, the probability that one digit will be repeated 13 times in a row is essentially 100%. Of course, if you happened across that digit repeated 13 times, you would swear that the series was not random. However, if it did not occur, we would know that the series is not statistically random. Technical Analysts are guilty of this, in our humble opinion. Even when they are told that the data is completely random, they will attempt to interpret the resulting graphs using their Technical Indicators. Again, we will discuss Technical Analysis in our next chapter.

Being Overconfident

We tend to believe we know more than we actually know. Or we believe that we are better than most other investors. The truth is we only see the "tip of the iceberg" with regard to what is happening within a company, an industry, and the economy. And we are usually only average or mediocre investors at best, especially if we decide to become speculators/traders!

This is called the Lake Wobegon Effect, named after the fictional town created by the author and famed storyteller Garrison Keillor. It is our natural human tendency to overestimate our capabilities. If you ask 100 people if they are excellent, good, average, fair, or poor drivers, typically over 80% will say they are excellent or good. This can't be the case because only 50% are better than average. The effect was named after Lake Wobegon because Garrison Keillor always ends his stories about the town with the phrase, "That's the news from Lake Wobegon, where all the women are strong, the men are good looking, and all the children are above average."

Just in case you forgot, remember that when you decide to become a speculator/trader, you are up against the best in the business. Go back to our first chapter and listen to the story of John Meriwether and John Gutfruend from the excellent book, *Liar's Poker*, by Michael Lewis. Read it! (Actually, read anything and everything by Michael Lewis. Trust me. You'll love 'em all! John Williams of the *New York Times Book Review* wrote, "I would read an 800-page history of the stapler if he wrote it.")

Selling Your Winners and Holding onto Your Losers, also known as Loss Aversion

Loss aversion refers to the tendency of people to feel much more pain from experiencing a loss as opposed to experiencing a gain. For this reason, we will often refuse to acknowledge the loss. This is very easy to do with regard to our stock investments. As humans, we hate to admit we made a mistake, so we stubbornly hold onto our losers, hoping that they will at least get back to where we bought them. Then we can sell and tell ourselves we did not lose. The reality is that our memories are hardwired to forget unpleasant experiences. If we sell our losers, we will quickly forget about them. If we hang onto them, each time we review our portfolio, we will always be reminded of our mistakes.

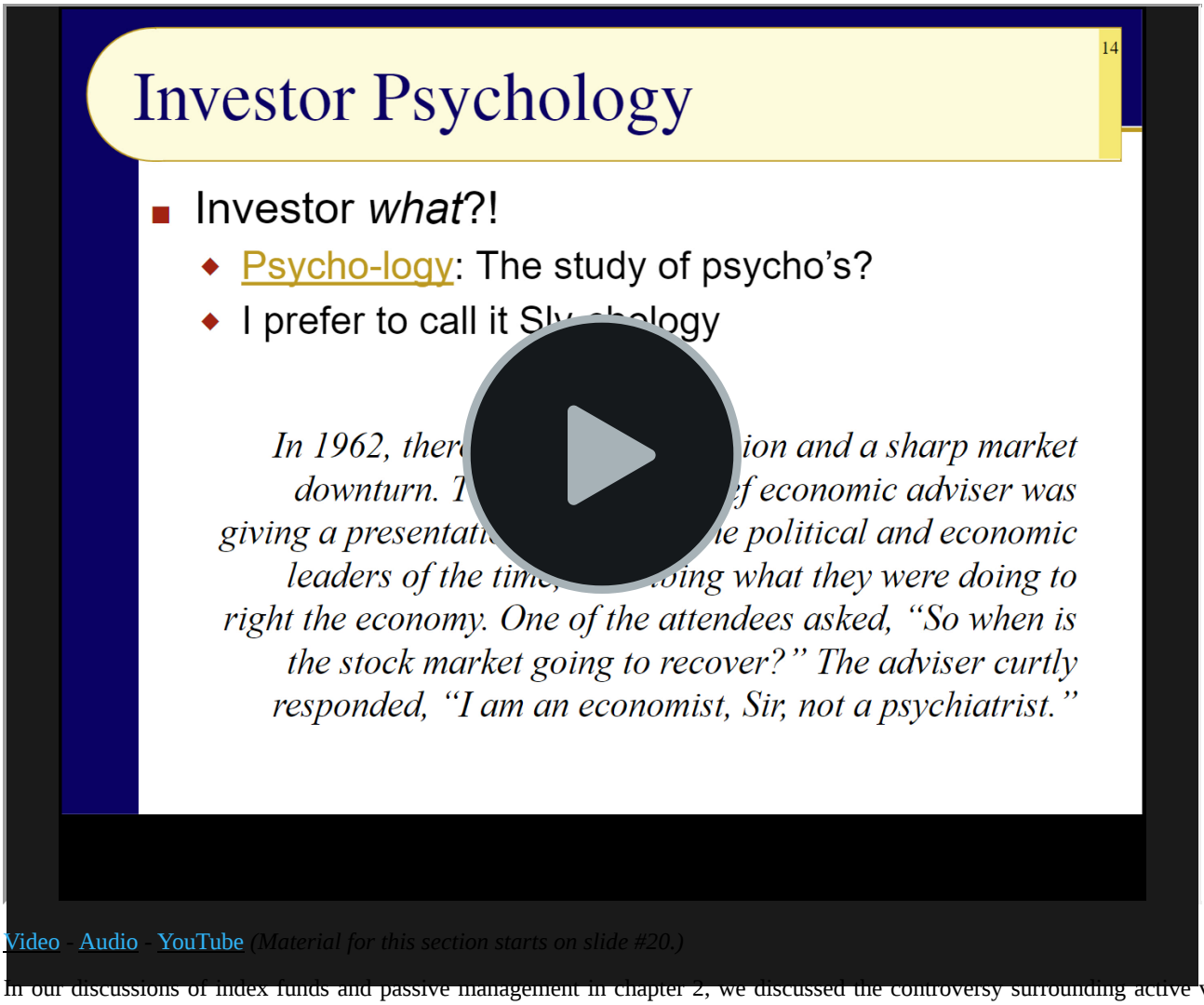
In contrast, we investors tend to sell our winners too quickly. We want to lock in that profit so we can say that we made a good trade and did not lose. However, in contrast, hanging on to the winners is what will make an investor rich. So, hang onto your winners! (Psst. Keep doing the research and reevaluate your choices regularly. Has the story changed? Or maybe you have found a

better investment alternative? If so, it might be time to sell that winner. You can always come back to it later, especially if it experiences a downturn.)

A wonderful example of why you should hold on to your winners comes from Peter Lynch. Mr. Lynch was once asked what his worst investment decision was. He responded, “Well, I bought Home Depot when it was just getting going. My position went up 100% and I sold.” The interviewers were dumbstruck. They asked how that could have been your worst investment decision. In his wry, self-deprecating style, Mr. Lynch deadpanned, “Home Depot’s stock then went up 20-fold.” Hold on to your winners, Dear Investment Gurus!

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6.4: Active versus Passive Management Revisited



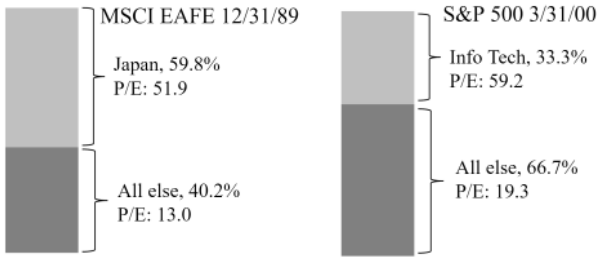
Video - Audio - YouTube *(Material for this section starts on slide #20.)*

In our discussions of index funds and passive management in chapter 2, we discussed the controversy surrounding active versus passive management. Passive management advocates will often make the claim that nobody can beat the market, something we have already seen is simply not true. One aspect of passive management that is not usually discussed is the effect that manias and crashes have on passive management and index funds.

Passive Management, Index Funds, Manias, and Crashes

When a mania occurs, especially if it is concentrated in a particular country or sector of the economy, index funds may become skewed and their holdings lopsided toward that country or sector. This is a serious problem with smaller and more obscure indexes but sometimes it is even a problem with broadly based indexes.

In the graphic below, we see the composition of the MSCI EAFE index as of December 31, 1989, and the composition of the Standard and Poor's 500 Index as of March 31, 2000. Recall that the MSCI EAFE was designed to track the international stock markets outside the United States. (It has been replaced by the wonderfully named MSCI All Country World Index ex-USA. Now there's a name you won't quickly forget, right?)



Source: Capital Group

In the late 1980's, the Japanese stock market and real estate market skyrocketed. What happened is the EAFE became skewed toward Japan, so much so that fully 60% of the value of the index was composed of Japanese stocks. All the other countries and areas, Canada, Western Europe, Australia, Hong Kong, Singapore, etc. made up only 40% of the index. Note the Price-to-Earnings ratios of each. The Japanese stock market had a P/E ratio of 51.9 when all the other markets had a P/E ratio of 13.0. An investor believed they were getting a well-diversified, broadly based index when in reality, almost 60% of their investments were concentrated in Japan with a very high Price-to-Earnings ratio. By August of 1990, the Japanese stock market had fallen in half. From a peak of almost 39,000 in 1989, the market fell to approximately 7,500 at its lowest point in 2008/2009.

The same phenomenon happened to the S&P 500 during the late 1990's. The Information Technology sector, the so-called "New Economy" stocks, soared. It became known as the Internet bubble, also called the Dot-Com Bubble. The NASDAQ Composite index, which is often used to track the technology sector of the economy, went from 800 in 1995 to 5,000 in March of 2000. Subsequently, fully one third of the S&P 500 was composed of the technology sector stocks. Two thirds were everything else in the United States economy, real estate, health care, energy, consumer products, etc. Note the relative P/E ratios. The technology sector had a nosebleed Price-to-Earnings ratio of almost 60. Everything else had a lofty but not outrageous P/E ratio of a bit over 19. What happened next? Although most stock prices suffered over the next two and half years, the prices of stocks in the technology sector collapsed. Many Dot-Com companies evaporated, never to be seen or heard from again. Recall that between March of 2000 and October of 2002, the NASDAQ Composite dropped to approximately 1,100 before starting to recover.

TThis same phenomenon is playing itself out somewhat in recent years. As of February 2025, the valuations of the top ten stocks in the S&P 500 reached unprecedented levels. Our Introduction to Investments class at Southwestern College has a bonus assignment on mutual funds. We ask the students to identify the percentage of the S&P 500 index that is made up of just the top ten stocks. Investors who are putting resources into S&P 500 index funds believe they are getting a broadly based, well-diversified index of stocks. In February of 2025, what they were really getting was approximately 36.6% of just 10 companies. Fifty out of 500 companies made up over 55% of the index. The Russell 1000 Growth Index was even worse. This index is used by many Exchange-Traded Funds. On February 26, 2025, the top ten companies constituted approximately 61.3% of the entire index of over 500 companies in the iShares Russell 1000 Growth ETF! The bear market of 2022 brought these levels down somewhat but they are still elevated. How will it end? We shall see. But we hope the parachutes are very large for investors of these very large growth companies.

The Argument for Active Management

Today in the financial media, passive management is touted as the better alternative to active management. As we saw, index funds do have the advantage of very low-cost investing. (That is, of course, unless your third-party administrator sneaks a high-cost index fund into your 401k. Be wary and review the fees in your 401k plan carefully. Your colleagues will thank you!) But decades ago, Benjamin Graham warned against any investment strategy that relied on deterministic or robotic decision making and removed the element of human judgment. And as we have discussed, there are individuals who have excelled in the investment world. There are investors who have "beaten the market."

> *"As with any human endeavor, whether it is athletic competition, the performing arts or technological innovation, some people clearly perform at a higher-than-average level." – Mark Denning, mutual fund manager with over 35 years of experience*

The trick for us mutual fund investors is to find those individuals who have clearly performed at a higher-than-average level for decades. They are out there. A good start are the six mutual fund families that are listed in the chapter 2 section of the Introduction to Investments class website. But they are not the only ones. As we have mentioned before, you have an entire lifetime of research and discovery ahead of you when you begin the journey of investing.

Remembering that we are not rational beings, one must be careful when pointing out the disadvantages of passive investing. Many investors have convinced themselves that no active managers can beat the market even though there are many who have. If you point out this contradiction to them, be prepared for a vitriolic response. They will accuse you of being a shill for the money managers and companies that have beaten the market. At the very least, they will repeat the Efficient Market theorists' thesis that those managers are just lucky. Right. "And the more I practice, the luckier I get."

The Argument against Active Management

Apart from the cost, there is another very good reason that some investors might prefer passive management and index funds. One never knows when and whether your active money manager might succumb to some of the more foolhardy and ridiculous ...

Anomalies, Silly Theories, and Oddities

Given the financial incentive to discover a surefire way to make untold riches in the stock market, throughout the years, various theories, systems, and traditions have emerged. Most are superstition and downright silliness. There is the Lipstick Indicator that watches the sales of lipstick and other small indulgences to determine whether a recession is on the horizon. The Boston Snow Indicator, often referred to as the B.S. Indicator, posits that a snowy Christmas in Boston will signal a market upswing in the coming year. A particularly sexist and offensive oddity is the Hot Waitress Indicator. Don't bother investigating this one. The Aspirin Count Theory believes that the higher the sales of aspirin, the worse the market is doing, and vice-versa. Hemlines of skirts were also supposed to predict the markets. In the 1920's and 1960's, skirt hemlines went up and so did the stock markets. In the 1930's and 1970's, hemlines went down, and so did the stock markets. You decide what to make of this theory.

However, the most popular and one of the silliest indicators is the Super Bowl Theory which states that the market will do well if a NFL National Conference team wins and will do poorly if an American Conference wins. That this so-called theory gets attention every year at Super Bowl time is a testament to the urgent need of media outlets to create some kind, any kind, of content to fill up the airwaves and Internet. When it was first introduced in 1978, the correlation had been 100%. The Super Bowl Theory had never been wrong. Have these people never heard of coincidences? For example, what would you think if we told you that the per capita consumption of mozzarella cheese correlates with 96% accuracy to the number of Ph.D. awards in Civil Engineering? Or that there is almost 100% correlation between United States spending on science, space, and technology and suicides by hanging, strangulation, and suffocation? Unless you are already a dyed-in-the-wool conspiracy follower, you would conclude that these are mere coincidences. The same is true of the Super Bowl Theory and all the other previous theories.

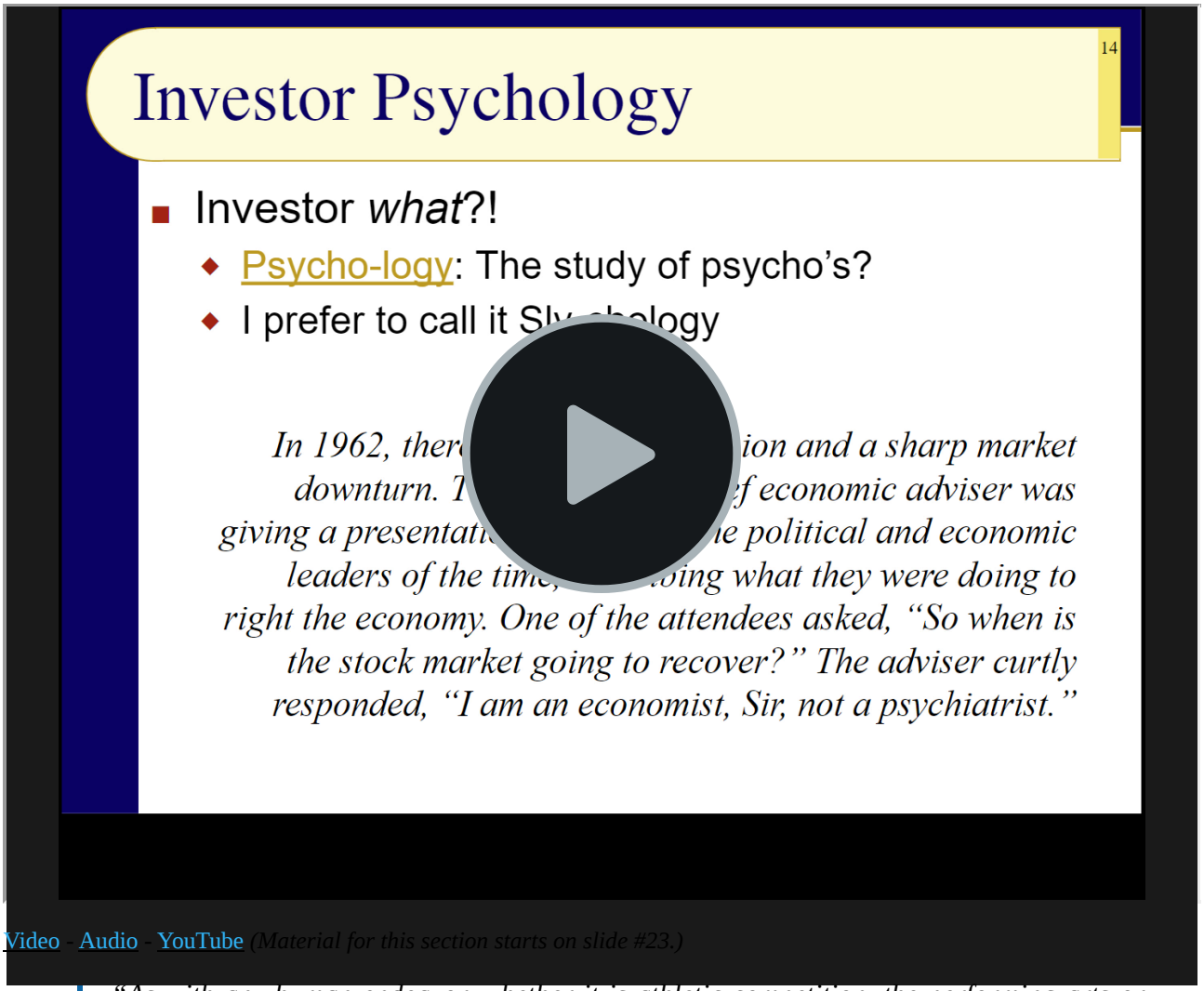
There are also Timing Theories that dictate when and how you should buy and sell. Supposedly, Monday is the best day to buy stocks. Or maybe it is the best day to sell stocks. We don't recall. Some individuals look at January and if January does well, then the year will do well. As we have mentioned, the stock market generally goes up more often than it goes down. So, in truth, we could pick any month of the year and say, "If the stock market goes up in June, it will go up in the next twelve months," and we would be correct more often than we would be wrong. Others expect there to be a Santa Claus rally at Christmas time. Of course, if the market falters in December, they will chalk it up to tax-related selling. There is one piece of advice that starts with empirically proven statistics and that is the adage, "Sell in May and go away." Traditionally, the best months of the year are from November to April. September is the worst month of the year and October is close behind. However, trying to trade in and out of stocks using this information is a fool's errand. The difference in returns over decades is very small. As Jack Bogle would admonish us, this particular contrivance has no business being in the investor's toolkit. For us prudent, long-term oriented investors, a buy-and-hold strategy remains the best course of action. "Chill in May and go on vacation!"

Let's end our discussion of silliness with a place that is synonymous with childishness and absurdity, and that is Washington, D.C. The conventional wisdom is that the markets will perform better with a Republican president in charge and worse with a Democrat in charge. In actuality, the reverse is true. Of course, over the long term, the difference is small. However, the reason for this is more a result of dumb luck than anything else, bad luck on the part of Republican presidents and fortunate luck on the part of Democratic presidents. Hoover, Nixon, and Bush, Junior, were in charge when the markets had some of their worst downturns in

modern history. Kennedy/Johnson, Clinton, and Obama were in the White House when the markets produced some of their best returns. The reality is that both parties are pro-capitalism, no matter how the slogans and advertising might try to paint the other party. Again, for us prudent, long-term investors, it is not something we should concern ourselves with. Focus on buying and holding high-quality companies with solid businesses and leave the political arguments for when your crazy Uncle Lucas comes for Thanksgiving Dinner.

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6.5: All Stars of Investing



Video - Audio - YouTube *(Material for this section starts on slide #23.)*

> *"As with any human endeavor, whether it is athletic competition, the performing arts or technological innovation, some people clearly perform at a higher-than-average level." – Mark Denning, mutual fund manager with over 35 years experience*

As Mr. Denning makes clear, some people perform at a higher-than-average level, over statistically significant periods of time. As students of investing, it pays for us to study those individuals and learn from them. The good news is that we don't have to win as big as they did. We just have to win.

Peter Lynch

Peter Lynch was the mutual fund manager of the Fidelity Magellan Fund from 1977 to 1990. In that time, he racked up a 29% per year average annual return. His book, *One Up On Wall Street*, is an excellent introduction to the concepts and practice of stock investing. It is one of the two books that we recommend as your first book to read. (The other is *A Random Walk Down Street*, discussed earlier.) He also wrote two other books that are likewise good reads, *Beating the Street*, and *Learn to Earn: A Beginner's Guide to the Basics of Investing and Business*. However, *One Up On Wall Street* is his most popular and powerful offering. Read it!

Mr. Lynch champions the idea that you should invest in businesses that you know and understand. The idea is encapsulated in the phrase, "Buy what you know." Critics accused Mr. Lynch of trivializing the practice of investing by saying people should buy the stocks of companies that they know and understand without doing more research. This is a wrong-headed criticism. Mr. Lynch

never said anything of the sort. He used the idea as just a starting point. Of course, he wanted investors to then do the proper research and investigation. Obviously, those critics had never read his book.

Warren Buffett

In this day and age, Warren Buffett needs no introduction. He is idolized and quoted and looked up to by countless investors. The annual shareholders' meeting of his company, Berkshire Hathaway, is often called the Woodstock for Capitalists. He is the consummate Fundamental Analysis investor, putting emphasis on the value of the entire company. His adage is, "Don't buy a stock. Buy a company." In other words, you are researching a company and you find that you like the business and its prospects. If you had the tens or hundreds of billions of dollars it would take to buy the company outright and you would do it, then go ahead and buy 10 shares. Mr. Buffett's resources are such that he indeed is prone to buy the whole company!

Benjamin Graham

Benjamin Graham was Warren Buffett's teacher and mentor. Mr. Graham is called the Father of Value Investing. He wrote what is typically referred to as the best book ever written about investing, *The Intelligent Investor*. Eventually, you must read *The Intelligent Investor*. However, we strongly recommend against reading it as your first book on investing. Mr. Graham's prose is at times difficult to penetrate and at other times, it is overly flowery. For this reason, all new editions of *The Intelligent Investor* have a commentary after every chapter. The commentaries are written by Jason Zweig, an excellent investment writer in his own right. Mr. Zweig will bring the material back to Earth and let you know, "Okay, here is what Old Ben was trying to say."

John Templeton

Sir John Templeton was also a student of Benjamin Graham. He was Knighted in 1987 for his philanthropic efforts. Becoming a Knight is no small feat for a kid from a small town in Tennessee! Sir John was one of the first investors to venture out of the comfortable confines of the United States and invest abroad. Indeed, the Templeton Growth Fund was one of only three global mutual funds on our chapter 2 list of mutual funds with over 50 years of experience that had a 10% or better average annual return. Sir John was also very much involved in philanthropic and spiritual matters and his spirit lives on in the Templeton Foundation.

Bill Miller

Bill Miller was the money manager for the Legg Mason Value Trust, now called the Clearbridge Value Trust. His is a cautionary tale of what the investment industry can do to a person. At the helm of the Legg Mason Value Trust, Mr. Miller was able to beat the S&P 500 index for an unprecedented 15 years in a row. Correspondingly, Mr. Miller became yet another investment celebrity, the media hanging on his every word. Mr. Miller was not particularly happy about his situation, publicly noting that the streak was an accident of the calendar. He noted that if the year had ended in any other month, there would not have been a streak. Mr. Miller is known for his saying, "any stock can be a value stock if it trades at a discount to its intrinsic value."

So why is this a cautionary tale? After his 15-year streak that ended in 2006, the returns of the Legg Mason Value Trust began to badly underperform the market, especially in 2007 and 2008. Although he did well in 2009, he again badly lagged the market in 2010 and 2011. In 2012, he retired from Legg Mason. It's a tough business. As Louis Rukeyser, the host of *Wall Street Week with Louis Rukeyser* for over 30 years, was fond of saying, "So what have you done for me lately?"

What do all these people have in common? They had the courage to not follow the crowd because the "conventional wisdom" is usually not very wise. However, most importantly, they had an eye for unrecognized value, similar to a "sixth sense." This gave them the ability to sniff out value that others missed. In the world of chess at one time, Garry Kasparov and Anatoly Karpov were the two best players in the world. Mr. Kasparov was once asked why this was so. Why were he and Anatoly Karpov the two best chess players in the world? His answer was astonishingly simple and direct. "We attack better than anybody else and we defend better than anybody else." These All Stars of Investing bought the best companies and they avoided the worst companies.

Charles Steadman (???)

Speaking of avoidance, as a mutual fund investor, Your Humble Author is not looking to find the next Peter Lynch or Bill Miller or Warren Buffet. Instead, I am looking to avoid the next Charles Steadman. Who was Charles Steadman, you ask? He was often referred to as the Rembrandt of Red Ink. Charles Steadman ran his own mutual fund, the Steadman American Industry Fund, from

December 1959 until his death in late 1997. During one of the greatest expansions of the global economy in human history, he had a negative return over almost 40 years! His cumulative total return was -42.9%. He would have done much better simply placing his investors' funds into a savings account at a bank. He would have done better putting it in a mattress! Why did the investors in his funds stay with such horrible investments? The simple answer is most of them were dead.

Let's highlight some useful advice from our All Stars.

> *"Be fearful when others are greedy. Be greedy when others are fearful." – Warren Buffett*

Mr. Buffett is paraphrasing his mentor, Mr. Benjamin Graham, who said, "Buy when most people including experts are overly pessimistic, and sell when they are actively optimistic."

> *"Bear markets are born of pessimism, grow on skepticism, mature on optimism and die on euphoria. The time of maximum pessimism is the best time to buy." – Sir John Templeton*

On a similar note, Sir John also famously said, "To buy when others are despondently selling and sell when others are avidly buying requires the greatest fortitude and pays the greatest reward." Did Sir John take his own advice? Oh, yes, he did!

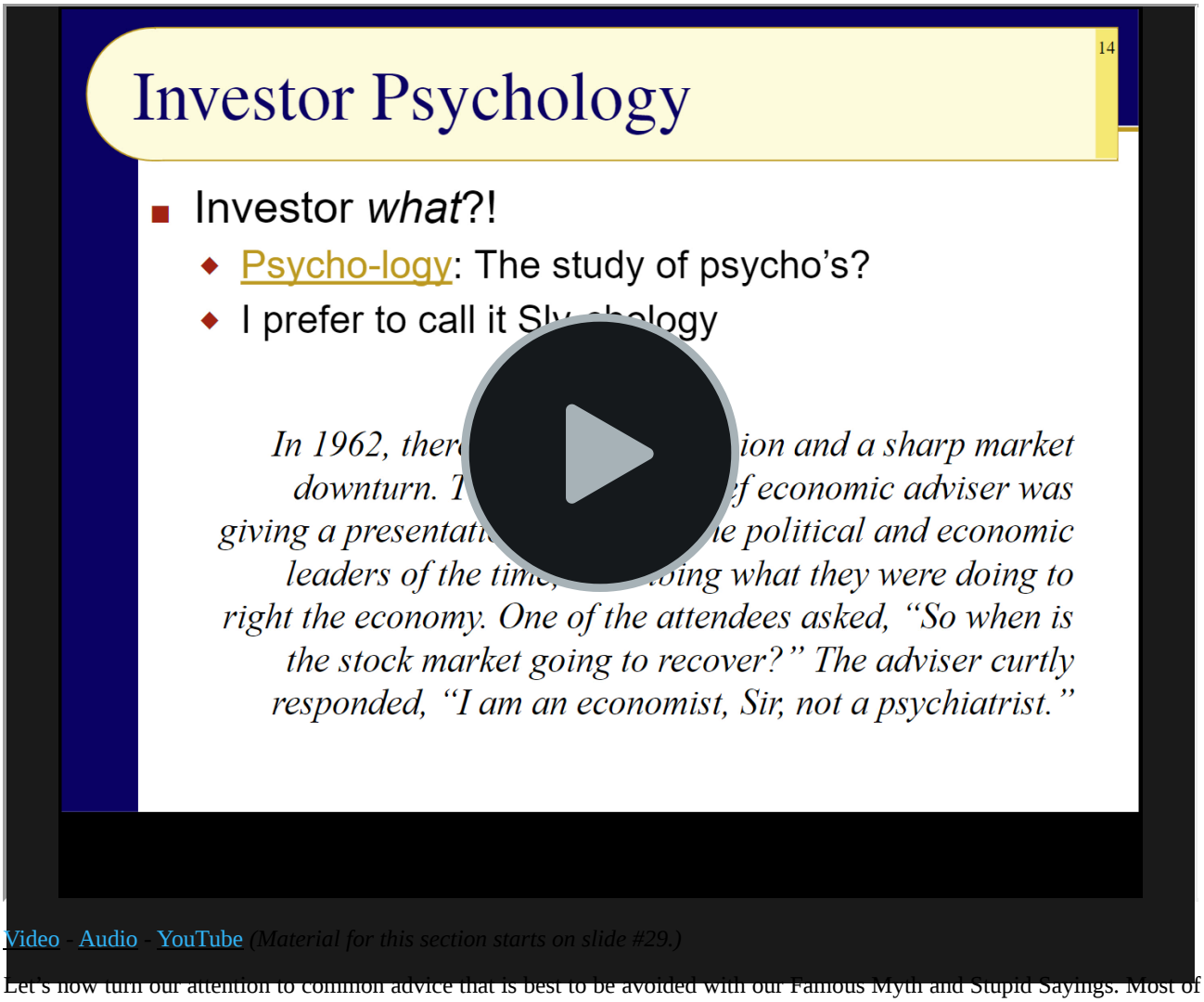
> *"When World War II began in Europe in 1939, he borrowed money to buy 100 shares each in 104 companies selling at one dollar per share or less, including 34 companies that were in bankruptcy. Only four turned out to be worthless. He turned large profits on the others." – Templeton Foundation*

The time of maximum pessimism is indeed the best time to buy. Our last quote is attributed to Nathan Rothschild, a 19th-century British financier and member of the Rothschild banking family. "The time to buy is when there is blood in the streets." Now that is contrarian investing!

If these stories about professionals in the industry pique your interest, consider reading *Wall Street People* by Charles "Charley" Ellis with James Vertin. Although this book is a bit outdated, it contains a treasure trove of stories about the men and women that populate the investment world. (It's mostly men but we are changing the world. Isn't that so, Ladies?) Some are heroes, some are villains, some are just regular folks trying to do the best they can in a high stress world, all are interesting. In addition, please note that anything that "Charley" writes is worth reading. Mr. Ellis is also noted for coining the term "The Loser's Game" for short-term speculation and trading of securities.

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6.6: Famous Myths and Stupid Sayings



Video - Audio - YouTube *(Material for this section starts on slide #29.)*

Let's now turn our attention to common advice that is best to be avoided with our Famous Myth and Stupid Sayings. Most of these are paraphrased from *One Up On Wall Street* by Mr. Peter Lynch. "*It can't go any lower.*" Oh, yes, it can! Until the stock price hits zero, it can and usually does go lower. Once the stock price hits zero, then it can't go any lower. "*It can't go any higher.*" Oh, yes, it can! There is no limit to how high a stock price can go. If the earnings are growing, if the story has not changed, if the business prospects look bright, the stock price can continue to rise. "*It's only $2 per share. What can I lose?*" Everything! The stock price can go to zero and you will have lost your entire investment. In these three sayings, the person giving the advice has focused on the price. The price is irrelevant. What is the value?

"*It has to come back.*" Oh, no, it doesn't! Companies can and do go bankrupt and become part of history. Have you ever heard of Penn Central, the nation's largest railroad company that had been in business for over 100 years when it became the country's largest bankruptcy up to that date? How about Trans World Airlines or Kodak? "*It's always darkest before the dawn.*" Oh, yeah? Sometimes it's always darkest before it's pitch black.

"*When it rebounds to $10, I will sell.*" This is an example of the loss aversion tendency that we humans exhibit. The stock has no idea you bought it at $10. If you would not buy it now at this price, accept that you made a mistake, sell it now, and take the loss. Remember, you will quickly forget about this unpleasant experience. If you hold onto the stock, every time you review your portfolio, you will be reminded of your blunder. Another example of loss aversion is the adage, "*If it goes down 10%, sell.*" Yes, the advice is trying to help you avoid large losses. However, the problem is that stock prices fluctuate greatly, even blue chips. If you sold each stock that lost 10%, you would almost always sell your winners along with your losers. Research and investigation are the keys to determine when to sell, not volatility.

"*It is taking too long.*" Patience is the prudent, long-term investor's most important trait. Besides, it gives you a chance to buy more! Remember that investing is a marathon, not a sprint.

"*Look at all the money I've lost! I didn't buy it!*" You did not lose a cent by not buying a stock that did well. Do not fret over it. Do your research and investigation and determine if it is still a good value now for the long term. "*I missed that one, I will catch the next one.*" The problem with this strategy is that "next one" rarely makes it. An exception to this rule happened in the big box do-it-yourself sector where Lowe's was able to carve out a substantial niche for themselves after Home Depot had pioneered the business strategy.

"*The stock has gone up, I must be a genius.*" There is an old saying in the investment community: "Never mistake a bull market for brains." If you talk to seasoned investment professionals, they will tell you that the time they started their career affected their career greatly. The folks who started just before a major bull run will tell you that it was actually a curse, not a blessing. They began to feel invincible … until the next bear market. The individuals who started in a difficult market quickly learned humility and will tell you that it was a blessing for them.

"*The stock has gone down, I must be an idiot.*" This is the previous saying in reverse. You are no more an idiot than the individual whose stock has gone up is a genius. You are going to make some mistakes. Redouble your research efforts and if you would not buy this stock at this price now, sell the loser.

"*It's different this time.*" As discussed above, this saying and the next two are three of the most dangerous phrases you will ever hear as investors. Yes, technically, it is different every time. But that does not mean you should pay an astronomical price for a company that probably will never make a dollar of profit such as the Internet stocks of the late 1990's and the marijuana stocks or cryptocurrencies of today. "*It's a new era. The old ways of valuing stocks are gone.*" Ditto. When you hear this, it is time to sell. "*It's a permanent trend.*" What? There ain't no such thing! "Permanent trend" is an example of an oxymoron, heavy on the moron.

And finally, you will hear friends and family members and colleagues say, "*Stocks are too risky.*" It is perfectly normal for individuals to fear stocks and stock investing. Here is where you come into the picture, Dear Investment Gurus. You will speak with authority and confidence. You will assure them that even with all the shenanigans, silliness, and stupidity, investments in businesses through stocks or stock mutual funds are still the best financial alternatives for patient, prudent long-term oriented investors. Of course, pointing them to BUS-123, Introduction to Investments, is yet another way to help them learn the good news. Thank you for your referrals. They are greatly appreciated!

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6.S: Summary

Congratulations – You Have Finished Chapter 6 – Efficient Market Theory: *"Who Can Beat the Market?"*

You have reached the end of chapter 6, Efficient Market Theory: *"Who Can Beat the Market?"*. In this chapter, you have:

- Been introduced to the concepts and theories of market efficiency
- Discussed the difficulties involved in "beating the market"
- Examined market manias, also known as bubbles, and market crashes, also known as panics, and the behaviors and the common weaknesses that typical investors exhibit
- Reexamined the advantages and disadvantages active management and passive management, also known as index investing
- Reviewed famous and infamous investors and their characteristics
- Been introduced to some famous myths and stupid sayings

You should now be able to:

1. Identify the three main efficient market hypotheses and the random walk hypothesis
2. Describe the characteristics of market manias, also known as bubbles, and market crashes, also known as panics, and the behaviors of and common weaknesses that typical investors exhibit
3. Describe the characteristics of intelligent, prudent, long-term oriented investors during manias and crashes
4. Compare and contrast passive management investing, also known as index investing, versus active management investing
5. Discuss some of the more famous investors and their characteristics
6. Relate various famous market myths and stupid market sayings

Get Ready for Some Real Silliness

In chapters 4 and 5, we examined Fundamental Analysis. Fundamental Analysis is not easy but it is the best method for identifying potential prudent, successful, long-term oriented stock investments, in our humble opinion. In this chapter, we examined the Efficient Market Theories and some remotely rational and some downright silly strategies. For our last chapter on stocks, we are going to examine the third major form of analysis, Technical Analysis. Get ready for some real silliness!

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CHAPTER OVERVIEW

Chapter 7: Technical Analysis: Reading Squiggles on a Computer Screen

> *"The fundamental analyst says, "You are buying companies, not stocks." The technical analyst says, "You are buying stocks, not companies." – The Theory of Investment Value, John Burr Williams*
>
> *"The biggest mistake a fundamental analyst makes is thinking that a stock and a company are the same thing. The biggest mistake a technical analyst makes is thinking that a stock and a company are different." – Phil Roth, Technical Analyst*

Learning Objectives

In this chapter, you will

- Be introduced to the theories and practices of Technical Analysis
- Research the requirements of the Securities Industry Essential (SIE) exam and the Series 7 General Securities Representative Exam, also known as the Stockbroker Exam

By the end of this chapter, you should be able to

- Research and utilize simple theories and practices of Technical Analysis in a controlled setting without placing much credence into their usage
- Relate the requirements for taking and passing the Securities Industry Essential (SIE) exam and the Series 7 General Securities Representative Exam, commonly known as the Stockbroker Exam

And Now for Something Completely Different!

Your Humble Instructor is a big fan of Monty Python's Flying Circus and all things silly. In the previous chapter, we saw how the Efficient Market Theorists were engaging in some silliness when they wrongly claimed that no one can beat the market. In this chapter, we reach the pinnacle of silliness! In our humble opinion, choosing stock investments using Technical Analysis is right up there with scanning tea leaves, palm reading, interpreting chicken entrails, and practicing voodoo. However, an attractive aspect of Technical Analysis is that anyone can practice Technical Analysis without really knowing what they are doing because no one else really knows what they are doing either. That means that you, too, can become a Technical Analyst without knowing what you are doing! Our students can get 10 extra bonus points in the chapter 7 bonus assignment just by acting as if they know what they are doing even though they really don't. But don't worry! I don't know what I am doing either when it comes to Technical Analysis so as long as they act as if they know what they are doing, they will get full credit. It is a no-lose situation!

Presentation file - Study guide

7.1: Technical Analysis

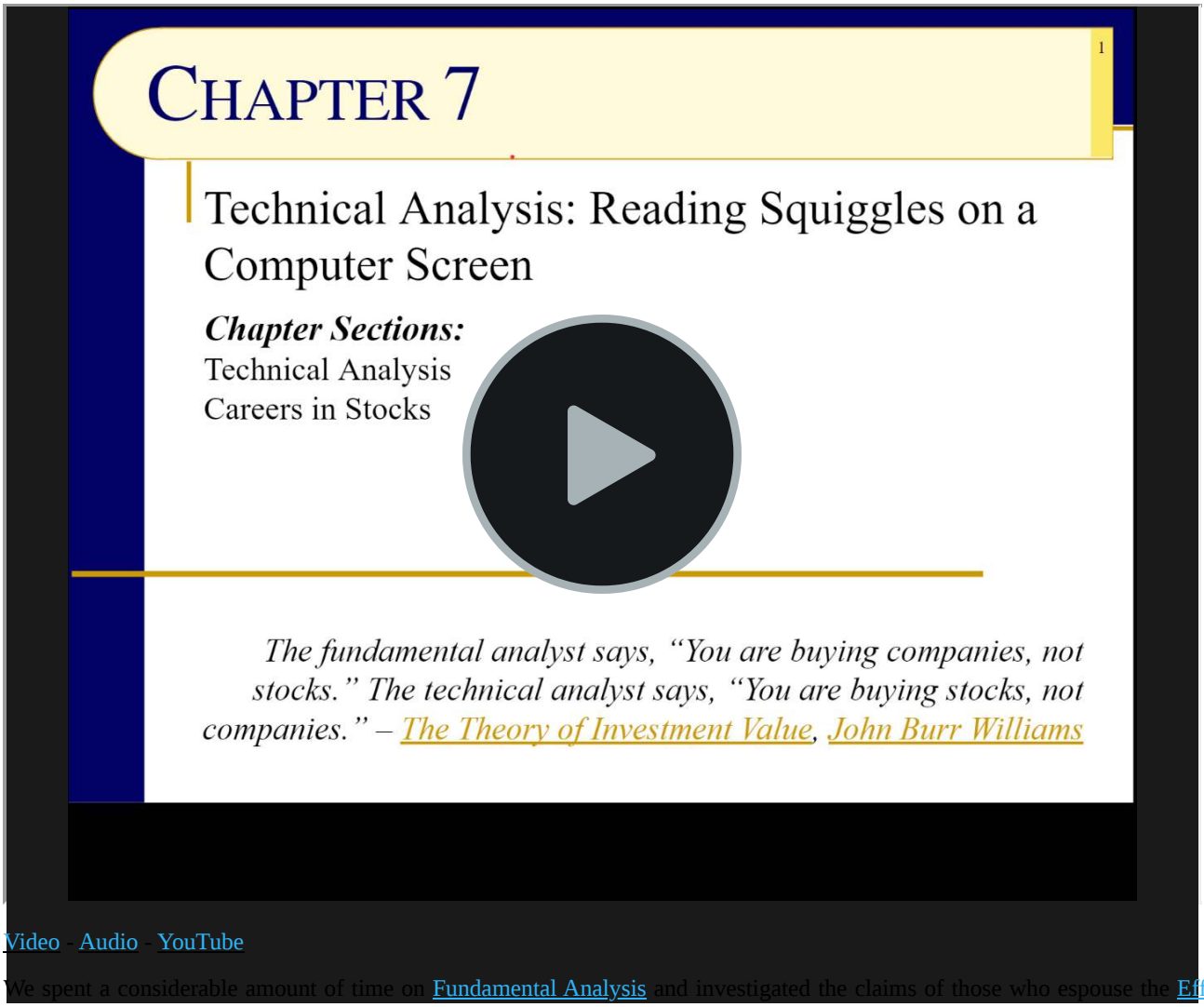
7.2: A Career in Stocks

7.S: Summary

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7.1: Technical Analysis



Video - Audio - YouTube

We spent a considerable amount of time on Fundamental Analysis and investigated the claims of those who espouse the Efficient Market Theory. We will now explore Technical Analysis, the last major investment analysis strategy. The reality is that Your Humble Author is the last person who should be introducing you to Technical Analysis. As this textbook grows and evolves, we hope to find someone who will take this topic more seriously. Your Humble Author has a very difficult time keeping a straight face while discussing the techniques and concepts of Technical Analysis. For a more detailed and thorough excoriation of Technical Analysis, we once again refer you to the excellent book by Professor Burton Malkiel, *A Random Walk Down Wall Street*. Read it!

In the meantime, please accept our humble introduction to the concept, techniques, and skills of Technical Analysis. We promise that we will do our best not to break into a Monty Python skit about dead parrots, cross-dressing lumberjacks, or Vikings extolling the joys of breakfast Spam.

Technical Analysis versus Fundamental Analysis

Recall that Fundamental Analysis concentrated on the company. Fundamental Analysts study the financial condition and operating results of the business. The goal is to determine the intrinsic value of the company. What is the company worth? Fundamental Analysts study everything about the overall economy and industry conditions and everything about the individual company including the management, their competitive position, its composition and growth in sales, earnings, and dividends, their profit margins and the dynamics of company earnings, their customers, their vendors, the composition and liquidity of corporate resources, what assets are available, the company's capital structure, how much debt, how much equity, etc., etc., etc. Simply put, the value of a stock is influenced by the performance of the company that issued the stock. The valuation models from chapter 4

and the ratio analysis from chapter 5 are examples of just some of the many available tools and techniques of Fundamental Analysis. But there are many investors who don't utilize Fundamental Analysis.

Technical Analysis is the study of the various forces at work in the marketplace and their effect on stock prices. Those who adhere to Technical Analysis believe that they can predict the future price of a stock or the stock market by analyzing the behavior of the stock price's history or the overall stock market. Technical Analysts pour over charts and attempt to interpret any one or many of dozens of so-called "Technical Indicators." Simply put, the future price of a stock is influenced by factors other than the company's fundamental future outlook.

The Argument for Technical Analysis

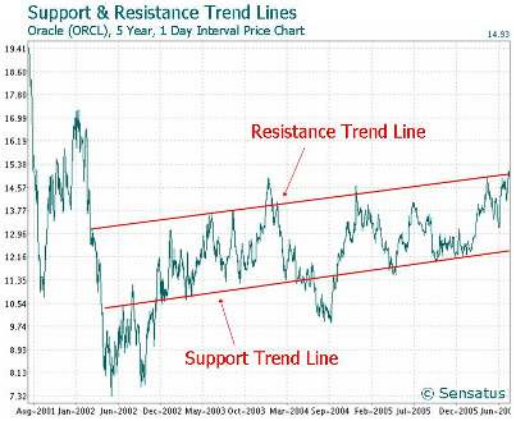
Advocates of Technical Analysis note that stock prices do tend to move in tandem to the stock market as a whole. Hence, they believe that the overall behavior of stock prices will affect an individual stock's price. When the market is rising, most stocks rise with it. There is an old Wall Street saying: "A rising tide lifts all boats." Likewise, when the market is falling, most stocks are brought down with it. The rebuttal to this argument is that this is just the foundational economic concepts of supply and demand at work. When stocks are in favor, prices rise. When stocks become out of favor, prices fall. Returning to the research of the Efficient Market Theorists, we reiterate that there has never been a reliable methodology for predicting the short-term behavior of the stock market. Of course, there have been plenty of unreliable methods.

For an example of one of the most infamous examples of methodologies that was at first believed to predict prices in the short-term, only to ultimately fail miserably and almost bring down the entire financial system, we refer you to the story of Long-Term Capital Management. Roger Lowenstein chronicles the story in his book, *When Genius Failed: The Rise and Fall of Long-Term Capital Management*. The PBS series, Nova, also related the story in their documentary, *The Trillion Dollar Bet*. The story of Long-Term Capital Management reads like a prequel to the Global Financial Crisis of 2008. The technology changes, human nature, not so much.

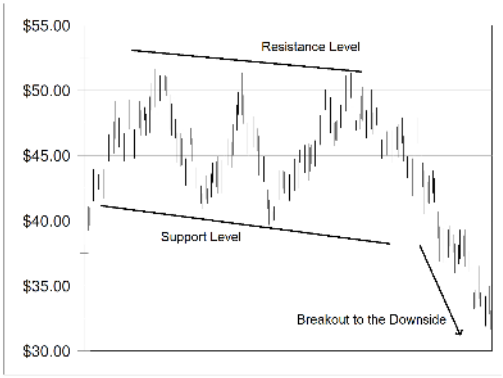
Market Price Indicators

Technical Analysts often rely on recent stock market movements and individual stock price changes for making decisions. One technique they utilize is momentum trading. "The trend is your friend," is a favorite saying. This works great as long as the trend is trending your way. When the trend turns, you had better be quick enough to change directions with it. However, as we have discussed, we retail investors are hopelessly outmatched against the high-frequency-trading (HFT) firms. Momentum trading is one of those techniques that Charles Ellis labeled, "The Loser's Game" way back in the 1970's. Momentum trading for us retail investors has only become much more difficult since then. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, we wish the Technical Analysts much luck in their usage of momentum trading. They will need it.

Two popular market price indicators are the support level and resistance level. The support level is a chosen price or level below which a stock or the market as a whole is unlikely to fall. Likewise, the resistance level is a chosen price or level above which a stock or the market as a whole is unlikely to rise. That is, of course, until the market price does rise above or fall below the chosen level. When that inevitably happens, it is called a breakout. Below are examples of the charting of support and resistance levels. A Technical Analyst must become proficient in choosing the correct support and resistance levels and then determining when the breakout will occur and whether the price will breakout to the downside below the support level or breakout to the upside above the resistance level. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, we wish the Technical Analysts much luck in their usage of support, resistance, and breakout trading. They will need it.

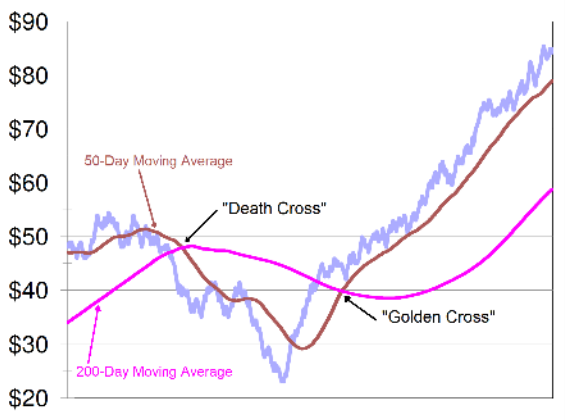


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Technical Analysts also watch for psychological barriers for stock market levels and stock prices. Examples are the Dow Jones Industrial Average closing in on the 40,000 level or the Standard and Poor's 500 close to the 5,000 level or a stock price that is close to $100. Supposedly, these psychological barriers act as resistance levels until the inevitable breakout to the upside. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, we wish the Technical Analysts much luck in their usage of psychological barrier trading. They will need it.

Our last price indicator is the very popular moving average. A simple moving average is the average of a stock price or stock market index level, calculated using a fixed number of previous days' prices or levels. The 15-day, 50-day, and 200-day moving averages are typically employed, although many other moving averages are used. For example, to calculate the 15-day moving average, we calculate the average price for the last 15 days. The next day, we do the same calculation but now for the previous 15 days. We continue to do so going on into the future. Technical Analysts will then compare the 15-day moving average with the 50-day moving average or the 50-day with the 200-day. When the shorter moving average crosses the longer moving average, that is called a crossover. Crossovers are often considered trading signals, events that warrant the Technical Analyst that there is a strong reason to make a trade. In fact, two such crossovers have special names. When the shorter moving average crosses above the longer moving average, that is called a golden cross and is considered a bullish sign and a signal the price will rise. When the shorter moving average crosses below the longer moving average, that is called a death cross and is considered a bearish sign and a signal the price will fall. Please see the figure below for examples of the golden cross and death cross. The moving average is so popular that there are several variations of it used. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, we wish the Technical Analysts much luck in their usage of moving averages. They will need it.



We have looked at just a few technical indicators. There are dozens and dozens of others. If you find any that actually do accurately and consistently predict the future price of stocks, please be sure to let us know. Good luck, by the way.

The Dow Theory

The Dow Theory has been around a very long time. It was originally proposed by none other than Charles Dow, one of the co-founders of the Dow Jones Industrial Average and the Wall Street Journal. Sadly, Mr. Dow passed away before he published the full theory. Since then, others have expounded upon the theory without the benefit of Mr. Dow's insight. To the best of our understanding, the theory states that if the market does not go up or down, it will go sideways. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, we wish the Technical Analysts much luck in their usage of The Dow Theory to assist in short-term trading. They will need it.

Relative Strength, Market Volume and Breadth, and the Tick

Relative strength, market volume, market breadth, and the tick are additional technical indicators used to assist Technical Analysts in their pursuit of riches beyond their wildest dreams. If you really want to know more about them, just follow the links. Since it has already been statistically demonstrated that stock prices in the short term are randomly distributed, … oh, wait. You have read this all before, yes? Our apologies. It is difficult for us to treat this hogwash seriously. Research high-quality companies, buy and hold them for the long term, and ignore anyone trying to get you to utilize Technical Analysis as a short-term trading technique.

Short Interest

Now here is an indicator that can actually be a useful tool to long-term investors. Short interest is the number of shares of stock that are sold short in the market at any given time. We will cover the details of short selling in more detail at the end of our journey together. In brief, short sellers want the price of a stock to go down. The more shares of a stock are sold short, the more investors believe the stock price will fall. For some reason, short investors are somehow considered more "sophisticated" and are therefore supposed to know when the market will fall. However, when large numbers of investors sell short, eventually they must buy the shares back. This creates a pent-up demand for stocks. A large amount of short interest is like a compressed spring. Eventually, there will be a "short squeeze" and the price will rise. For long-term investors, a large amount of short interest can then become a contrarian indicator. If long-term investors see that a large amount of short interest has driven down the price of a desirable company, they can use this situation to buy shares for the long term.

Your Humble Author was living through his first bear market as a market professional in 2000 through 2002. In August of 2002, the Standard and Poor's 500 index was on its way to falling almost 50% since March of 2000. It was reported that the number of shares sold short on the New York Stock Exchange was the highest it had ever been in the history of the market. That gave Your Humble Author great comfort as I was absolutely sure we were coming to the end. The market bottomed in October of 2002. That is when you started to hear people – including other market professionals – say, "Ooo, ooo, ooo. Is it too late to get out?" History may not repeat itself perfectly, but it rhymes!

Contrarian Opinion

Another indicator that may be of use to prudent, long-term investors is Contrarian Opinion. Contrarian Opinion is the theory that if people are very optimistic, that is a predictor of falling prices for the market, and if people are very pessimistic, that is a predictor of rising prices. Therefore, we all should be as bearish as possible and that will make the market rise, right? We covered the Contrarian Strategy already in Investment Strategies. The idea is to buy when others are selling, sell when others are buying. The problem is the market historically has gone up three times more often than it goes down.

There is a journalist who has made it his life's mission to track the consensus sentiment of the multitude of published stock market advisory newsletters. Mark Hulbert publishes the Hulbert Stock Newsletter Sentiment Index. When in the aggregate the newsletters are all extremely bullish, that has been a fairly accurate indicator that the stock market returns for the next several years will be poor. Likewise, when the newsletters are predicting gloom and doom, the actual returns over the next several years are often favorable. As with any indicator, it is not perfect. Mr. Hulbert himself also recommends that prudent investors take a long-term perspective and simply identify high quality companies and hold them for the long term.

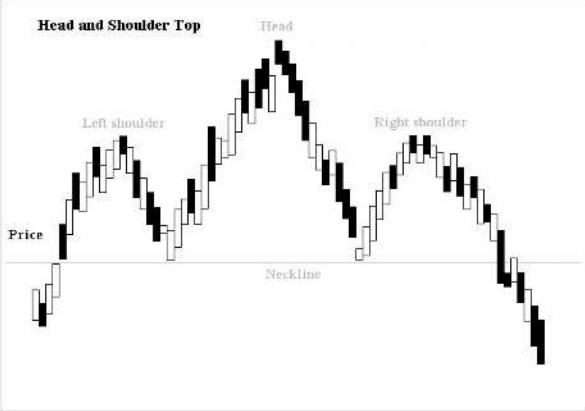
Odd-lot Trading

A dubious technical indicator is the odd-lot trading indicator. The theory is based on the idea that small investors tend to buy and sell in odd lots. Recall that an odd lot is less than 100 shares. The saying is, "The best thing to do is the opposite of what small investors are doing." If old-lot trading rises, it supposedly means that more and more small investors are entering the market. Small investors are supposedly notorious for getting into the market at the top of a bull market. Not only is the research and data behind this theory very suspect, technology has made odd-lot trading commonplace.

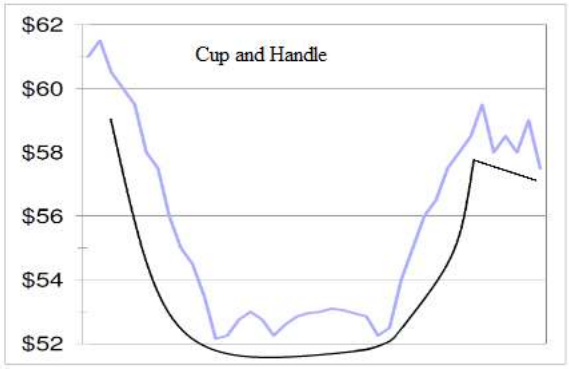
Charting Examples

Finally, the most celebrated weapon in the Technical Analyst's arsenal is charting. Charting is the activity of using price behavior and other market information to create charts and then superimposing patterns the charts form to make investment decisions. The moving averages and the resistance and support levels that we discussed above are examples of popular charts. Also popular are open-hi-lo-close (OHLC) charts and candlestick charts. Both are types of bar charts that use each day's price information. For a short-term trader, if the closing price is higher than the opening price, that is supposedly a bullish candlestick. Likewise, if the closing price is lower than the opening price, that is supposedly a bearish candlestick. Since it has already been statistically demonstrated that stock prices in the short term … oh, no! We won't start that again! We will leave it up to you, Dear Reader, to determine the value of these and the chart patterns that follow.

The most famous chart pattern is the head and shoulders chart. When Your Humble Author took the Series 7 Stockbroker Exam in 1998 (discussed in our next section), the only question about Technical Analysis dealt with the head and shoulders chart. The question simply asked if one was aware of this famous pattern. The head and shoulders chart is supposedly a bad sign. Don't bother asking anyone why this is so because it is just so obvious why it is a bad sign, right? (Sarcasm included at no cost.) Other popular chart patterns are triangles and wedges, flags and pennants, and cups and handles. The reader is left to decide whether to spend any valuable time researching and possibly using any of these tools for trading their way to untold riches and fame.



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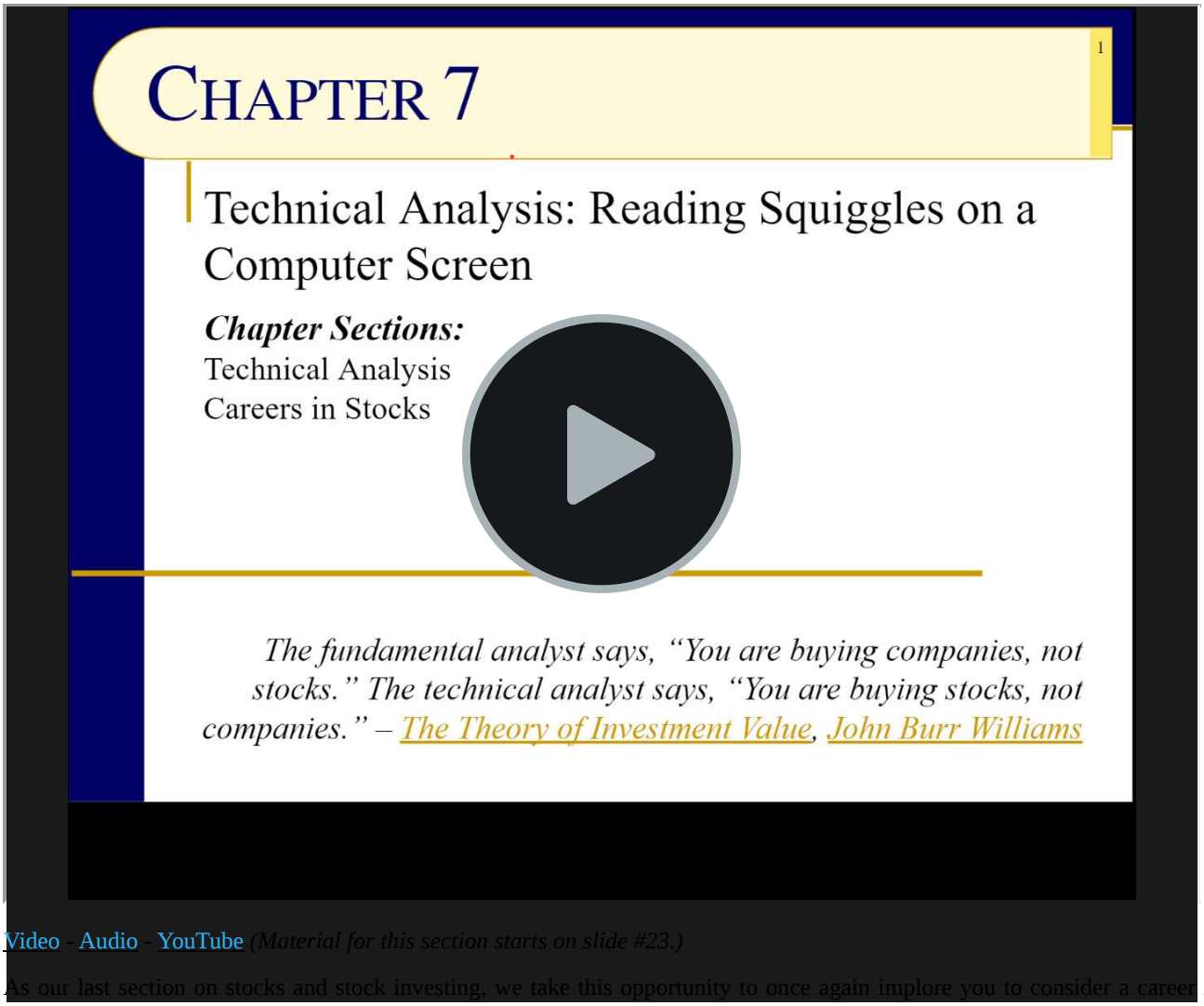
For the final word on Technical Analysis, we will quote from a real live Technical Analyst who was asked what his short-term prediction for the stock market was.

> *"The market's rise after a period of reaccumulation is a bullish sign. Nevertheless, fulcrum characteristics are not yet clearly present and a resistance area exists 40 points higher in the Dow, so it is clearly premature to say the next leg of the bull market is up. If, in the coming weeks, a test of the lows holds and the market breaks out of its flag, a further rise would be indicated. Should the lows be violated, a continuation of the intermediate term downward trend is called for. In view of the current situation, it is a distinct possibility that traders will sit in the wings awaiting a clearer delineation of the trend and the market will move in a narrow trading range."* – *A Random Walk Down Wall Street*

Ah, I think it means, if the market does not go up or down, it will remain unchanged. So, really, Folks, if you want to make a ton of money on Wall Street as a Technical Analyst, all you have to do is learn how to convince people you know what you are doing even though you don't. Could a $500,000 per year – plus bonuses! – job be in your future? Think about it! (Oh, by the way, if you do become a Technical Analyst, we wish you much good luck! You will need it.)

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7.2: A Career in Stocks



Video - Audio - YouTube *(Material for this section starts on slide #23.)*

As our last section on stocks and stock investing, we take this opportunity to once again implore you to consider a career in the investment industry. The industry needs you! There are thousands of professionals who are close to retirement. The industry knows this and they also know that they need diversity. We need more women, minorities, and bilingual speakers. Veterans are especially welcome since the investment industry is highly regulated and structured and who better to recruit than those who have lived and thrived in the highly regulated and structured world of the military. Over the decades of the 1980's, 1990's, and into the 2000's, finding and nurturing new investment professionals became difficult. For that reason, the industry, led by the Financial Industry Regulatory Authority (FINRA), introduced a new entry-level exam to facilitate an easier way to break into the business, the Securities Industry Essential (SIE) Exam.

The Securities Industry Essentials (SIE) Exam versus the Series 7 General Securities Representative Exam

In 2018, FINRA rolled out the Securities Industry Essentials Exam, also known as the SIE Exam. The aim was to create a new entry-level exam that could be taken by anyone interested in a career in the investment industry. Before the SIE Exam, the previous entry-level exam was the Series 7 General Securities Representative Exam, also known as the Series 7 Registered Representative Exam, Series 7 Stockbroker Exam, or simply the Series 7 Exam. However, before someone could sit for the Series 7 Exam, they were required to be sponsored by a brokerage firm. Brokerage firms became very reluctant to sponsor individuals without knowing beforehand that they could pass the exam since the cost of preparing someone for the Series 7 as well as the cost of the Series 7

itself are not insignificant. The SIE Exam requires no brokerage sponsorship and the cost is substantially lower than taking the Series 7. As of February 2025, the cost to take the SIE Exam was $60 as reported on FINRA's website.

The material on both exams is very similar. By taking this course, you are learning the bulk of what is needed to be studied. There is more material that you are expected to know that we do not cover in this class, especially matters concerning compliance issues. There are numerous study guides and practice exams available from FINRA and from dozens of third-party. The free practice exam from FINRA is a great place to start to see how much you have already learned. Studying and taking as many practice exams as possible seems to be the best way to prepare for the exam.

Once you pass the SIE Exam, the industry will come a callin'. Recruiters will know that you are goal oriented and motivated to become an industry professional. They will also know that there is a very good probability that you will pass the Series 7 exam. For that reason, they will be willing to make the necessary and substantial investment in you as a new professional.

Okay, so what kind of time commitment are we talking about here, eh? We tell students that to pass the Series 7, you should expect to study one to two hours per day for at least 2 months. It pays to spend the same amount of time for the SIE Exam. Study hard, pass easily. At least one previous student told us that he spent two weeks studying three to four hours per day and passed the SIE Exam on his first try. Don't be discouraged if you fail on the first attempt on either exam. Typically, what happens is an individual will believe that they sufficiently understand one or two of the more difficult sections of the exam when in reality, they did not thoroughly study enough. They then realize what topics they need to go back to and learn more completely. A few of the trickier concepts are options, buying on margin, and shorting. We will delve into these topics at the end of the course.

There is a second exam that one must take after taking the Series 7. It is the Series 63 or the Series 66, depending upon your potential position. Neither is as difficult as the Series 7. Both require about two weeks of studying one to two hours per day.

"But Do I Have What It Takes?"

Yes! There is a future for you in the investment industry. Not everyone in the industry has to be a stockbroker. There are numerous types of positions available within the investment industry. And don't forget about other financial services industries such as insurance and banking. The real estate and mortgage industries need financial professionals, too. Many of the positions require direct contact with the public. However, many do not. There is room for everyone, extrovert and introvert.

As discussed previously, I have my own predictors. Are you a positive, optimistic person with a sunny disposition? Do you like to socialize? Do you enjoy meeting new people? Do you want to help them succeed? Are you not afraid to ask someone if they need your help? If they say, "No," are you still willing to go to the next person and ask the same question ... and then go on to ask twenty-seven more people? In short, are you a go-getter who refuses to give up? Will you never give up? If you can answer, "Yes," to all or most of these questions (especially the part about never giving up), I guarantee you will do well in the industry. You might bounce around from one position to another for a bit but you will find your place. We highly recommend you read this article from the prestigious industry magazine, the *Financial Times*: US Financial Advisors Struggle to Overcome Their Lack of Racial Diversity. The industry needs you!

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7.S: Summary

Congratulations – You Have Finished Chapter 7 – Technical Analysis: Reading Squiggles on a Computer Screen

You have reached the end of chapter 7, Technical Analysis: Reading Squiggles on a Computer Screen. In this chapter, you have:

- Been introduced to the theories and practices of Technical Analysis
- Researched the requirements of the Securities Industry Essential (SIE) exam and the Series 7 General Securities Representative Exam, also known as the Stockbroker Exam

You should now be able to:

1. Research and utilize simple theories and practices of Technical Analysis in a controlled setting without placing much credence into their usage
2. Relate the requirements for taking and passing the Securities Industry Essential (SIE) exam and the Series 7 General Securities Representative Exam, commonly known as the Stockbroker Exam

We Have Reached the End of Our Investigation into the World of Stocks

Congratulations! Think about how much you have learned about stocks. Go back over these chapters often, especially the first two, Introduction to Stocks (chapter 3) and Valuation Models (chapter 4), and study them often. Remember that you are an official Investment Guru and must be able to speak with authority when your family members, friends, and colleagues ask you questions about stocks and the stock market. Our next adventure takes us into the world of bonds. See you in our next chapter, Introduction to Bonds. Boring bonds, stodgy bonds, *reliable* bonds!

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SECTION OVERVIEW

Part 3: Bonds, also known as Fixed Investments

It is time to turn our attention to bonds. Stodgy bonds. Boring bonds. *Reliable* bonds!

Please accept our apologies. After immersing ourselves in the world of stocks, bonds are going to seem very bland and unexciting. However, unlike stocks, bonds allow us to sleep well at night. There is something to be said for that, right?

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CHAPTER OVERVIEW

Chapter 8: Introduction to Bonds

> *"Gentlemen prefer bonds." -- Andrew Carnegie*

Learning Objectives

In this chapter, you will

- Be introduced to the definition of bonds, their advantages and disadvantages, their risks versus reward characteristics, and their historical returns
- Explore the inverse relationship of interest rates and bond prices, a relationship that causes much confusion to many individuals in and out of the industry
- Examine various characteristics of bonds including maturity date, par value (aka face value), call provisions, bond quotes, and the principles of bond price behavior
- Review the various types of bonds from the least risky (Treasury bonds) to the most risky (non-investment grade, aka junk bonds)
- Explore the methods by which bonds are rated on the basis of their probability of default

By the end of this chapter, you should be able to

- Describe the various components, characteristics, benefits, advantages, and disadvantages of bonds and bond investing
- Explain the inverse relationship of bond prices and interest rates and how a bond could be selling at a premium or a discount to its par value (aka face value)
- Outline the major bond types and their risk/return profiles
- Identify and explain the method by which bonds are rated on the basis of their probability of default

Bonds are stodgy. Bonds are boring. Bonds are *reliable!*

Yes, Dear Students, bonds are stodgy and boring. However, bonds are reliable. Bonds bring stability to a portfolio. Bonds let us sleep well at night. Let's explore the world of bonds and see if they belong in your investor's toolkit.

Presentation file - Study guide

8.1: Bond Basics

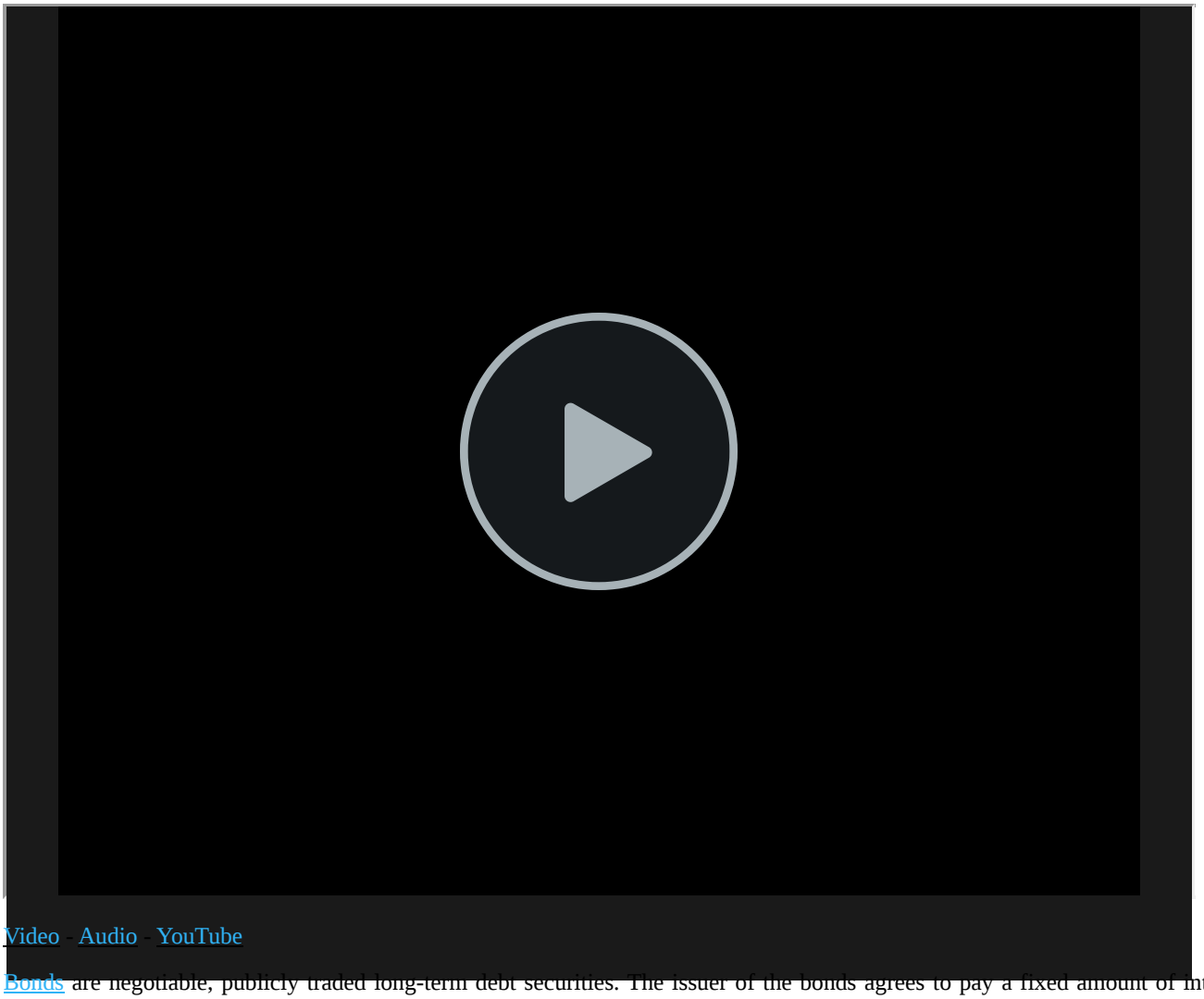
8.2: Types of Bonds

8.3: Bond Ratings, Trading, and Quotes

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8.1: Bond Basics



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Bonds are negotiable, publicly traded long-term debt securities. The issuer of the bonds agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Bonds are also known as Fixed-income Securities, Fixed Investments, or Debt Financing. A bond is basically an IOU issued by corporations, a state or local municipality such as a state, city, or school district, or the Federal government. The bond investors loan their money to the bond issuers. Bond investors are loaners as opposed to stock investors who are owners. The bond issuers agree to repay the money they borrowed with interest.

When a bond is issued, a document is created called the trust indenture. The trust indenture is the contract that sets forth the terms between the issuer and the bondholders. The indenture describes the bond investors' rights and issuer's obligations. A trustee is appointed to oversee that these obligations are carried out. The trustee is usually a commercial bank or a trust company. The trust indenture stipulates protective covenants, such as an obligation of the bond issuer to keep doing business, to keep equipment in good working order, to make payments on time, etc. For example, recently, the college where I teach, Southwestern Community College in Chula Vista, California, issued bonds to build a new stadium and the other new buildings. In the trust indenture is a protective covenant that states that the money received from the bond issue must be used for "capital improvements," a fancy term for either new building or restoring old building. In other words, we could not use the money to give the staff and faculty pay raises.

Why Invest in Bonds?

Bond investors receive interest during the life of the bond. The interest is normally paid every six months. When the bond is redeemed at the end of the life of the bond, the principal is returned to the bond holder. Bonds mature anywhere from 1 to 30 years. However, bond terms are typically in the 20-to-30-year range. One might think of bonds like a mortgage, a long-term loan where the payments are stretched out over many years.

With bonds, there is also the potential for a capital gain or a capital loss. The potential capital gain or capital loss is normally much less than what is exhibited by stocks. “Wait a minute,” you ask, “how could there be a capital gain or capital loss on a loan? That doesn’t make sense. Wouldn’t the amount of the loan remain constant?” Yes, you are correct. The principal remains constant throughout the bond’s life but the price of the bond will fluctuate as interest rates fluctuate. We will discuss the relationship between interest rates and bond prices in detail soon. If interest rates fall, there is a potential for a capital gain but there is also a potential for a capital loss if interest rates rise. However, if you intend to hold the bond to maturity when your principal is returned, capital gains or losses will not affect you.

Some bonds offer tax advantages. We will see that municipal bonds are free from Federal income taxes and Treasury bonds are free from state and local taxes. Lastly, some bonds can be converted into stocks. These are called convertible bonds and they give us the opportunity for outsized capital gains if the underlying stock does well. That might sound exciting but these are bonds, remember? Bonds are boring. Convertible bonds rarely deliver in a big way for their investors. We will cover “convertibles” when we discuss hybrid securities in a later chapter.

Bond holders are first in line for repayment if there is default on the loans. Actually, any payroll or tax expenses must be paid first. Guess who is at the end of the line. That’s right, the stock investors. When a company goes through bankruptcy, the bond investors get to pick at the carcass first. By the time they are through, there is invariably nothing left for the stock investors. Also, just as most people pay their home mortgages and car loans, etc., most all bond issuers pay their interest payments and repay the principal. For these reasons, bond prices are far less volatile than stocks. However, bond prices still fluctuate. Bond prices can go down and do go down when interest rates rise. Again, we will discuss this inverse relationship in detail later.

What kind of long-term results can we expect from bonds? For several decades, bond investors became accustomed to typically being paid between 4% and 8% on a diversified bond portfolio. Treasury and municipal bonds paid 4% to 5% while corporate bonds paid 6% to 8%. For several years, the return on bonds has been much, much less. Recently, they are beginning to rise again. As of March 2025, Treasury bonds were paying 4% to 4½%. Municipal bonds were paying between 3% and 4½%. High-quality corporate bonds were paying 4% to 6% while some lower quality, riskier corporate bonds were paying over 7%. Not surprisingly, this has renewed interest in bonds on the part of bond investors after many years of uninspiring returns.

Bonds versus Stocks

Over the long term, stocks have outperformed bonds. So why invest in bonds? Stocks are far more volatile and carry more risk than bonds. Bonds offer an element of stability to your portfolio. For some investors, stocks are simply too risky. They reason, “If I can obtain my long-term goals without taking on the risk of being invested in stocks, so be it.” Some call this the “I-Can-Sleep-Better-At-Night” factor. The investor’s time frame should also be considered. Bonds make good intermediate-term investments while stocks are better thought of as good long-term investments. And sometimes, bonds are just screaming good deals. Who wouldn’t want to earn 8% or 9% on a high-quality, fixed-income investment that had a very small probability of default? The last time that bonds offered these opportunities was in the 1980’s.

Even though stocks have performed better than bonds over time, there have been periods of time when bonds have outperformed stocks, sometimes for long periods of time. The last major example of this was the 2000’s, sometimes called the Lost Decade for stocks. The 10-year average annual return was approximately -1%. Before that you have to go back to the Great Depression to see a negative 10-year average annual return. However, I am going to tell you the truth, even though as a licensed investment professional, I could have my license revoked for saying it to a potential client. *Stocks must outperform bonds over the long term.* Why is this so? The reason for this comes from the fundamental structure of our capitalist society.

Corporations pay the interest and principal on the bonds that they issue mainly from their earnings. If the economy and the stock market have crashed … and subsequently don’t recover, then that means corporate and private individual earnings have evaporated and our society is in shambles. With no corporate earnings, it is only a short matter of time before the corporate bonds default and

become worthless. Municipalities such as state and local governments and the United States Treasury rely on corporate and individual taxes to pay the interest and principal on the bonds that they issue. If corporations and private individuals are not producing earnings, then they are not paying taxes. Likewise, it is only a short matter of time before the municipal and Treasury bonds default and become worthless. Of course, we are discussing a situation where there is no food at the grocery stores, no gas at the service stations, no clothes at the mall, the cell phones and the gas and electric companies are no longer providing service, the schools, the banks, the hospitals, the fire departments, the police stations, etc., are all boarded up, and there are brown-shirted individuals driving around with guns attached to their vehicles, using up what little resources are left to scavenge. In this case, your stock and bond investments will be the last items on your list of things to concern yourself about.

Failure is not an option. We must never let this doomsday scenario become a reality. Hence, corporations and private individuals must thrive. Over the long term, for our capitalist society to survive, stocks must perform better than bonds. Sports analogies are always a slippery slope. However, I always like to think of stocks as baseball and bonds as football. In football and most other games that are played on a rectangular field, one must stay within the boundaries of the field. Their world is fixed, like bonds. In baseball, theoretically, the foul lines are open-ended and extend indefinitely, like stocks. The world of bonds is bound. The world of stocks is limitless. I think so.

The Risks Associated with Bond Investments

Although bonds are far less risky than stocks, there are still several risks that need to be taken into consideration when investing in bonds. The first is interest rate risk. Interest rate risk comes from the inverse relationship of interest rates and bond prices. As we will cover in detail, when interest rates rise, bond prices fall. If you intend to sell the bonds in the future before they mature, a rise in interest rates can translate into capital losses. If you plan to hold your bonds until maturity, interest rate risk is not an issue you would need to consider.

Purchasing power risk is the risk that your purchasing power will fall if inflation outstrips your return from bonds. Inflation is the bond investor's worst nightmare. If inflation runs out of control, the dollars a bond investor receives in interest and principal repayments are worth far less and the investor's purchasing power is gutted. Business risk and financial risk are risks that are shared by both stocks and bond investors. For bond investors, business failure or financial failure on the part of the bond issuer may result in default on interest payments or principal repayments. This is much less a problem with municipal bonds although some municipalities have gone bankrupt in the past. Except for the occasional political theatrics practiced in our nation's capital, the United States Treasury has never defaulted since the founding of the Republic and will not default anytime within our lifetimes or our children's children's lifetimes, unless some politicians who are far less responsible than children have their way.

Some bonds exhibit liquidity risk, the risk that there may not be sufficient buyers when and if an investor wants to sell their bonds before maturity. This is less of a problem with municipal and Treasury bonds. It could be a serious problem with thinly traded bonds. However, with high-quality bonds, it is normally not something that an investor needs to concern themselves with. For investors who plan to hold their bonds to maturity, this risk is not an issue.

The last risk is call risk, also called prepayment risk. This is the risk that a bond will be "called away" from the investor before its scheduled maturity date. This is similar to what happens when a homeowner decides to prepay their mortgage and refinance with a new mortgage, normally in response to falling interest rates. The bond investor receives their principal. However, since interest rates have fallen, the bond investor must now invest in lower-yielding bonds. For this reason, some bond issuers offer non-callable or deferred-callable bonds. We will discuss the call feature of some bonds in detail soon.

Bond Interest, Principal, and Maturity

The feature of a bond that defines the amount of annual interest income is called the coupon rate. It also goes by the names nominal rate, coupon yield, and nominal yield. Interest on bonds is usually paid every six months, although some bonds pay from every month to quarterly to once a year. The term "coupon rate" came from the fact that bonds used to have coupons attached to them. When the interest was due, an investor was required to send the coupon into the bond issuer and the issuer would then send the bondholder the interest. To this day, earning interest from a bond is often called "clipping the coupon" even though now virtually all transactions are done electronically.

The amount of the loan and the amount of capital that must be paid at maturity is called the principal. (Careful. *Principle* is a different word with a different meaning.) The principal is also referred to as the par value or face value. The principal of most bonds is $1,000. Another way of saying this is that bonds are denominated in $1,000 increments. There are some bonds that are denominated in $5,000 and $10,000 increments. However, for the sake of simplicity, we will always use $1,000 as our denomination, our par value, our face value, our principal.

Putting the coupon rate and principal together tells you how much interest you will receive each year. For example, a coupon rate of 7% and a principal of $1,000 gives $70 of interest each year. And since almost all bonds are denominated in $1,000 increments, knowing the coupon rate gives you the amount of interest. Therefore, normally bond investors simply refer to their bonds by the coupon rate and maturity. "I bought a 7% 30-year bond." So if we ask you what the annual interest on a 7% bond is, you will say, "$70." For a 5% bond, it will be $50. For a 3% bond, $30. Careful: A 10% bond would yield $100 of annual interest whereas a 1% would yield $10.

The maturity date is the date on which a bond matures and the principal must be repaid. Most bonds are term bonds. Term bonds mature all at once. For example, a company will issue 20-year bonds that all mature in 20 years on the same date. There are also serial bonds. Serial bonds have a series of maturity dates. For example, a company may issue "series" of 20-year serial bonds with 20 maturity dates, each series maturing each year for 20 years. Each year, a certain portion of the issue would come due and be paid off as that series matures.

Technically, there is a difference between a bond and a note. Notes mature in 2 to 10 years whereas bonds mature in 10 or more years, usually 20 to 30 years. Some bonds mature in 50 or 100 years. Recently the Government of México issued 100-year bonds. A very small number of bonds never mature. They are often referred to as perpetuities or consols. Examples of these are railroads and other industries that had their starts in the 19th century. Although there is technically a difference between a 10-year note and 30-year bond, most investors, including Your Humble Author, use the term bond to refer to both bonds and notes.

The Call Provision on Bonds

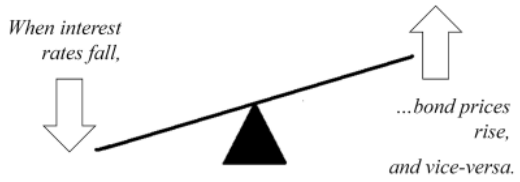
As briefly mentioned above regarding the risks of bonds, many bonds have a call provision. The call provision specifies whether and under what circumstances the bond issuer can retire the bond prior to the maturity date. If interest rates drop, just as a homeowner would want to refinance their mortgage, a bond issuer would want to refinance their bond loans. The issuer "calls in" the bonds. The bonds are "called away" from the bond investor. This is also called prepaying the bonds. All other factors being equal (and they never are), investors would prefer non-callable bonds to callable bonds.

There are three types of call provisions. Freely callable bonds can be retired at any time. With non-callable bonds, the issuer is prohibited from retiring the bond before the maturity date. The third type is a hybrid of the first two. A bond with a deferred call states that the issuer must wait for a certain length of time to pass before the bonds can be called. This length of time is referred to as the call protection period or call deferment period. Most corporate and municipal bonds are freely callable or have a deferred call. Treasuries have always been non-callable. Which of the above provisions is the least desirable? Which is the most desirable? Obviously, a non-callable bond is more desirable than a freely callable bond with bonds with a deferred call somewhere in between. Of course, all other factors being equal (and again, they never are), you can expect to receive less interest from a non-callable bond than a callable bond since non-callable bonds carry the call risk whereas non-callable bonds do not.

Some callable bonds will have a call premium, an amount that is added to a bond's par value and paid to investors if and when a bond is retired prematurely. For example, a bond might have a call premium of $85 that must be paid in addition to the principal if and when the bond is called away from the investor. This is similar to the "prepayment penalty" that some loans such as home mortgages have. The call price, also known as the redemption price, is the price the bond issuer must pay to the bond investors in order to retire the bond prematurely. It is equal to the par value plus the call premium. In our example, $85 call premium is added to the par value of $1,000 to give us a $1,085 call price. If there is no call premium, the bond is said to be "callable at par."

Bonds and Interest Rates

By far, the most misunderstood feature about bonds is their inverse relationship with interest rates. When interest rates fall, bond prices rise. When interest rates rise, bond prices fall. For many investors, the image of the playground seesaw is helpful.



Keep this image front and center in your mind when thinking about bonds. The inverse relationship of interest rates and bonds trips up everyone, even seasoned professionals.

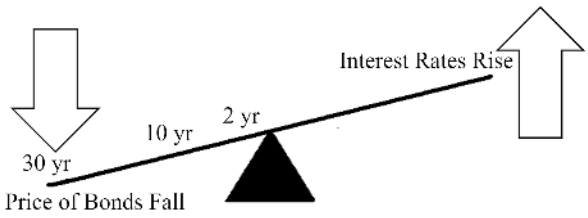
Because of this ongoing relationship, the current market value of a bond could be greater than or lesser than the par value. A premium bond is a bond with a market value greater than the par value. This occurs when prevailing interest rates drop below the coupon rate of the bond. A discount bond is a bond with a market value lower than par value. Contrariwise, this occurs when prevailing interest rates are greater than the coupon rate. A bond selling at a discount to its par value can also occur when and if the investment community believes that the bond issuer is in danger of defaulting on interest payments or principal payments. If there is no premium or discount, the bond is said to be "selling at par."

You may be wondering, "Wait a minute. Why would a bond sell at a premium or a discount to its par value? If the loan is for $1,000, the bond would always sell for $1,000, right?" No, this is not the case. Since the interest rate of your bond is fixed and cannot change, the price of the bond changes to reflect the change in the prevailing interest rates within the financial industry. Again, keep the image of the see-saw in your mind. Interest rates go down, bond prices go up. Interest rates go up, bond prices go down.

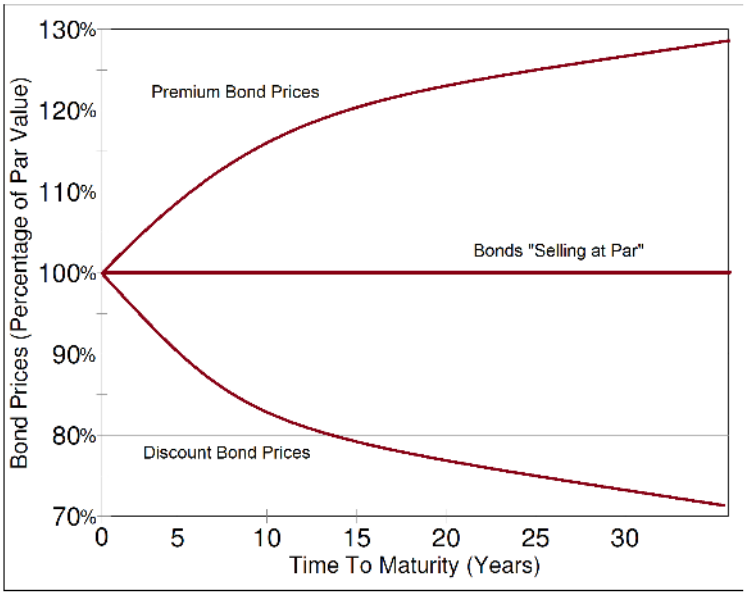
Let's take a look at an example. You own a bond with a par value of $1,000. (Remember, in our class, all bonds will have par values, also known as face values, of $1,000.) It has a coupon rate of 10%. That means it is paying you $100 every year. (It actually will pay you $50 every six months. Picky, picky, picky.) Now what happens if two years after you purchase the bond, interest rates fall to 8%? New bonds with $1,000 par values are only paying $80 per year, $40 every six months. The result is that your bond is now worth more than it was. You would not sell your bond for $1,000 since now investors have to pay $1,250 to get the same amount of interest. You could sell your bond for more than $1,000. You would receive a capital gain on the sale of your bond.

What happens if interest rates rise? If we purchased the same 10% bond and then a few years later, interest rates rise to 12%, now investors only need to pay $833.33 to get the same amount of interest as your bond is paying. New bonds are paying $120 and investors only need to spend $1,000 to get that $120. The result is you could not get anyone to buy your bond for $1,000. If you wanted to sell, you would need to lower the price of your bond to attract a buyer. If you sold now, you would realize a capital loss. Your bond would be sold at a discount. Of course, if you have no plans to sell your bond, you will still receive the $100 each year until the bond matures and you receive your principal of $1,000 back.

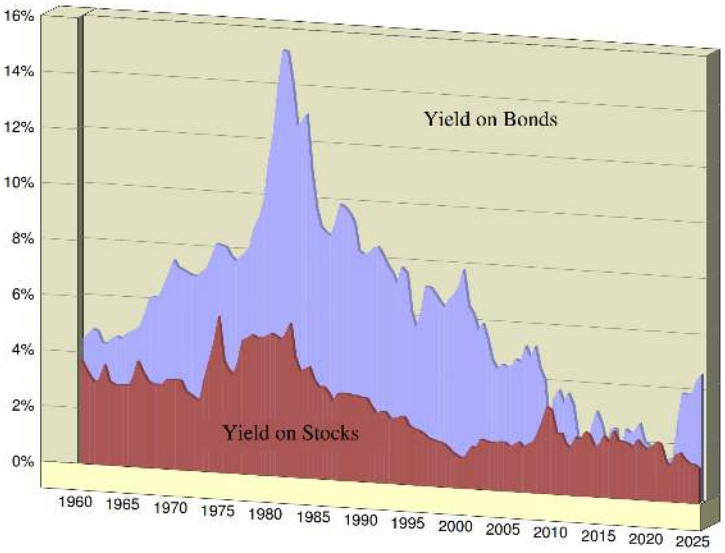
The amount of the premium or discount is not only related to the amount of the fall or rise of interest rates. In general, the greater the fall or rise in interest rates, the greater the premium or discount. The maturity date is also very important. In general, the longer the maturity, the greater the premium or discount. Just like a seesaw, the farther out you are, the greater the rise or fall. This is why long-term bonds are riskier than short-term bonds.



In the graphic above, we see that the farther you are out on the see-saw, the more dramatic the rise or fall. The same is true of the maturity of your bonds and the bond prices. The longer the time to maturity, the more dramatic the rise or fall of the bond price will be as interest rates fall and rise. The shorter the time to maturity, the less pronounced the rise or fall of the bond price.



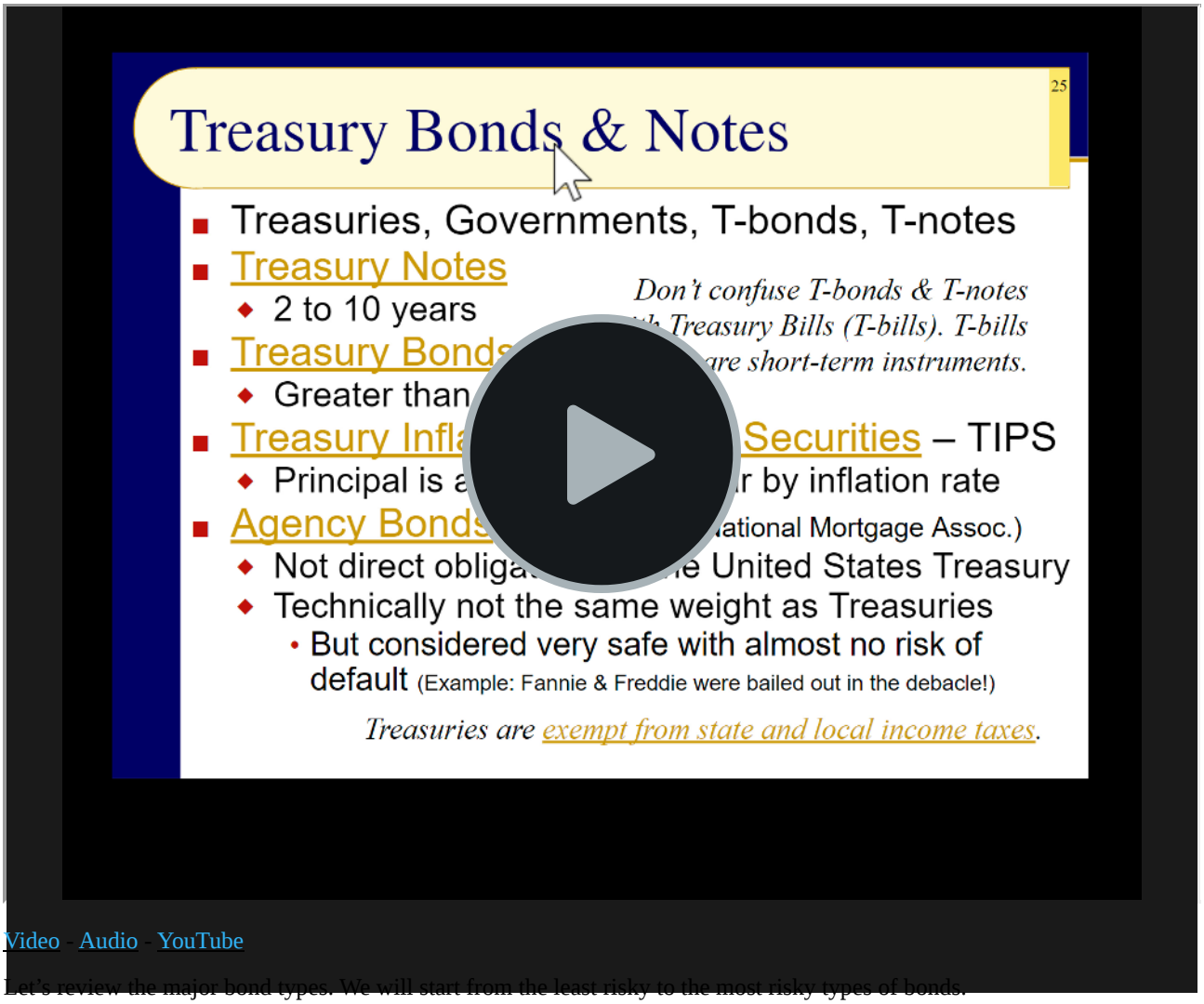
In the graphic above, we see as bonds get closer and closer to their maturity date, the closer and closer the price of the bonds will get to their par values. In general, long-term bonds exhibit greater price volatility and a greater opportunity for capital gain or loss. Intermediate-term and short-term bonds exhibit less price volatility with a lesser opportunity for capital gain or loss. Bonds very close to maturity – three, six, or nine months – start to behave similarly to short-term investments such as commercial paper and Treasury bills. However, if you intend to keep the bonds until they mature, then you are not concerned about the price volatility. You will always receive the par value of the bond except in the rare case of a bond default.



We revisit this graphic from our Introduction to Stocks chapter. We see that in 1960, the yields on bonds and stocks were very close. As inflation took hold in the 1970's, bond investors demanded higher and higher yields. After the Federal Reserve Bank broke the back of inflation in the late 1970's and early 1980's, the yield on bonds fell more or less consistently until 2022 when the Federal Reserve Bank again began raising interest rates to curtail inflation caused by the effects of the COVID pandemic on the global economy. Subsequently, bond prices fell as interest rates rose and bond investors experienced a rare occurrence, negative bond returns for the year. As mentioned, bond investors have begun sniffing out attractive yields on bonds for the long term. Are they right? Is now a good time for long-term investors to invest in bonds? We will know in a few years. Stay tuned! In the meanwhile, would you be happy with 5% to 6% on 20-year corporate bonds? Do you want to eat well or do you want to sleep well?

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8.2: Types of Bonds



Video - Audio - YouTube

Let's review the major bond types. We will start from the least risky to the most risky types of bonds.

Treasury Bonds and Notes

"Flight to quality!" When you hear these words, you know that someone is talking about Treasury bonds. Treasury bonds, or just "Treasuries," are the safest bonds available. When some shock happens in the world, whether it be economic or political or a natural disaster, you can always count on Treasury bonds to shine. Some professionals tell their clients that they should think of Treasury bonds as air bags. In a crash, they inflate and will protect a portfolio from catastrophic disaster. You most likely have heard one or two wingnut radio or Internet commentators rail about the national debt being unconstitutional and that Treasury bonds will become worthless and that the United States government will default. Yes, we have a serious debt problem that will cause us pain in the future. However, the United States will pay its debts.

An example of the Flight to Quality was during the Global Financial Crisis of 2008 and 2009. All major investment classes fell sharply, stocks, mutual funds, oil and other commodities, real estate, and even most bonds, that is, except for Treasury bonds. Treasury bonds became scarce and their prices went up even as the supply increased. Another example of the topsy-turvy world of investment came in 2011 when political brinkmanship between the Obama Administration and the Republicans in Congress prompted Standard and Poor's to lower the credit rating of Treasury bonds. Typically, when an individual or corporation or any other entity has their credit rating lowered, the interest rates they must pay to borrow rise. This was not so with the United States Treasury! Treasury bond prices actually increased and interest rates fell as investors once again sought Treasury bonds as a safe haven from the turmoil.

Don't forget that 2-year to 10-year Treasury notes are technically different from 20-year to 30-year Treasury bonds but also remember that there are many of us who just don't care about the distinction. However, don't confuse Treasury notes and bonds with Treasury bills which are short-term investments that use the discount method for paying interest. Treasury notes and bonds pay interest every six months and then repay the principal upon maturity.

So far, the Treasury has never issued anything other than non-callable notes and bonds. The interest on Treasury notes and bonds is exempt from state and local taxes but not Federal tax.

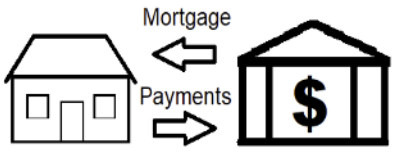
An increasingly popular Treasury offering are Treasury Inflation-Protected Securities, often referred to as "TIPS." TIPS are guaranteed to keep pace with inflation and as such, remove one of the risks associated with bond investing, purchasing power risk, also known as inflation risk. TIPS pay much less interest than other Treasury bonds. However, every year, the par value principal is adjusted upwards according to the rate of inflation as measured by the Consumer Price Index (CPI). Hence, if inflation for the year were 5%, a $1,000 TIPS bond would rise $50 ($1,000 * 5%) and the new par value would be $1,050. Accordingly, next year's interest would be based on the new par value so the bond investor's interest would also rise. TIPS are very popular with investors who fear inflation. One disadvantage of TIPS is that the IRS requires a bond investor to pay income tax on the increase in par value, even though the investor did not receive the price rise in cash. This is known as phantom income.

Often associated with Treasury bonds and notes are agency bonds. Agency bonds are not direct obligations of the United States Treasury. They are offered by agencies that were initially sponsored by the Congress. Technically, they do not have the same weight as Treasuries, but they are considered very safe with almost no risk of default. Time and time again for decades, our government officials would swear that these entities were not backed by the full faith and credit of the United States Treasury and would not be bailed out in case of a default. This was the case until the Global Financial Crisis of 2008. Subsequently, Uncle Sam had to go back on his word and bail them out. These agency bonds are the topic of our next section.

Mortgage-Backed and Asset-backed Bonds

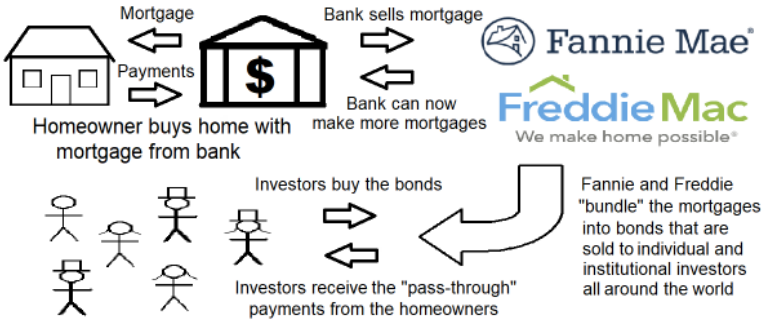
Mortgage-backed bonds are debt issues secured by a pool of home mortgages, issued primarily by the government-sponsored entities we just introduced. They are a type of agency bond that pools together home mortgages and repackages them into bond issues that are then sold to bond investors. The original goal was to increase the availability of home mortgages as a way to encourage and promote more home ownership. They have been very successful and now are responsible for 70% of home loan funding in the United States. The various flavors of mortgage-backed bonds go by various names including Pass-through Securities, Participation Certificates, Collateralized Mortgage Obligations (CMOs), Collateralized Debt Obligations (CDOs), and Mortgage-Backed Securities. Unlike most other bonds, the payments a bond investor receives consist of both interest and principal, similar to home mortgages.

The three main agencies are the Government National Mortgage Association ("Ginnie Mae"), the Federal Home Loan Mortgage Corporation ("Freddie Mac"), and the Federal National Mortgage Association ("Fannie Mae"). For decades, these entities were very successful and earned a healthy profit while accomplishing the admirable goal of increasing home ownership. That is, until the real estate bubble of the 2000's came along. These entities got caught up in the fervor and contributed much to the Global Financial Crisis. So much so, that, as mentioned, the United States Treasury had to step in and rescue Fannie and Freddie. So now, Dear Reader, as a citizen and taxpayer of the United States of America, you are proud co-owners of Fannie and Freddie. Maybe surprisingly or maybe not surprisingly, they have rewarded you well. Every quarter, Fannie and Freddie pay several billion dollars to the Treasury from their earnings. Not bad for a country that decries socialism and wants the government to have no part of any business! Everyone can agree that the current situation is not ideal. However, no one can seem to agree on how the government should extricate itself from the industry. Stay tuned for continuing developments!



Before the advent of government-sponsored entities such as Fannie and Freddie, a potential homeowner went to their bank, credit union, savings and loan, or other type of mortgage company and applied for the mortgage. The financial institution lent the home buyer the mortgage so they could buy the house and make it their home. Every month, the homeowner made their monthly

payment consisting of interest and principal to the bank, credit union, or savings and loan and the interest was credited to the financial institution as part of their earnings. Life was simple.



Life ain't so simply anymore.

Now let's see if we can follow the money once Fannie and Freddie come onto the scene. Life became far more complicated. As before, our potential home buyers still go to a financial institution for their mortgage. Except this time, the financial institution has no intention of keeping the loan in their portfolio. They immediately sell the loan to Fannie or Freddie. Why? They receive an infusion of cash that they can use to sell another mortgage to the next wave of home buyers, generating more new mortgage-related fees and more earnings. Plus, they no longer have to worry about the homeowner going bankrupt. It's not their loan anymore. They typically will continue to service the loan which means they are accepting the monthly mortgage payments and simply forwarding the money to Fannie or Freddie.

Now here is where it gets confusing. Fannie and Freddie bundle the mortgage into packages of thousands of home loans. They then create bond issues based on the mortgages. These bonds are then sold to investors, mostly institutional investors such as life insurance companies, pension funds, and mutual funds. The investors receive the "pass-through" payments from the homeowners. As mentioned, this system was very successful for decades until the real estate bubble of the 2000's. That's when it was learned that many of the mortgages were sold to home buyers who did not have the necessary resources to make the payments over the long term. Many of the mortgages were so-called "no doc loans," also known as "liar loans." Many started with very low payments that quickly increased to the point where they could no longer make the payments. The ensuing crisis almost brought us a second Great Depression. Although there is still much controversy over the handling of the crisis, the consensus is that those in charge at the Federal Reserve Bank and the United States Treasury somehow managed to avoid the worst of a depression and instead, we suffered through the Great Recession. History is still being written about this sad chapter in our financial history.

The process of transforming lending vehicles such as mortgages into marketable securities is called securitization. The issuer pools various income producing instruments together and packages them for investors. This process can be done with almost any debt or asset. The success of the securitization of mortgage-backed bonds spread into many other areas and led to the development of asset-backed securities. Asset-backed securities go by various names such as Collateralized Bond Obligations (CBOs) and Structured Investment Vehicles (SIVs).

Asset-backed bonds are securities that are similar to mortgage-backed bonds except they are backed by a pool of bank loans, leases, and other assets such as car loans, credit card loans, patents, stocks and bonds, and even pop artists. In the late 1990's, the artist David Bowie shocked the financial world when he issued "Bowie Bonds." These were bonds backed by Mr. Bowie's artistic endeavors such as his upcoming concerts and previous album releases. Although many in the industry were skeptical, the Bowie Bonds survived a credit downgrade and all the interest and principal payments were made in full. Other artists soon followed suit. Who said bonds were boring?

Municipal Bonds

Municipal bonds, often called muni bonds or just "muni's," are debt securities issued by states, counties, cities, and other political and governmental entities such as school districts, water or bridge authorities, or hospitals. The most attractive feature of municipal bonds is the interest paid is free of Federal taxes. Note that the IRS wants us to call them tax-exempt; they don't appreciate the term tax-free. Also note that any capital gains from the sale of a municipal bond are not tax-exempt. Municipal bonds are very popular

with individual investors, especially high income and high net worth taxpayers in the upper tax brackets. These investors must take care when they purchase municipal bonds, though, as some municipal bonds do not keep their tax-exempt status if the investor is subject to the Alternative Minimum Tax (AMT). Some municipal bonds are insured which is a desirable feature.

There are three major types of Municipal Bonds. General Obligation Bonds, also known as GOs, are municipal bonds that are backed by the full faith, credit, and taxing power of the issuer. This means that in case the entity runs into financial trouble, the entity will be required to raise revenues in any manner they can to pay the interest and principal, including raising taxes. Some time ago, the City of San Diego, California, was finally coming to terms with a pension plan that was overly generous. This led none other than *The New York Times* to christen San Diego, "Enron by the Sea." (Just for the record, the overly generous plan was offered to the city employees by Republicans in the City Council in exchange for their support of a pet project on behalf of the mayor. All those leaders were long gone by the time the organic matter hit the ventilating device.) The new leaders who were left holding the bag demanded concessions from the city employees and publicly threatened that San Diego would declare bankruptcy if the employees did not agree to the concessions. This was pure bluster. If San Diego had gone to the courts claiming bankruptcy, the courts would have noted that unlike many other cities, San Diego still had plenty of untapped tax revenue streams that they could employ. Suffice it to say, the city never came hat in hand to the courts asking to be placed in bankruptcy.

The second type of municipal bonds are Revenue Bonds. Revenue Bonds are municipal bonds that require payment of principal and interest only if sufficient revenue is generated by the issuer. They are generally considered less desirable than GO bonds since GOs must seek new sources of income to meet the interest and principal payments while Revenue Bonds do not. However, Revenue Bonds typically come with higher interest rates than GOs. When researching potential Revenue Bonds, an investor should investigate the projects behind the bonds in much the same manner as when an investor researches a stock. Is the project fiscally sound? Is it desirable? Will it be able to pay the future interest and principal payments?

The last major type of municipal bonds are Special Tax Bonds. Special Tax Bonds are payable from the proceeds of a special tax that is typically voted on by the citizens of the jurisdiction. As mentioned, the college where I teach, Southwestern College, issued bonds to upgrade the buildings and other facilities of our campuses. The college asked the voters to approve bond propositions via local elections. We are happy and grateful to report that the voters approved both our bond propositions. With the proceeds from the sale of the bonds, we have been replacing older builders with new ones. The money to pay the interest and principal on the bonds will come from a special tax that is levied on property owners in the district. Although many in our community have pointed with pride to our new stadium, Southwestern recently has earned Onion Awards for architectural cluelessness. Oh, well. Everything changes; some things mutate.

As mentioned, municipal bonds offer investors attractive tax advantages, especially higher income investors. They are typically free from Federal income taxes. If the bonds are purchased by investors in that municipality, they are also often free from state and local taxes. This is sometimes referred to as double-tax exempt or double-tax free interest. If an investor is based in California and purchases California municipal bonds, they will not pay any Federal income tax nor will they pay any California income tax on the interest from the California municipal bonds. Recall that the interest payments on some bonds are subject to taxes if the investor is subject to the Alternative Minimum Tax. Also recall that any capital gains taxes on the sale of municipal bonds are not tax-exempt.

Because of this tax-exempt feature, when we research municipal bonds, we must always look at the Taxable Equivalent Yield. This allows us to compare municipal bonds with corporate and Treasury bonds. There is a Taxable Equivalent Yield calculation for Federal tax-exempt municipal bonds and a Double-Tax Exempt Taxable Equivalent Yield for both Federal & state tax-exempt municipal bonds. We will learn how to calculate these in the next chapter. We will find that the higher the tax bracket of the investor, the higher the taxable equivalent yield. For this reason, we find that municipal bonds are favored by high-income investors and eschewed by lower-income investors for the mere fact that they are just more valuable for high-income investors who then bid the prices up relative to other bonds.

Corporate Bonds

There are two major types of corporate bonds, secured and unsecured. Secured corporate bonds are backed by a claim on specific property of the issuing corporation, such as real estate, airplanes, or railroad equipment. The secured bonds are then delineated as either senior bonds, also known as senior lien bonds, or junior bonds, also known as junior lien bonds. The senior bonds have priority over the junior bonds and would be satisfied first in case of any bankruptcy proceedings. This relationship is similar to the

first mortgage and a subsequent home equity line of credit (HELOC) that are associated with a house. In the event of a foreclosure, the first mortgage must be paid first before the HELOC would receive any funds.

Unsecured corporate bonds are called debentures. They are backed by the "full faith and credit" of the corporation. These are similar to a credit card loan where there is no identified collateral for the credit card company to attach for payment. The credit card company must go after whatever income or assets that the credit card holder may have. Likewise, unsecured corporate bond investors must seek payment from whatever assets are available when a company goes through bankruptcy. Similar to the pecking order described above with secured corporate bonds, there are subordinated debentures which are only able to seek payment after the debentures are satisfied. Finally, corporations can issue income bonds which are unsecured bonds that require that interest be paid only after a certain amount of income is earned.

Junk Bonds

The riskiest bonds are typically referred to as junk bonds. This is not the most flattering of titles but it is the most commonly used when referring to bonds that are in distress. More gentle names include high-yield bonds, non-investment grade bonds, distressed bonds, and speculative bonds. Junk bonds are high-risk securities that have low ratings but can produce high yields. Traditionally, junk bonds were held in very low esteem and often compared to penny stocks. They were investments to be avoided. Junk bonds were not to be discussed in polite company.

This changed in the 1980's. Junk bonds became an industry as companies not large enough to issue bonds began to issue bonds with very high interest rates. One individual, Michael Milken, of the firm Drexel Burnham Lambert, was generally regarded as creating this industry. Sadly, Mr. Milken became involved with a trader by the name of Ivan Boesky and the two set upon a scheme to use insider information to become filthy rich. (Recall: The legal term for insider information is non-public material information.) The two inspired the movie *Wall Street*. The famous speech from the movie where the character brazenly declares that, "Greed is good," is based on a speech that Mr. Boesky gave at a graduation ceremony. Both gentlemen spent time in prison, paid large fines, and were barred from the securities industry for life.

Before Mr. Milken and Drexel Burnham Lambert, junk bonds were only associated with corporations that were in dire distress. Occasionally, the bonds of a municipality qualify as junk but this is the exception, not the norm. As we have learned, the eternal struggle between risk and return applies to all investments, including bonds. With junk bonds, there is tremendous risk but they also often offer the opportunity for large capital gains along with the high income.

Unlike other bonds, junk bonds tend to follow the stock market. We say they are highly correlated with stocks. (We will discuss correlation later on in our journey together.) Why is this? Recall that most junk bonds are corporate bonds. When the stock market is doing well, it is usually a sign that the economy is prospering. Hence, corporate earnings are strong and the companies associated with the junk bonds can more readily make their interest and principal payments. When the economy is in recession, corporate earnings are depressed. Hence, not only is the stock market typically suffering but so are junk bonds because the corporations associated with the junk bonds are having a difficult time making their necessary interest and principal payments because of the depressed earnings. In contrast, in a recession, interest rates typically go down and we learned in our previous section that when interest rates go down, bond prices go up.

Zero-Coupon Bonds

We now turn our attention to a type of bond that is a bit of an oddity in the bond world, zero-coupon bonds. Zero-coupon bonds, also known as "zeros," do not offer semi-annual interest payments. Recall that many years ago, bonds had coupons attached to them and the investor would clip the coupon, send it to the bond issuer, and the bond issuer would send them a check for the interest. Hence, a bond that pays no interest has zero coupons to clip and send. Zero-coupon bonds are sold at a deep discount from par value, similar to the savings bonds we saw in our first chapter. Instead of receiving the interest in cash, the bonds simply accrue in value until maturity. (Accrue is the fancy accounting word for increase.) For example, a $1,000 bond maturing in 20 years at 6.25% would cost $300 when it is issued. After 10 years, it would be worth $550. After 20 years, the investor would receive the full $1,000 par value.

Zero-coupon bonds are popular with those who do not need the interest income and are more interested in growing their wealth. There are a couple of disadvantages, though. They are very sensitive to interest rate changes exhibiting wide price swings.

However, if you don't plan on selling your zero-coupon bonds before maturity, then this is not an issue that concerns you. The second disadvantage is that the IRS expects you to pay taxes on the accrued interest even though you didn't receive it in cash. There's that phantom income problem again! To circumvent this, investors will utilize municipal zero-coupon bonds since the interest is tax-exempt or the zero-coupon bonds will be purchased inside a tax-qualified account such as an IRA or other retirement plan.

Foreign Bonds

With all due respect to the beloved memory of Jack Bogle, founder of the Vanguard Group, who stubbornly advocated investing only in the United States, our country is not the only country in the world that offers bonds. However, for many years, Mr. Bogle's advice was worth considering with regard to bonds. Traditionally, investing in foreign bonds was not easy for retail investors. Thankfully, the wide availability of international brokerage accounts has made investing in foreign bonds easier. Also, traditionally, most other countries had much less stringent regulations and standards than the United States but that has changed dramatically for many countries. Some countries now have stricter regulations and standards. However, there are still serious considerations a potential investor must take into account when considering purchasing foreign bonds.

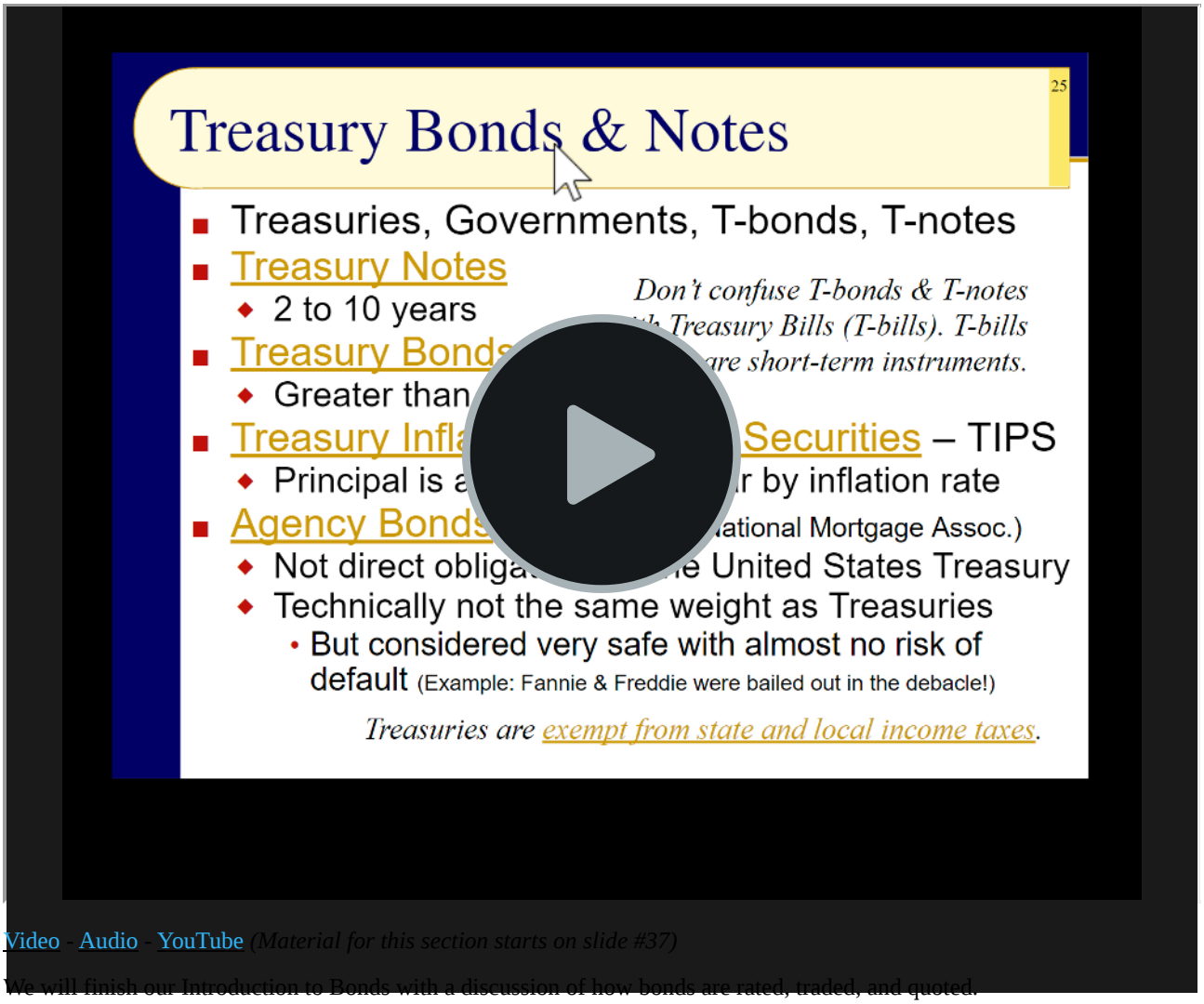
Along with all the normal risks associated with bonds, foreign bonds carry currency risk. When a bond is purchased abroad, interest and principal payments are paid in foreign currencies. All other things being equal (and they never are), if the U.S. dollar rises relative to the foreign currency, the value of the bond will fall. Contrariwise, if the U.S. dollar falls relative to the foreign currency, the value of the bond will rise. It is an inverse relationship. Again, think of the see-saw analogy.

To counter the currency risk and attract investors from the United States, in the past, many foreign entities issued dollar-denominated bonds. The foreign bond issuer promised to pay the interest and principal payments in dollars, no matter what happened to the currency exchange rate. This removed the currency risk from the investor. However, some jurisdictions saw their currency fall precipitously against the dollar. This meant that the foreign bond issuers saw their payment double, triple, or more since they needed far more of their own currency to pay the dollar interest and principal obligations. Needless to say, some of the entities defaulted.

Ultimately, for the vast majority of retail investors, global and international bond mutual funds are the preferred choice for those interested in foreign bonds. Established and successful mutual fund companies have the resources to conduct the international transactions and more importantly, have the global research teams necessary to properly assess the risks and rewards of bonds based outside the United States.

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8.3: Bond Ratings, Trading, and Quotes



Video - Audio - YouTube *(Material for this section starts on slide #37)*

We will finish our Introduction to Bonds with a discussion of how bonds are rated, traded, and quoted.

Bond Ratings

When you need a loan and apply at a bank or credit union, the loan officer will run a credit report from one of the several companies that keep credit histories on virtually all citizens. The credit agencies use numeric scales to assess an individual's credit worthiness. The credit quality of bonds is assessed very differently. Bond ratings are letter grades that designate investment quality and are assigned to a bond issue by a few designated rating agencies, the two largest being Standard & Poor's and Moody's. The higher the letter rating, the better the quality of the bond and the lower the risk of default of interest and principal payments.

In the wake of the 2001/2002 corporate scandals, the rating agencies were caught completely off guard. They didn't downgrade Enron and WorldCom until they were practically in default. They were again called to task because of the 2008 mortgage-backed bond crisis that spawned the Global Financial Crisis. Yep, you guessed it! They screwed up again, but this time, they almost brought down the entire economy! Personally, Your Humble Author has always thought of the credit ratings as similar to the "idiot lights" on your car's dashboard. By the time the [Engine Oil] goes on, it's too late. Your engine is toast! (Friends of mine who are more car savvy tell me that the warning lights or newer cars are far more useful these days.) By the time your bond has been downgraded to junk, it is too late. You are toast!

Bond Rating Designators

Moody	S&P	Definition
Aaa	AAA	Highest grade: The “gilt-edge”
Aa	AA	High grade
A	A	Medium grade
Baa	BBB	Medium grade: The last investment grade rating
Ba	BB	Starts non-investment grade: Speculative, Distressed, “Junk”
B	B	More speculative: Moderate protection
Caa	CCC	Poor quality: In danger of default
Ca	CC	Poorest quality: Close to or de-facto default
C	C D	Moody C: In default S&P C: Not paying interest; S&P D: In default

Anything BBB or Baa or above is considered investment grade. Below BBB or Baa is considered non-investment grade, the proper and more polite term for “junk” bond status. As mentioned, in the case of Enron, the rating agencies still had them pegged at BBB as the revelations of their widespread accounting fraud were being uncovered. During the housing bubble of the mid-2000’s, the rating agencies had absurdly given their highest rating, AAA, to the associated mortgage-backed bonds backed by the “no-doc liar” mortgage loans. Many critics of the rating agencies have time and time again emphasized that the system is broken. The bond issuers pay the rating agencies for their ratings. This is a glaring conflict of interest. The rating agencies are not stupid. They are not going to “bite the hand that feeds them.” Of course, they are going to want to give their customers a high rating or else fear that their clients will look for another rating agency. When representatives of the rating agencies were called to testify before Congress after the Global Financial Crisis, how do you think they responded to these accusations? “What? How dare you suggest that we would do such a thing?” Ah, yeah, right, sure.

One last wrinkle in the ratings needs to be addressed. To further fine tune their ratings, the agencies will add a plus sign or a minus sign to the rating in the case of Standard and Poor’s or a 1, 2, or 3 in the case of Moody’s. Therefore, for bonds rated by Standard and Poor’s, AA+ is higher than AA which is higher than AA-. What’s the difference between AA+, AA, and AA-? For that matter, what’s the difference between AA, A, and BBB? Uh, I don’t know. I guess you will have to ask Standard and Poor’s.

Bond Trading

For the vast majority of bonds, bond trading is very difficult for retail investors. Many bond investors hold onto their bonds until they mature. Hence, trading volume is often thin. Many bonds trade over the counter, which means you or your broker have to find someone who owns the bonds who is willing to sell. Traditionally, one of the more reliable sources for these transactions was and still is The Bond Buyer.

However, the impediment for most retail investors is that bond traders normally trade in the $100,000 or more range. Many traders have minimum transactions of $25,000. If you can find a bond trader that will handle transactions in the $10,000 range, you can expect to be treated rudely and receive poor prices. Do you recall the famed bond trader John Meriweather and his encounter with John Gutfruend? For this reason, most of us working grunts use bond mutual funds to invest in bonds. The mutual funds have the purchasing power to buy bonds using transactions in the millions of dollars.

The exception to this grim situation for retail investors is the United States Treasury and www.TreasuryDirect.gov. As you researched way back in chapter 1, Treasury bonds, notes, and bills can be purchased directly from the Treasury and you, the lowly retail investor, will get the same prices as the big boys and girls on Wall Street. Very cool!

Bonds Quotes

Bond quotes are not quoted in dollars as stocks are. That would be too easy. The opulent and moneyed world of bonds has one last curve ball to toss at us. Bond quotes normally are quoted as a percentage of the par value, also known as the face value. For

example: if you see 97.25, that means 97.25% of the par value of the bond. Recall that most bonds are denominated in $1,000 increments. That means the price of the bond would be 97.25% * $1,000 = $972.50. An easy way to determine the price of the bond is to move the decimal point one to the right. 97.25 is a bond quote for a bond selling at a discount. A bond selling at a premium would be quoted over 100. A bond selling at par would be quoted at 100.

For our purposes, we will always use $1,000 as the par value. However, do keep in mind that a few bonds are denominated in $5,000 or $10,000 increments. In the case of $10,000 denominated bonds, you would simply move the decimal point two to the right. A bond quote of 97.25 would designate a bond selling for $9,725. In the case of a bond denominated in $5,000 increments, get out your 99¢ calculator.

Unlike stock quotes, free bond quotes are not easy to come by. The Financial Industry Regulatory Authority (FINRA) is one of the few Internet websites that offer free bond quotes. You can use www.finra.org for bond quotes. However, much of the data found here is highly suspect. Remembering that most investors who purchase individual bonds deal in very large numbers, we can safely assume that these folks have their own private brokers who specialize in bonds. For those of you who are considering a career in the investment services industry, you will find that most of us investment professionals immerse ourselves in stocks while only a few specialize in bonds. If you find that bonds interest you, by specializing in bonds, you will not only face less competition, you will also attract the most lucrative clients. Think about it. The industry needs you!

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8.S: Summary

Congratulations – You Have Finished Chapter 8 – Introduction to Bonds

You have reached the end of chapter 8, Introduction to Bonds. In this chapter, you have:

- Been introduced to the definition of bonds, their advantages and disadvantages, their risks versus reward characteristics, and their historical returns
- Explored the inverse relationship of interest rates and bond prices, a relationship that causes much confusion to many individuals in and out of the industry
- Examined various characteristics of bonds including maturity date, par value (aka face value), call provisions, bond quotes, and the principles of bond price behavior
- Reviewed the various types of bonds from the least risky (Treasury bonds) to the most risky (non-investment grade, aka junk bonds)
- Explored the methods by which bonds are rated on the basis of their probability of default

You should now be able to:

1. Describe the various components, characteristics, benefits, advantages, and disadvantages of bonds and bond investing
2. Explain the inverse relationship of bond prices and interest rates and how a bond could be selling at a premium or a discount to its par value (aka face value)
3. Outline the major bond types and their risk/return profiles
4. Identify and explain the method by which bonds are rated on the basis of their probability of default

We Are Halfway Through Our Investigation into the World of Bonds

In our next chapter, we will introduce the calculations necessary to compare and contrast bond yields. We will also learn a technique to assign a value to a bond that should look vaguely familiar, namely the Discounted Cash Flow Model. Hey, maybe bonds are really not as boring as they seem! (Ah, sorry. Yes, they are.) See you in our next chapter, Bond Yields and Valuations.

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CHAPTER OVERVIEW

Chapter 9: Bond Yields and Valuations

> *What is our bond paying us?*
> *What is our bond worth?*

Learning Objectives

In this chapter, you will

- Review the importance of bond yields
- Explore the various types of bond yields and bond yield calculations
- Examine the taxable-equivalent yield calculations for municipal bonds
- Discuss bond yield spreads and the bond yield curve and what an inverted bond yield curve can tell us about the future state of the economy
- Explore bond valuation techniques
- Discuss various bond investment strategies and the technique of bond laddering

By the end of this chapter, you should be able to

- Describe the importance of bond yields and the various types of bond yields
- Calculate current yield, yield to maturity, and yield to call
- Calculate the Federal tax-exempt taxable equivalent yield and double tax-exempt taxable equivalent yield for municipal bonds
- Identify wide versus tight (aka narrow) bond yield spreads
- Explain the bond yield curve and what an inverted bond yield curve typically signifies for the near-term future state of the economy
- Calculate bond valuations using a variation of the Discounted Cash Flow Model
- Identify and explain various bond investment strategies and be able to construct a bond ladder investment program

Let's continue with stodgy, boring, *reliable* bonds

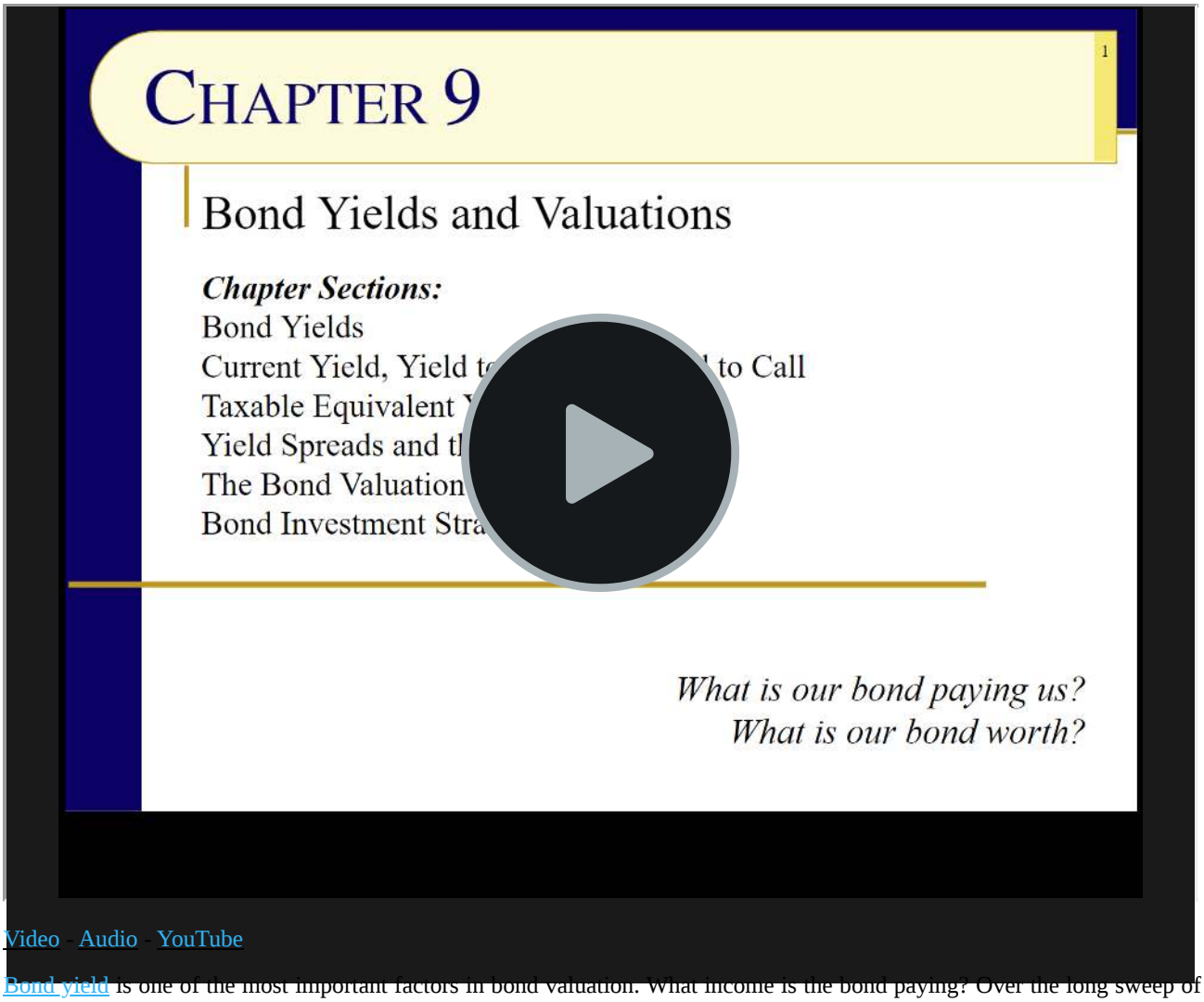
What is our bond paying us? What is the yield? What is our bond worth? What is its valuation? We will learn how to compute the various bond yields and how to use a bond valuation technique that will be very familiar. We will see that the fixed-income nature of bonds makes predicting bond prices much more reliable than predicting stock prices. We will also discuss the yield curve and some final aspects of bond investing.

Presentation file - Study guide

9.1: Bond Yields
9.2: Yield Spreads and the Yield Curve
9.3: Bond Valuations
9.4: Some Final Aspects of Bond Investing
9.S: Summary

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9.1: Bond Yields



Video - Audio - YouTube

Bond yield is one of the most important factors in bond valuation. What income is the bond paying? Over the long sweep of time, income is the principal reward an investor receives from investing in bonds. Although there are sometimes opportunities for capital gains, when the bond is redeemed, you are only going to get back the par value of the bond. Given that most all bond issuers repay their principal without incident, the valuations calculated using bond yields tend to be very predictable.

The unpredictable factor in bond valuation is the future direction of interest rates. However, for the many investors who hold onto their bonds until maturity when they get their principal back, the direction of interest rates is unimportant to them. They are mostly interested in the income and are not affected by the direction of interest rates since they have no intention of ever selling their bonds before they mature. You are only concerned about changing interest rates if you intend or are forced to sell your bonds before they mature.

There are several different types of bond yields. We will cover the most important.

Nominal Yield, also called the Coupon Yield

The Nominal Yield is the named interest rate of the bond. It also is called the Coupon Yield, the Nominal Rate, and the Coupon Rate. Recall that the term coupon came from the historical aspect of certain bonds that had coupons attached to the bond document. When the interest was due, the investor would clip the coupon and send the coupon to the bond issuer who would then send the bond investor a check. So to this day, “clipping the coupon” is the phrase that you will hear bond investors say even though no bonds have had coupons attached to them for decades.

The absolute dollar amount of annual interest is calculated by multiplying the nominal yield by the par value. For our purposes, we will always use $1,000 as the par value of our bonds even though some bonds have par values of $5,000 or $10,000. For example, if a bond had a nominal yield of 8%, we would multiply $1,000 by 8%. That would give us $80 of annual interest. Recall that most bonds pay interest every six months so that would signify that we were going to receive $40 every six months from our bonds.

The Nominal Yield, however, is not as important as the Current Yield, Yield to Maturity, and the Yield to Call. Let's learn how to calculate each.

Current Yield

The Current Yield is the amount of current income a bond provides relative to its market price. It is also called the Current Rate. The method for calculating the Current Yield is:

$$\text{Current Yield} = \frac{\text{Annual Interest}}{\text{Current Market Price of the Bond}}$$

For example, say we found a bond with a Nominal Yield of 8% that was selling for $800. This is a bond that is selling at a discount, most likely because interest rates have risen or possibly because the bond issuer is in distress and investors are worried about the possibility of default on the interest and principal payments.

$$\text{Current Yield} = \frac{\text{Annual Interest}}{\text{Current Market Price of the Bond}} = \frac{\$80}{\$800} = 0.10 \text{ or } 10\%$$

The nominal yield is 8% but because the bond is selling at a discount, the current yield is actually 10%. We only have to pay $800 to get $80 of annual interest. What if the bond is selling at a premium because interest rates have fallen? Let's say that the same 8% bond was selling for $1,200.

$$\text{Current Yield} = \frac{\text{Annual Interest}}{\text{Current Market Price of the Bond}} = \frac{\$80}{\$1,200} = 0.066667 \text{ or } 6.67\%$$

The nominal yield is the same 8% and the annual interest is the same $80, but because the bond is selling at a premium, the current yield is only 6.67%. We would have to pay a premium of $1,200 to get the $80 of annual interest.

Yield to Maturity

The Current Yield tells us what the bond is paying us at this moment. However, we must remember that when the bond matures, we will receive the par value, no matter what price we actually pay for the bond. Therefore, we need to look at the Yield to Maturity to know what the fully compounded rate of return that will be earned by an investor over the life of the bond. It is often abbreviated as YTM and is sometimes called the Promised Yield. The Yield to Maturity includes both the current income and the price appreciation or depreciation of the bond.

There are two primary methods of calculation. The more accurate method is the bond pricing formula that we will discuss later combined with an internal rate of return approximation. Although it is a more accurate method, it is difficult to do manually and is better left to a spreadsheet. The other more popular method is a formula that is much easier to use and gives a very good approximation to the more accurate method. The formula looks scary but is actually fairly easy to use. The Yield to Maturity approximation formula is:

$$\text{YTM} = \frac{\text{Annual Interest} + \dfrac{\text{Par Value} - \text{Market Price}}{\text{Number of Years to Maturity}}}{\dfrac{\text{Par Value} + \text{Market Price}}{2}}$$

Relax. Let's break it down into pieces. The first observation that we can make is that it is somewhat similar to the Current Yield formula. Annual Interest is on the left in the numerator just like the Current Yield formula. In the denominator, instead of just the Market Price as we had in the Current Yield formula, we take the average of the Par Value and Market Price. Why do we use the average? Because we bought the bond at the Market Price but we will receive the Par Value when the bond matures. As mentioned, the Yield to Maturity formula takes into account not only the interest we receive but also the par value, the principal amount that we will receive when the bond matures.

Okay, how about that scary part on the right side of the numerator? What is that for? Remember that although we might have paid a premium or a discount for the bond, when the bond matures, we will only receive the par value. We do not receive the market price that we paid for the bond. The calculation takes that into account. The Par Value minus the Market Price computes the difference between what we paid for the bond (Market Price) and what we will receive when the bond matures (Par Value). We then divide by the Number of Years to Maturity to determine how much per year the price of the bond will appreciate (if it is a discount bond) or depreciate (if it is a premium bond). Let's take a look at an annotated version of the formula:

$$YTM = \frac{\text{Annual Interest} + \frac{\text{Par Value} - \text{Market Price}}{\text{Number of Years to Maturity}}}{\frac{\text{Par Value} + \text{Market Price}}{2}}$$

This term calculates the amount of bond price appreciation or depreciation each year.

This term calculates the average of the Par Value and the Market Value.

Let's return to our first example of an 8% bond selling at a discount for $800 and now add that the bond will mature in 10 years. Remember that for our purposes, the Par Value will always be $1,000. The formula becomes

$$YTM = \frac{\$80 + \frac{\$1{,}000 - \$800}{10}}{\frac{\$1{,}000 + \$800}{2}} = \frac{\$80 + \frac{\$200}{10}}{\frac{\$1{,}800}{2}} = \frac{\$80 + \$20}{\$900} = \frac{\$100}{\$900} = 0.1111 \text{ or } 11.11\%$$

In the denominator, the average of the $1,000 Par Value and the $800 Market Value is $900. In the numerator, we compute the difference between the $1,000 Par Value and the $800 Market Value and then divide by 10, the Number of Years to Maturity. The difference between $1,000 and $800 is $200. The bond will increase in value $200 from the Market Price of $800 to the Par Value of $1,000 when the bond matures. We then divide by the Number of Years to Maturity of 10 to get $20. Every year, theoretically, the price of the bond will increase by $20. (It doesn't actually work that way in the marketplace since interest rates and bond prices are continuously changing due to market forces. However, this approximation serves our purpose.) Purchasing the bond at a discount means that we will receive more than the Current Yield of 10%. We will not only receive the interest payments but we will receive more than what we paid for the bond when it matures. If we hold the bond for 10 years, our Yield to Maturity will be approximately 11.1%.

The situation reverses if we buy a bond at a premium. The Yield to Maturity will be less than the Current Yield. Let's return to the second example of an 8% bond selling at a premium of $1,200 and matures in 10 years. The formula is:

$$YTM = \frac{\$80 + \frac{\$1{,}000 - \$1{,}200}{10}}{\frac{\$1{,}000 + \$1{,}200}{2}} = \frac{\$80 + \frac{-\$200}{10}}{\frac{\$2{,}200}{2}} = \frac{\$80 + (-\$20)}{\$1{,}100} = \frac{\$60}{\$1{,}100} = 0.054545 \text{ or } 5.45\%$$

The Current Yield was 6.67% but because we are paying $1,200 for the bond and only receiving $1,000 when the bond matures in 10 years, our Yield to Maturity is only 5.45%. Each year, we subtract $20 from our Annual Interest as the price of the bond makes its way from the Market Price down to the Par Value.

Yield to Call

In the case of callable premium bonds, there is always the risk of the bond being called away from us. The Yield to Call calculates the yield on a bond assuming it will be called away from us on a specified date sometime in the future. This is only used on premium-priced bonds. A bond issuer would never call in discount bonds. That would mean they would be refinancing at a higher rate. As with the Yield to Maturity, there are two common methods of calculation. There is the bond pricing formula discussed later combined with an internal rate of return approximation that we would use with a computer spreadsheet. We can also use the same approximation formula as we used for the Yield to Maturity. The difference is we replace the Par Value with the Call Price and we replace the Number of Years to Maturity with the Number of Years to Call.

$$YTC = \frac{\text{Annual Interest} + \frac{\textbf{\textit{Call Value}} - \text{Market Price}}{\textbf{\textit{Number of Years to Call}}}}{\frac{\textbf{\textit{Call Value}} + \text{Market Price}}{2}}$$

Returning to the second Yield to Maturity example above, let's say that the premium 8%, 10-year bond selling for $1,200 is eligible to be called in 5 years. The Call Protection Period ends in 5 years. For this example bond, if the bond issuer chooses to call the bond away from us, they must pay a Call Premium of $85. Hence, the Call Value is $1,085. Replacing the Par Value with the Call Value and the Number of Years to Maturity with the Number of Years to Call, we get the following formula:

$$YTC = \frac{\$80 + \frac{\textbf{\textit{\$1,085}} - \$1,200}{\textbf{\textit{5}}}}{\frac{\textbf{\textit{\$1,085}} + \$1,200}{2}} = \frac{\$80 + \frac{-\$115}{\textbf{\textit{5}}}}{\frac{\$2,285}{2}} = \frac{\$80 + (-\$23)}{\$1,142.5} = \frac{\$57}{\$1,142.50} = 0.049891 \text{ or } 4.99\%$$

The Yield to Call was less than the Yield to Maturity. This is typical because if the bond is called away before maturity, we would have less time to take advantage of the outsized interest income payments of the premium bond. Note that if a bond is selling at Par Value, then the Nominal Yield / Coupon Yield, the Current Yield, the Yield to Maturity, and the Yield to Call will all be the same.

Taxable Equivalent Yield

Recall that municipal bonds are exempt from Federal income taxes. The Taxable Equivalent Yield formula takes this tax-exempt status into account. Before we compare the yield of a municipal bond with the yield of a corporate bond, we must calculate the Taxable Equivalent Yield. The formula is:

$$\text{Taxable Equivalent Yield} = \frac{\text{Municipal Bond Yield}}{1 - \text{Marginal Tax Rate}}$$

Let's take a look at a municipal bond that is paying 6% and assume that the investor is in the 25% Federal marginal tax bracket. The marginal tax bracket, also called the marginal tax rate, depends upon your level of income. As your income rises, so does your marginal tax bracket.

$$\text{Taxable Equivalent Yield} = \frac{0.06}{1 - 0.25} = \frac{0.06}{0.75} = 0.08 \text{ or } 8.00\%$$

e result is telling us that our municipal bond is paying us as much as a corporate bond that is paying 8%. How is that? Well, the interest on the municipal bond is tax-exempt. We get to keep all of the interest we receive. On a 6% bond, that would be $60 annually. However, the interest on the corporate bond is fully taxable. That means we have to pay income taxes on the interest. We would receive $80 interest on the corporate bond but we would have to pay the Federal government 25% of that. The $80 of interest times 25% is $20 taxes. We would only get to keep $60. The two bonds would give us the same amount of money. They are equivalent.

Double Tax-free Equivalent Yield

If an investor purchases a municipal bond domiciled in their state of residence, most states will waive the state income tax on the interest, hence the bond is said to be double tax-free or double tax-exempt. In order to compare our double tax-exempt bond with a fully taxable corporate bond, we need to calculate the Double Tax-free Equivalent Yield. There are two versions of the formula, one for taxpayers who itemize their deductions and the other for taxpayers who do not itemize. Since most municipal bond investors are typically high net worth, high-income taxpayers, this first formula is more useful.

$$\text{Double Tax-free Equivalent Yield} = \frac{\text{Double Tax-Free Municipal Bond Yield}}{1 - (\text{Federal Bracket} + (\text{State Bracket} * (1 - \text{Federal Bracket})))}$$

Again, it looks a bit scary but if we just plug in the numbers and then work our way from the innermost parentheses to the outermost, we can do it. Let's revisit the previous example with a 6% municipal bond yield and a 25% Federal tax bracket. Let's assume this is a California bond and the taxpayers are California residents in the 8% California tax bracket. The formula becomes:

$$\text{Double Tax-free Equivalent Yield} = \frac{0.06}{1 - (0.25 + (0.08 * (1 - 0.25)))} = \frac{0.06}{1 - (0.25 + (0.08 * 0.75))} =$$

$$= \frac{0.06}{1 - (0.25 + 0.06)} = \frac{0.06}{1 - 0.31} = \frac{0.06}{0.69} = 0.0890565 \text{ or } 8.696\%$$

Because the California resident does not pay Federal or state taxes on the interest from the California municipal bond, the Double Tax-free Equivalent Yield is higher than the Taxable Equivalent Yield. The second form of the formula is used when the taxpayer does not itemize deductions on their Federal income taxes. This is very unusual as most municipal bond investors are high net worth and high-income taxpayers. Here is the second version of the formula:

$$\text{Double Tax-free Equivalent Yield} = \frac{\text{Double Tax-Free Municipal Bond Yield}}{1 - (\text{Federal Bracket} + \text{State Bracket})}$$

If the taxpayer in the previous example did not itemize deductions on their Federal tax return, then the Double Tax-free Equivalent Yield will be higher. The calculations would be:

$$\text{Double Tax-free Equivalent Yield} = \frac{0.06}{1 - (0.25 + 0.08)} = \frac{0.06}{1 - 0.33} = \frac{0.06}{0.67} = 0.89552 \text{ or } 8.955\%$$

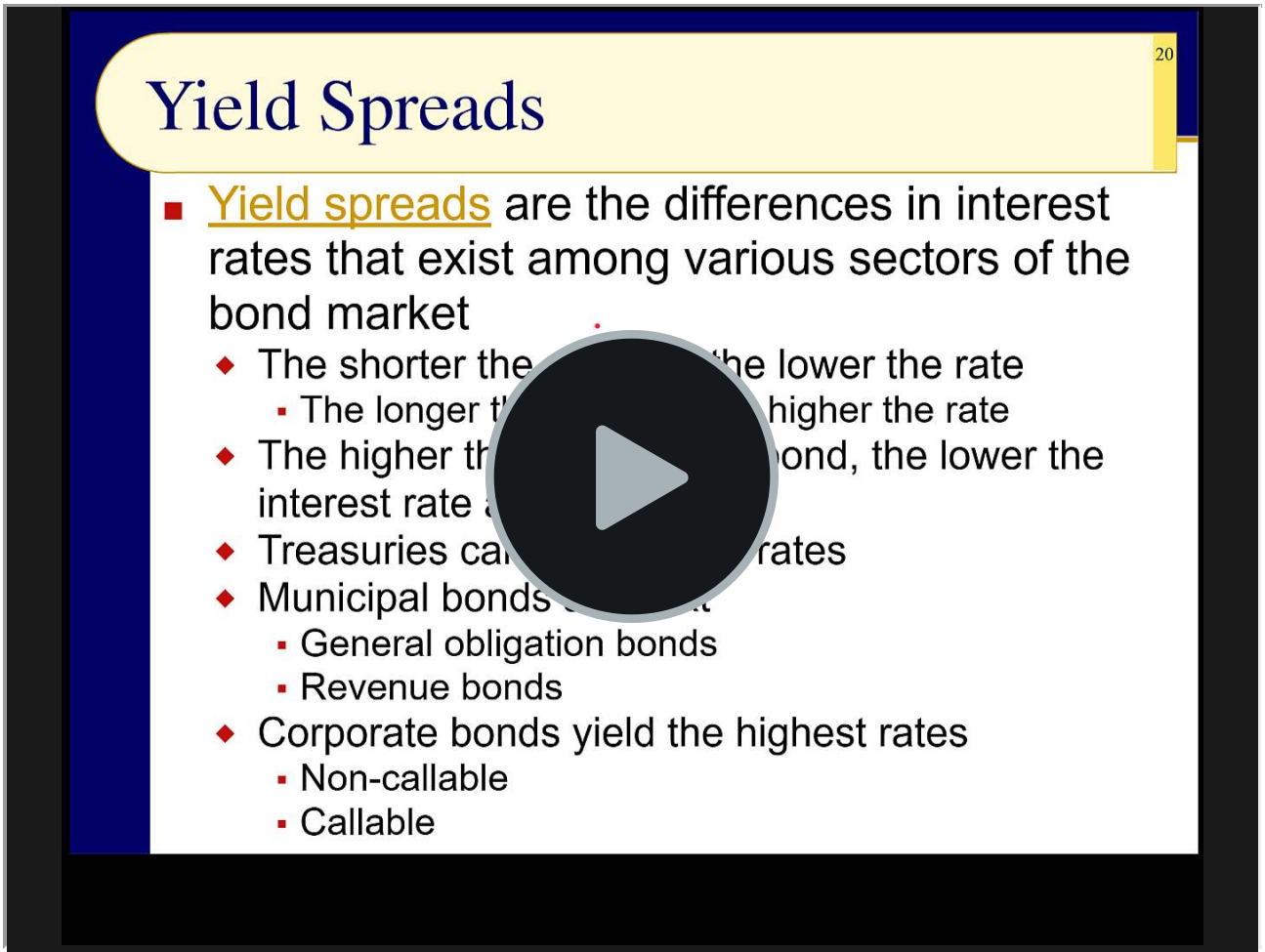
It turns out, the higher the taxpayer's marginal tax bracket, the higher the Taxable Equivalent Yield and the Double Tax-free Equivalent Yield will be. For this reason, as mentioned, municipal bonds are more desirable for those in the high income tax

brackets. For those in the lower tax brackets, municipal bond yields often do not compete with fully taxable corporate bonds. We must always compute the Taxable Equivalent Yield or the Double Tax-free Equivalent Yield before we can make an informed decision about which bond is best for us.

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9.2: Yield Spreads and the Yield Curve



Video - Audio - YouTube

Yield Spreads

Yield spreads are the differences in interest rates that exist among various sectors of the bond market. The shorter the maturity, the lower the rate. The longer the maturity, the higher the rate. The higher the rating of the bond, the lower the interest rate and vice versa. Treasuries carry the lowest rates. Municipal bonds are next with general obligation bonds carrying rates lower than revenue bonds. Corporate bonds yield the highest rates, especially distressed “junk” bonds. In general, non-callable bonds carry lower rates than callable bonds.

Fidelity Fixed Income & Bond Yields

	3mo	6mo	9mo	1yr	2yr	3yr	5yr	10yr	20yr	30yr+
CDs (New Issues)	4.30%	4.25%	4.25%	4.40%	4.50%	4.55%	4.60%	4.60%	--	--
BONDS										
U.S. Treasury	4.32%	4.38%	4.31%	4.46%	4.26%	4.28%	4.34%	4.47%	4.79%	4.71%
U.S. Treasury Zeros	3.95%	4.09%	4.13%	4.19%	4.28%	4.35%	4.43%	4.63%	4.93%	4.61%
Agency/GSE	4.38%	4.36%	4.33%	4.38%	4.63%	4.9%	5.1%	5.63%	6.00%	6.25%
Corporate (Aaa/AAA)	4.05%	4.20%	4.08%	4.23%	4.55%	4.29%	4.64%	4.83%	4.97%	5.32%
Corporate (Aa/AA)	4.28%	4.31%	4.33%	4.44%	4.44%	4.56%	4.69%	5.04%	5.49%	5.62%
Corporate (A/A)	4.56%	4.77%	4.49%	5.07%	4.83%	5.13%	5.55%	5.77%	6.01%	6.13%
Corporate (Baa/BBB)	4.78%	4.91%	4.88%	5.18%	5.70%	6.19%	6.41%	7.16%	6.56%	7.87%
Municipal (Aaa/AAA)	3.09%	3.28%	3.02%	3.00%	3.39%	3.70%	3.97%	4.07%	4.62%	4.12%
Municipal (Aa/AA)	3.82%	3.58%	3.53%	3.53%	3.66%	3.88%	4.36%	4.55%	4.80%	4.37%
Municipal (A/A)	3.56%	3.2%	3.55%	3.64%	3.51%	4.00%	3.87%	4.62%	4.72%	4.7%
Taxable Municipal*	5.00%	4.78%	4.75%	4.78%	4.94%	4.90%	5.07%	5.61%	5.50%	6.04%

Source: Fidelity https://fixedincome.fidelity.com/ftgw/fi/FILanding, March 7, 2025

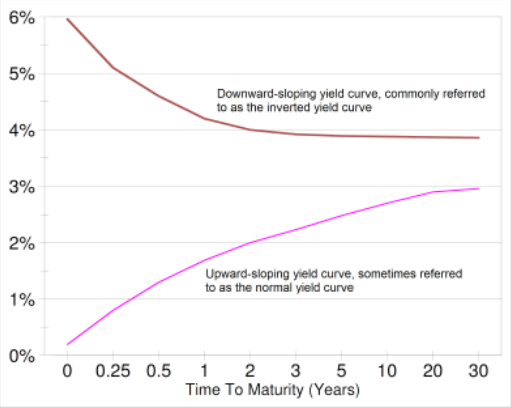
Often, investors will speak about the bond spreads as being “tight” or “wide.” A “tight” spread signifies the interest rates among the bonds they are evaluating are very close to one another. An example of a “tight” spread would be if Treasury bonds were paying 4.8% and corporate bonds were paying 5.1%. A “wide” spread denotes there is a big difference between the bond interest rates. An example of a “wide” spread would be if Treasury bonds were paying 3.2% and corporate bonds were paying 8.2%. In yet another attempt to confuse the general population and show how smart they are, experts in the media use the term "basis point" to signify 0.01 of a percentage. 100 basis points equals 1%. The first “tight” spread example has a 30-basis points spread, 0.30%. The second “wide” example has a 500-basis point spread. For several years, bond yield spreads were very tight. During the turmoil of 2008/2009, the yield spreads widened to levels not seen in decades. They narrowed significantly during the 2010’s and now have widened somewhat since 2022 as interest rates rose.

The Yield Curve

The yield curve is a graph that represents the relationship between a bond’s maturity and its yield at a given point in time. The yield curve is also used to make comparisons among types of bonds. Normally, the yield curve is upward sloping. Longer term bonds have higher interest rates than shorter term bonds and bills. However, sometimes the yield curve is downward sloping. Shorter term bonds and bills have higher interest rates than longer term bonds. This is called an “inverted yield curve.” When bond yields follow an inverted yield curve, the investment world sits up and takes special notice as we shall see.

Normal Upward-sloping Yield Curve

The upward-sloping yield curve is considered normal. Indeed, for the vast majority of time, the yield curve is upward-sloping and is often called a normal upward-sloping yield curve.



Why do longer term debt securities normally have higher interest rates than shorter term debt securities? There are three hypotheses. The Expectations Hypothesis states that the shape of the yield curve reflects investors’ expectations of future interest

rates. The Maturity Preference Hypothesis, also called the Liquidity Preference Hypothesis, states that investors tend to prefer the liquidity of short-term securities and, therefore, require a premium to invest in long-term securities. The Market Segmentation Hypothesis believes that the market for debt is segmented on the basis of maturity. Supply and demand within each segment determine the prevailing interest rate. Each of these three theories makes sense and each has some merit. But how do we account for the times when the yield curve is inverted? What factors could cause an inverted yield curve to occur? And what can an inverted yield curve tell us about the future of the economy?

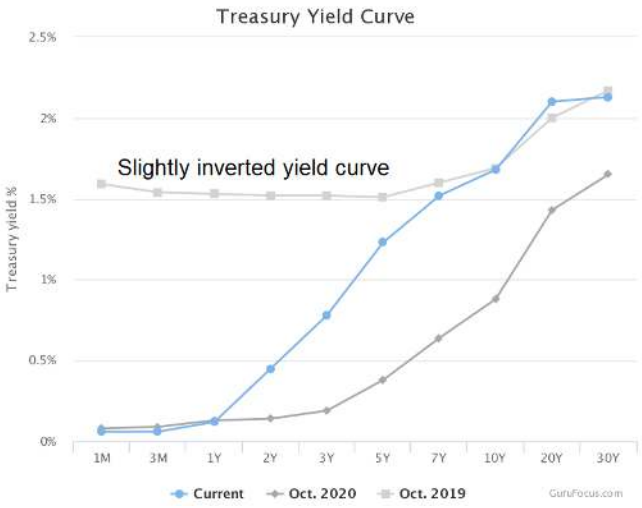
Atypical Downward-sloping Yield Curve, the Dreaded Inverted Yield Curve

Since World War II, every time the yield curve has inverted when short-term rates were higher than long-term rates, the economy has fallen into a recession. The only exception was 1966. The yield curve inverted in 2019, ever so slightly, causing renewed fears of an imminent recession. But then the yield curve reversed strongly as the virus turmoil hit.

For about two years before the beginning of 2008, the yield curve was slightly inverted. The bond market was predicting a recession for over two years. The stock market, for the most part, didn't believe them. It wasn't until fall of 2008 that the officials charged with tracking the economy acknowledged that we were in a recession. It took over two years, but the bond "ghouls" were finally proven right.

That's odd. Why are bond investors sometimes referred to as the "bond ghouls?" Think about the dynamics of the economy. When do interest rates rise? Interest rates usually rise when the economy is growing and getting stronger. Wages are rising, corporate earnings are healthy, life is good … but not for the bond investors! They see their bond prices falling. When do interest rates fall? Interest rates invariably fall when the economy falls into recession. Unemployment rises, corporate earnings are weak, life is not good … except for the bond investors! They see their bond prices rising. Of course, "bond ghouls" is a somewhat pejorative term. Luckily, it is usually used in jest because as we shall see, if bond investors keep a long-term perspective, rising interest rates means that newer bonds will be paying higher interest. Life is good for prudent long-term oriented investors.

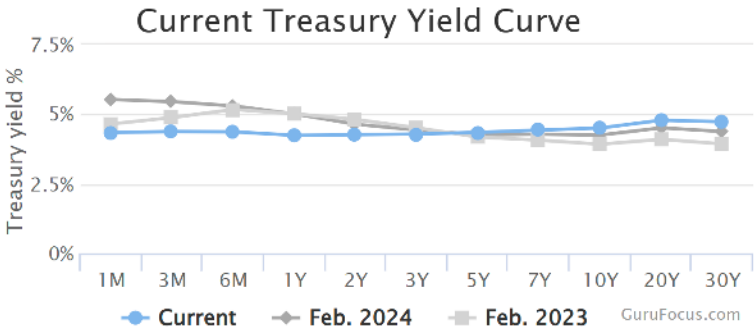
Here was the current yield curve as of later 2021:



Source: GuruFocus.com, October 25, 2021

Notice how the yield curve was slightly inverted in 2019. Although there was much talk of a coming recession during 2019, many experts were quick to point out that the yield curve could be inverted for quite some time before the economy actually fell into recession. Covid-19 came onto the scene and the short-term end of the yield curve collapsed as the Federal Reserve lowered short-term interest rates back to zero and bond investors braced for a pandemic-induced recession.

Here was the yield curve as of February 2025:

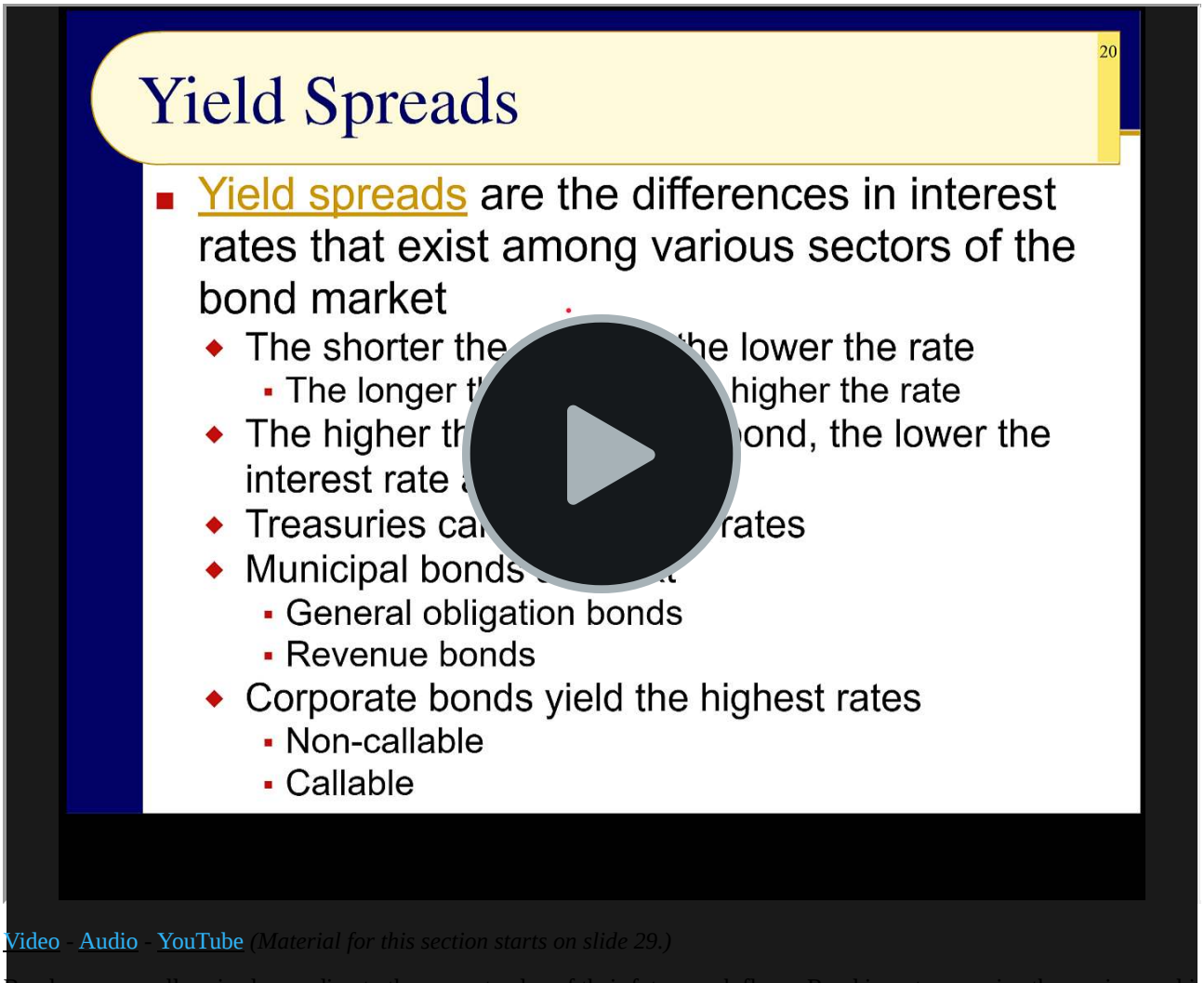


Source: GuruFocus.com, February 17, 2025

The yield curve is still inverted, ever so slightly. For years, the pundits have been spinning their narratives about why the yield curve is inverting and what were the chances for a recession in the following months. The challenge this particular time was the unprecedented events that are taking place. Many believed we have finally emerged from the Covid pandemic while others note that the anti-vaccine movement that was spawned from Covid is just starting to ravage some areas of our country and the world with diseases we thought we had vanquished. On top of that, there was the invasion into Ukraine by Russia that that has bogged down into a bloody stalemate. The Federal Reserve Bank and central banks around the world ratcheted up have short-term interest rates to curtail inflation in 2022 and began lowering them in 2024 only to see the prospects of massive tariffs and mass deportations threaten to reignite inflation. It is a very murky and uncertain time. Is a painful recession just around the corner from this morass? Stay tuned!

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9.3: Bond Valuations



Video - Audio - YouTube *(Material for this section starts on slide 29.)*

Bonds are normally priced according to the present value of their future cash flows. Bond investors receive the semi-annual interest payments and the repayment of principal. Of course, other factors will always need to be considered such as the credit-worthiness of the issuer. If an issuer runs into trouble, the price of their outstanding bonds will fall because investors will be afraid of default.

The Discounted Cash Flow Model, Repurposed

Wait a minute! We just said that bonds are normally priced according to the present value of their future cash flows. Doesn't that sound familiar? Yes, it's the Discounted Cash Flow Model! The predicted bond price equals the present value of the yearly interest income and the present value of the principal repayment when the bond matures. Since bonds pay interest normally every six months, we really should use semi-annual compounding. However, annual compounding is easier to compute and will give you almost the exact same answer. Annual compounding computations are easily done using the present value tables. Of course, spreadsheets make annual compounding and semi-annual compounding calculations very easy. Here is the formula:

```
Predicted
  Bond    = PresentValue (InterestIncome) + PresentValue(Principal Repayment)
 Price
```

First, we will learn how to do the calculation manually. We will then demonstrate the spreadsheet bond calculator which not only is much easier but also much more flexible. The manual calculation involves using our old friend, the present value table from chapter 4. That table gives us the present value multipliers for single payments. However, we will add another version of the present value tables to the mix. We could do the calculations using just the chapter 4 present value table. The only problem is that

since bonds pay the same fixed amount each year, it would be very tedious to calculate the present value of each and every year. We would have to do 30 multiplications for a 30-year bond! This new present value table allows us to calculate the present value for a series of payments in just one multiplication calculation. That boils down the entire formula to just two multiplication calculations. The formula becomes:

```
 Predicted     Annual       Present Value              Principal    Present Value
   Bond    =  Interest  *  Multiplier for a      +     Repayment * Multiplier for a
  Price        Payment    Stream of Payments                        Single Payment
```

The left side of the formula computes the present value of the fixed annual bond interest payments. The right side of the formula computes the present value of the principal payment we will receive when the bond matures. We are calculating what the future stream of cash flows from the bond are worth to us today, in the present.

You are thoroughly lost, yes? Again, as was the case when we first learned about present value and discounting and the Discounted Cash Flow Model, the words and concepts are very confusing but the calculations are very easy. After we do the calculations, go back over the paragraphs above and it should make more sense.

Let's look at an example bond. Idaho Power Company is an electrical power utility company serving Idaho and Oregon. As of April 2023, they have a 5.50% bond coming due in 10 years on 1-Apr-2033, with a par value of $1,000. The bond is rated A-. It was priced to yield 4.994%. This yield is close to 5% so we will use 5% for 10 years since the tables only display data for exact percentages and exact years. Here is a snippet of the present value tables:

Present Value of $1 Stream of Payments

	1%	2%	3%	4%	5%	6%
1	0.990	0.980	0.971	0.962	0.952	0.943
2	1.970	1.942	1.913	1.886	1.859	1.833
3	2.941	2.884	2.829	2.775	2.723	2.673
4	3.902	3.808	3.717	3.630	3.546	3.465
5	4.853	4.713	4.580	4.452	4.329	4.212
6	5.795	5.601	5.417	5.242	5.076	4.917
7	6.728	6.472	6.230	6.002	5.786	5.582
8	7.652	7.325	7.020	6.733	6.463	6.210
9	8.566	8.162	7.786	7.435	7.108	6.802
10	9.471	8.983	8.530	8.111	7.722	7.360
11	10.368	9.787	9.253	8.760	8.306	7.887

Present Value of $1 Lump Sum Investment

	1%	2%	3%	4%	5%	6%
1	0.990	0.980	0.971	0.962	0.952	0.943
2	0.980	0.961	0.943	0.925	0.907	0.890
3	0.971	0.942	0.915	0.889	0.864	0.840
4	0.961	0.924	0.888	0.855	0.823	0.792
5	0.951	0.906	0.863	0.822	0.784	0.747
6	0.942	0.888	0.837	0.790	0.746	0.705
7	0.933	0.871	0.813	0.760	0.711	0.665
8	0.923	0.853	0.789	0.731	0.677	0.627
9	0.914	0.837	0.766	0.703	0.645	0.592
10	0.905	0.820	0.744	0.676	0.614	0.558
11	0.896	0.804	0.722	0.650	0.585	0.527

The new table on the left allows us to calculate the present value of a series of payments, also known as a stream of payment or multiple payments. The table on the right is the same table we used in chapter 4. It allows us to calculate the present value of a single, lump sum payment. The annual payment for a $1,000 par value bond paying 5.50% is $55. The formula becomes:

```
 Predicted     Annual       Present Value              Principal    Present Value
   Bond    =  Interest  *  Multiplier for a      +     Repayment * Multiplier for a
  Price        Payment    Stream of Payments                        Single Payment
```

```
Predicted
Bond Price = $33.00 * 7.360 + $1,000 * 0.558 = $242.88 + $558 ≅ $800.88
```

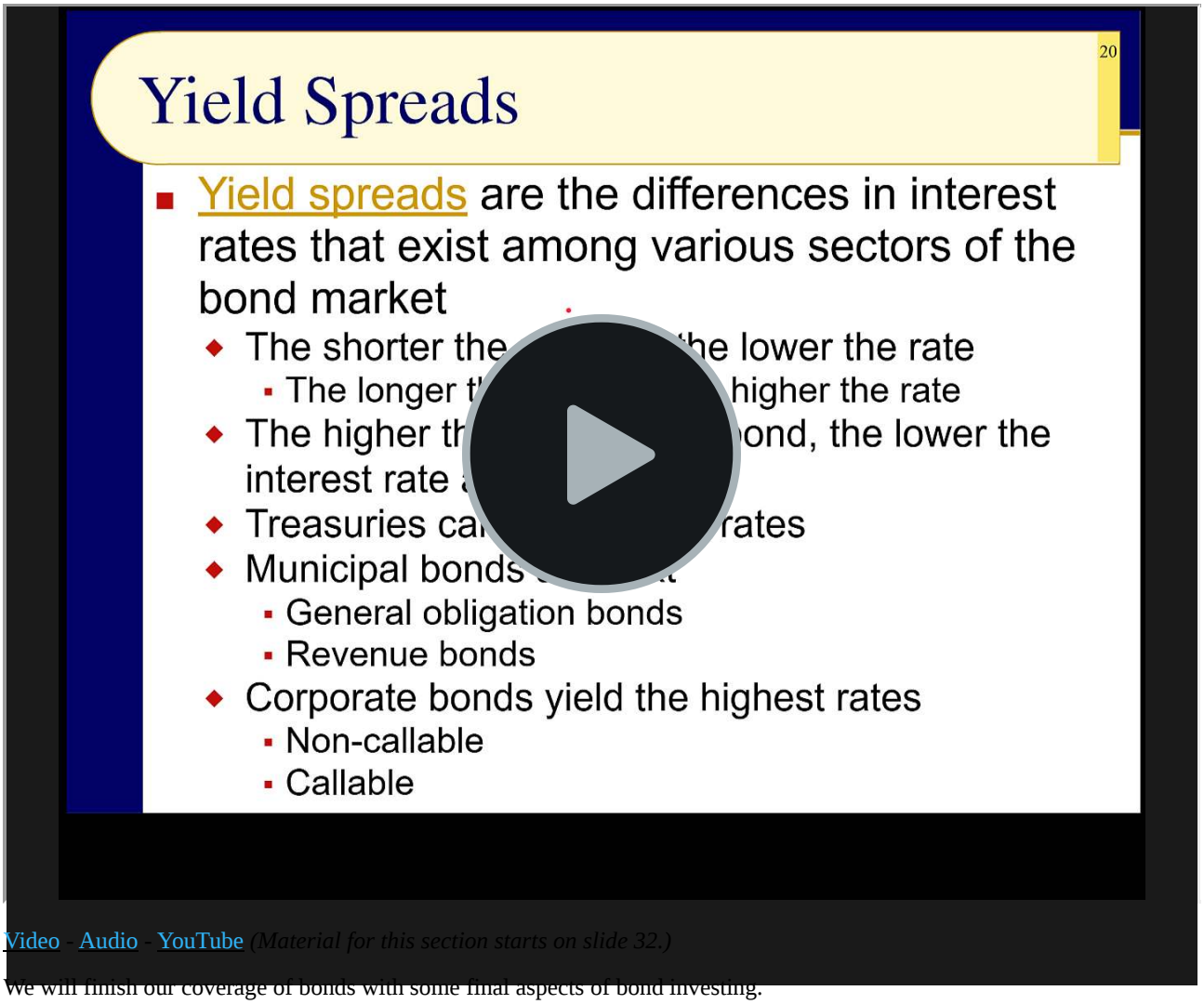
For the left side of the formula, we use the left table. We go across to 6%, the "priced to yield" value, and then go down to the 10th year. The present value multiplier is 7.360. We multiply the annual interest payment of $33 by the present value multiplier for a stream of payments at 6% for 10 years. That gives us $242.88 on the left side. The ten interest payments we will receive in the future are worth approximately $242.88 today in the present. On the right side, we use the right table. We go across to 6% and down to year 10. The present value multiplier is 0.558. We multiply the principal repayment of $1,000 by the present value multiplier for a single payment at 6% for 10 years. This result is $558; the $1,000 bond principal repayment we will receive in ten years when the bond matures is worth $558 today in the present. Adding together the two values gives us $800.88. This is our prediction for the bond price.

How close were we to the actual price? The quoted price on FINRA on February 18th, 2025, was $797.76. The bond spreadsheet calculator on the class website gave us $800.31 for annual payments and $802.91 for semi-annual payments. Pretty close, eh? Why is the prediction using semi-annual payments a bit higher than the annual payments prediction? We are getting paid every six months instead of waiting until the end of the year for the full payment. That makes the present value worth more, not much more, but more.

As mentioned, using the present value tables is impractical. The tables only display present value multipliers for exact years and exact percentages. There is an exponential formula but remember, we promised that you would only need a 99¢ calculator. However, Google Docs is free to use with a Google account. Please view the presentation about the bond spreadsheet calculator and explore the bond spreadsheet calculator itself. Plug in different values and watch how the bond price predictions change.

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9.4: Some Final Aspects of Bond Investing



Video - Audio - YouTube *(Material for this section starts on slide 32.)*

We will finish our coverage of bonds with some final aspects of bond investing.

Reinvestment Risk

Reinvestment risk is the uncertainty about the future value of an investor's bond investments that result from the need to reinvest bond interest payments and redemptions at yields not known in advance. Changing interest rates don't only affect the price of your bonds. They also affect your future income as you need to reinvest the interest income and bond repayments. If interest rates have fallen, although bond prices will have risen, your income level will fall as you reinvest your income and bond repayments. Likewise, if interest rates have risen, although bond prices will have fallen, your future income level will rise from reinvesting in higher paying bonds. This exact scenario is played itself out between 2022 and 2023. Interest rates rise, bond prices fell. No doubt many bond investors, especially those who never experienced a bond market downturn, were alarmed that the values of their bonds were falling. However, newly issued bonds started paying higher interest rates. This is yet another example of why it is important for prudent, patient investors to keep a long-term perspective, no matter what the investment alternative.

Duration and Immunization

Duration is a measure of a bond price's sensitivity to changes in interest rates and bond yields. Duration captures both price and reinvestment risk. It is used to indicate how a bond will react in different interest rate environments. The duration of a bond changes as it approaches its maturity date and current interest rates change. In general, the longer a bond's maturity, the longer its duration and the higher a bond's nominal rate and yield-to-maturity, the shorter its duration. Theoretically, the shorter the duration,

the less potential price volatility the bond will exhibit from interest rate changes. The longer the duration, the most potential price volatility the bond will exhibit.

Investors who have a specified time horizon can use bond immunization to increase the probability of successfully achieving their desired goal. The goal is to keep the average duration of your bond investments equal to your time horizon. An investor would thus be more protected against interest-rate induced price swings. The problem with this strategy is that it requires constant rebalancing of your bond portfolio since durations of bonds change as interest rates change and bonds get closer to maturity. Only bond investors with very large bond portfolios would easily be able to implement this strategy. Hence, this strategy is mostly used by pension funds, bond mutual fund managers, life insurance companies, and other institutional investors with very large bond portfolios.

Bond Investment Strategies

There are three major types of bond investment strategies. The most common is the Income Strategy where investors purchase the bonds simply for the interest income they produce and typically hold the bonds until maturity. The Capital Gains Strategy entails speculating that interest rates will fall and capitalizing on the general increase in bond prices. Another form of the Capital Gains Strategy involves researching, identifying, and purchasing distressed, high-yield "junk" bonds in anticipation of the bonds increasing in credit quality and prices. The final strategy is the Total Return strategy. Investors purchase bonds for both the income and the possibility of capital gains. You will notice that there are many bond mutual funds that have the term "Total Return" in their name.

Which of these would be the easiest to implement? Which would be the hardest? The Income Strategy is the easiest method since the investor is unconcerned with the direction of interest rates and will typically keep mostly high-quality bonds in a portfolio. The Capital Gains Strategy is the most difficult as speculating on interest rates and the rehabilitation of junk bond issuers is not easily done. In fact, there are many professionals being paid tremendous sums of money to inaccurately predict the future of interest rates. (Can you imagine how much money they could make if they could accurately predict the future of interest rates?) Last, the Total Return strategy, being a mixture of the first two, sits somewhere in between.

Bond Laddering

A common method of diversifying a bond portfolio is bond laddering. This strategy involves purchasing bonds with staggering maturities. An investor, or more likely a pension fund manager or bond mutual fund manager, will purchase some bonds with short-term maturities, some with intermediate-term maturities and some with long-term maturities. Thus, the investor owns some higher-paying long-term bonds with the accompanying interest rate risk while also protecting the total portfolio with some lower-paying intermediate-term and short-term that carry much less interest-rate induced rate.

Here were interest rates as of October 25, 2021:

	Interest Rate	Maturity Date	Maturity (years)
3-month Treasury	0.04%	Jan 2022	0.25
6-month Treasury	0.06%	Apr 2022	0.5
2-year Treasury	0.47%	Oct 2023	2
2-year A Corporate	1.01%	Oct 2023	2
5-year Treasury	1.17%	Oct 2026	5
5-year A Corporate	1.73%	Oct 2026	5
10-year Treasury	1.63%	Oct 2031	10
10-year A Corporate	2.74%	Oct 2031	10
20-year A Corporate	3.52%	Oct 2041	20
30-year Treasury	2.08%	Oct 2051	30
30-year A Corporate	3.99%	Oct 2051	30

Data as of October 25, 2021 Source: Fidelity https://fixedincome.fidelity.com/ftgw/fi/FILanding

What a difference less than six months can make. Here are interest rates as of April 1, 2022:

	Interest Rate	Maturity Date	Maturity (years)
3-month Treasury	0.75%	Jul 2022	0.25
6-month Treasury	1.22%	Oct 2022	0.5
2-year Treasury	2.49%	Apr 2024	2
2-year A Corporate	2.97%	Apr 2024	2
5-year Treasury	2.59%	Apr 2027	5
5-year A Corporate	3.81%	Apr 2027	5
10-year Treasury	2.39%	Apr 2032	10
10-year A Corporate	3.95%	Apr 2032	10
20-year A Corporate	4.51%	Apr 2042	20
30-year Treasury	2.45%	Apr 2052	30
30-year A Corporate	4.78%	Apr 2052	30

Data as of April 1, 2022 Source: Fidelity https://fixedincome.fidelity.com/ftgw/fi/FILanding

After peaking in 2023, the Federal Reserve Bank began lowering short-term interest rates in 2024. Below are the rates as of February 17, 2025. The expectation was that they would continue to lower short-term rates as the economy cooled and inflation

was brought under control. However, with the prospect of massive tariffs and mass deportation in early 2025, the Fed will have to wait to see if inflation picks up again.

	Interest Rate	Maturity Date	Maturity (years)
3-month Treasury	4.23%	May 2025	0.25
6-month Treasury	4.38%	Aug 2025	0.5
2-year Treasury	4.26%	Feb 2027	2
2-year A Corporate	4.83%	Feb 2027	2
5-year Treasury	4.34%	Feb 2030	5
5-year A Corporate	5.55%	Feb 2030	5
10-year Treasury	4.47%	Feb 2035	10
10-year A Corporate	5.77%	Feb 2035	10
20-year A Corporate	6.01%	Feb 2045	20
30-year Treasury	4.71%	Feb 2055	30
30-year A Corporate	6.13%	Feb 2055	30

Data as of February 17, 2025 Source: Fidelity https://fixedincome.fidelity.com/ftgw/fi/FILanding

We always knew that someday, interest rates would begin to rise back to historical norms. It is unlikely that anyone would have thought the rise would begin because of the shutting down of the global economy because of a global pandemic with the subsequent supply/demand imbalances causing global inflation and then compounding the misery by Russia invading Ukraine. (What's next? China invading Taiwan?) And if the tariffs and deportations cause a recession as is predicted, the Federal Reserve Bank will be in a very difficult situation. They will want to lower interest to help the economy get out of a recession but will also want to raise interest rates to bring down inflation. Please keep the Federal Reserve Bank in your thoughts and prayers in the coming year. I know I will.

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9.S: Summary

Congratulations – You Have Finished Chapter 9 – Bond Yields and Valuations

You have reached the end of chapter 9, Bond Yields and Valuations. In this chapter, you have:

- Reviewed the importance of bond yields
- Explored the various types of bond yields and bond yield calculations
- Examined the taxable-equivalent yield calculations for municipal bonds
- Discussed bond yield spreads and the bond yield curve and what an inverted bond yield curve can tell us about the future state of the economy
- Explored bond valuation techniques
- Discussed various bond investment strategies and the technique of bond laddering

You should now be able to:

1. Describe the importance of bond yields and the various types of bond yields
2. Calculate current yield, yield to maturity, and yield to call
3. Calculate the Federal tax-exempt taxable equivalent yield and double tax-exempt taxable equivalent yield for municipal bonds
4. Identify wide versus tight (aka narrow) bond yield spreads
5. Explain the bond yield curve and what an inverted bond yield curve typically signifies for the near-term future state of the economy
6. Calculate bond valuations using a variation of the Discounted Cash Flow Model
7. Identify and explain various bond investment strategies and be able to construct a bond ladder investment program

We Are Done with Bonds

And congratulations are also in order since we have finished our journey of studying all the major financial investment alternatives. In our next module, we will take a brief look at hybrid securities such as preferred stock and convertible bonds. They are a very small piece of the investment universe and not very popular with the general investing public, especially preferred stocks. After that, we will go back to the very beginning of the semester and tie together everything we have learned.

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CHAPTER OVERVIEW

Chapter 10: Hybrid Securities: Preferred Stock and Convertibles Securities

> *The Best of Both Worlds, The Worst of Both Worlds*

Learning Objectives

In this chapter, you will

- Be introduced to the two major forms of hybrid securities, preferred stock and convertible securities
- Examine the advantages and disadvantages of preferred stocks and convertible securities

By the end of this chapter, you should be able to

- Identify the advantages and disadvantages of preferred stock and convertible securities
- Describe the main reason that preferred stock is most likely owned by corporations instead of retail investors
- Calculate the various measures of convertible securities

Hybrid Securities: The Best and Worst of Both Worlds

In a backwater of the investment universe rarely visited by retail investors lives a group of instruments known as hybrid securities. It is very unlikely that you as an individual retail investor will choose hybrid securities as part of your investment portfolio but you never know. You may be drawn to these instruments. At the very least, you need to be able to explain the inherent problems with these choices for retail investors to your brother-in-law who is all excited about buying preferred stock instead of just plain old common stock.

Presentation file - Study guide

10.1: Preferred Stock

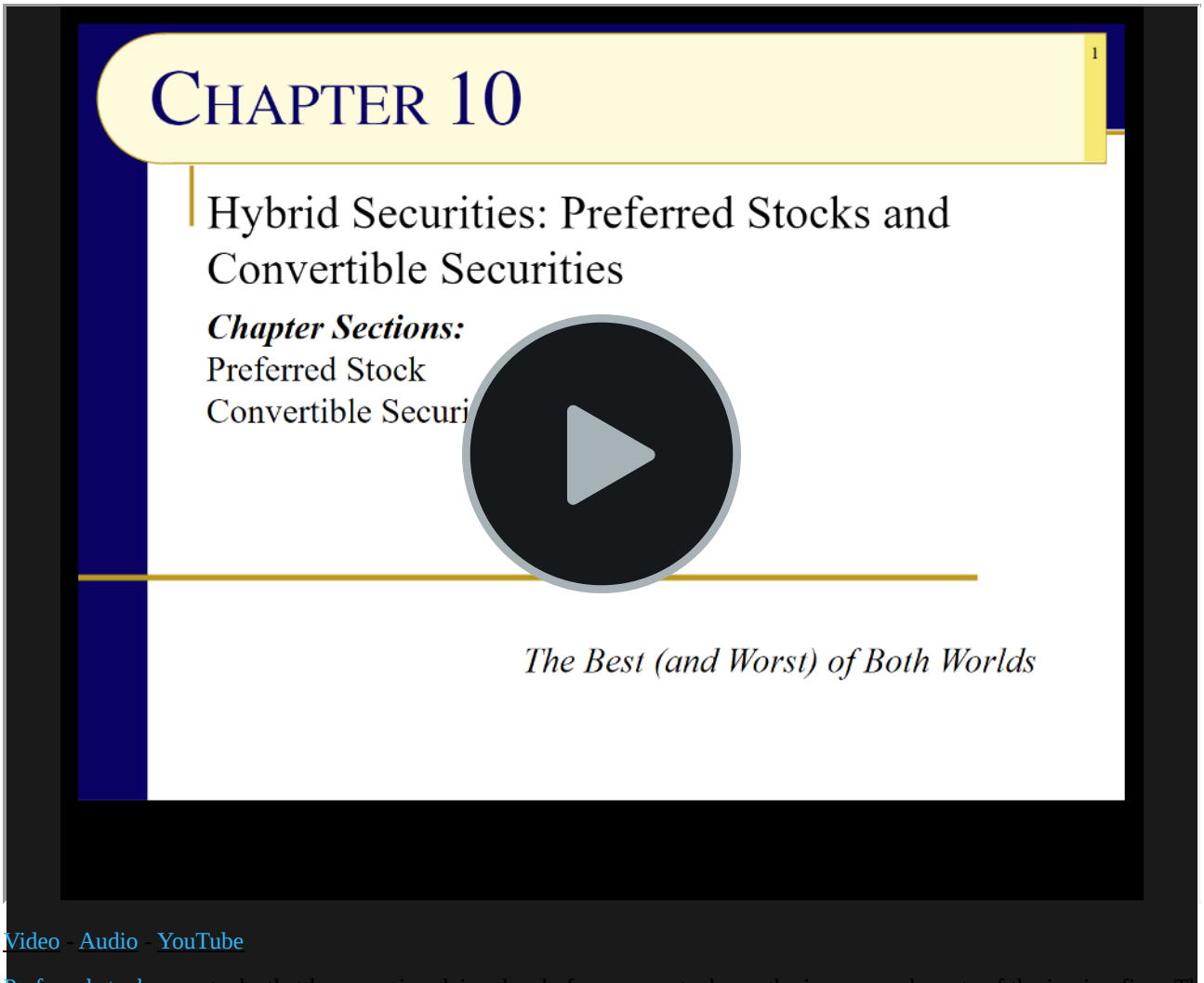
10.2: Convertible Securities

10.S: Summary

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10.1: Preferred Stock



Video - Audio - YouTube

Preferred stocks are stocks that have a prior claim ahead of common stocks on the income and assets of the issuing firm. They are one type of Hybrid Security. They are sometimes called Fixed-income Stocks because they usually pay a fixed dividend. The dividend is usually a percentage of a preset par value of the preferred stock in much the same way as a bond pays a fixed interest amount on the par value of the bond. However, preferred stocks represent equity and therefore, do not count as debt on the corporate balance sheet. And like common stocks, there is no maturity date as there is with a bond. There is also no guarantee of continued dividends; a corporation can suspend preferred stock dividends at any time. In case of corporate default, preferred stocks have priority over common stockholders but are subordinate to bonds. They are truly a hybrid mixture of both stocks and bonds.

When people hear the term preferred stock, they often believe that preferred stock is a better choice than common stock. It is true that preferred stock typically pay a reliable stream of dividend income and have priority over common stock investors in case of default. The critical issue, however, is that preferred stock typically does not participate in the success of the corporation, whereas common stock does participate in the success. For this reason, some professionals refer to preferred stock as bonds even though, legally, they are not bonds. The interest payments on bonds are mandatory; the dividend payments from preferred stock are not mandatory.

The Advantages and Disadvantages of Preferred Stocks

Preferred stocks typically offer a highly predictable stream of dividend income and, as a whole, have an excellent record of meeting those dividend payments. A major benefit of preferred stock is the tax benefits that are offered to corporations who own the preferred stock of another corporation. Corporations that receive dividends on preferred stock can deduct 50% to 65% of the

dividend income from their corporate taxes. This strong incentive to corporations turns out to be a strong disincentive to individual retail investors like us. Because of this provision, corporations are willing to pay a higher price for preferred stocks than would be prudent for individual investors. This is the major reason that although the name preferred stocks is attractive to individual investors, the actual investment vehicle is not.

What are the disadvantages? Preferred stocks are susceptible to inflation risk, similar to bonds. Like common stocks, dividends can be suspended or postponed, unlike bonds, which must pay interest or risk default. Like bonds, because of the fixed nature of the dividends, there is a lack of potential of substantial capital gains, unlike common stock. Last, preferred stocks normally do not pay as well as bonds but the yield has been very close to bonds over time. And of course, the dividends of the common stocks of many corporations have grown substantially over the years whereas preferred stock dividends remain fixed.

We see that preferred stocks have some of the advantages of both stocks and bonds and some of the disadvantages of both stocks and bonds. They offer the best and the worst of both worlds. Also, the universe of preferred stocks is much smaller than either stocks or bonds. For these reasons, many in the industry recommend stocks for growth and income and they recommend bonds for income.

The Yield and Pricing of Preferred Stock

The dividend yield of preferred stock is annual dividend income divided by the preferred stock price, similar to the current yield of a bond or a common stock.

$$\text{Dividend Yield} = \frac{\text{Annual Dividend Income}}{\text{Current Market Price}}$$

For example, if the annual dividend income for a preferred stock were $2 and the current market price were $27.50, then the dividend yield would be:

$$\text{Dividend Yield} = \frac{\$2}{\$27.50} = 0.0727272727 \text{ or } 7.27\%$$

This preferred stock is yielding 7.27% annually.

As with bonds, preferred stock prices fluctuate mostly inversely to interest rates. However, with preferred stock, there is a greater risk of non-payment of dividends. Recall that the dividends for both common stock and preferred stock are not mandatory. Bonds, on the other hand, would be declared to be in default if the interest is not paid. The bond issuer would be hauled off to bankruptcy court.

The pricing formula for preferred stock is:

$$\text{Price} = \frac{\text{Annual Dividend Income}}{\text{Prevailing Interest Rates}}$$

Does this formula look familiar? It's the Zero Growth Model. Well, of course, it is. Preferred stock dividends don't grow! For example, if the annual dividend income were $2.50 and currently, prevailing interest rates are paying 12%, then the formula would become:

$$\text{Price} = \frac{\$2.50}{0.12} = 20.833333 \text{ or } \$20.83$$

We would predict the market price of this preferred stock to be approximately $20.83.

Some Characteristics of Preferred Stock

Some preferred stocks have a conversion feature. They are referred to as Convertible Preferred or just Convertibles. This allows the holder of a preferred stock to convert to a specified number of shares of the issuing company's common stock. This helps alleviate

one of the major disadvantages of preferred stock. With a conversion feature, if the corporation is very successful, the investor can then share in the growth of the common stock. We will discuss convertible securities in more detail in the next section.

A few preferred stocks are Adjustable-rate Preferred Stocks. They are often referred to as Floating-rate Preferred or just Floaters. Instead of being fixed, the dividends are adjusted periodically in line with prevailing interest rates. They are often tied to Treasury rates or other indexes. This helps alleviate the inflation / purchasing power risk.

Some companies issue different classes of preferred stock called Senior Preferred, Preference Stock, or Prior Preferred. Similar to the senior and junior bonds, the most senior preferred stocks are guaranteed to be paid before the less senior (aka junior preferred), etc. Also similar to bonds, preferred stocks can be issued as callable preferred or non-callable preferred. If interest rates fall, the issuer would want to refinance the preferred stock at a lower dividend rate similar to how a bond issuer would want to refinance their bonds at a lower interest rate. Finally, some preferred stock is issued as Participating Preferred Stock. This is a rare form of preferred stock that allows investors to participate in the earnings of a corporation beyond the stated dividend rate, similar to how many companies will increase the dividends of their common stock as their earnings grow.

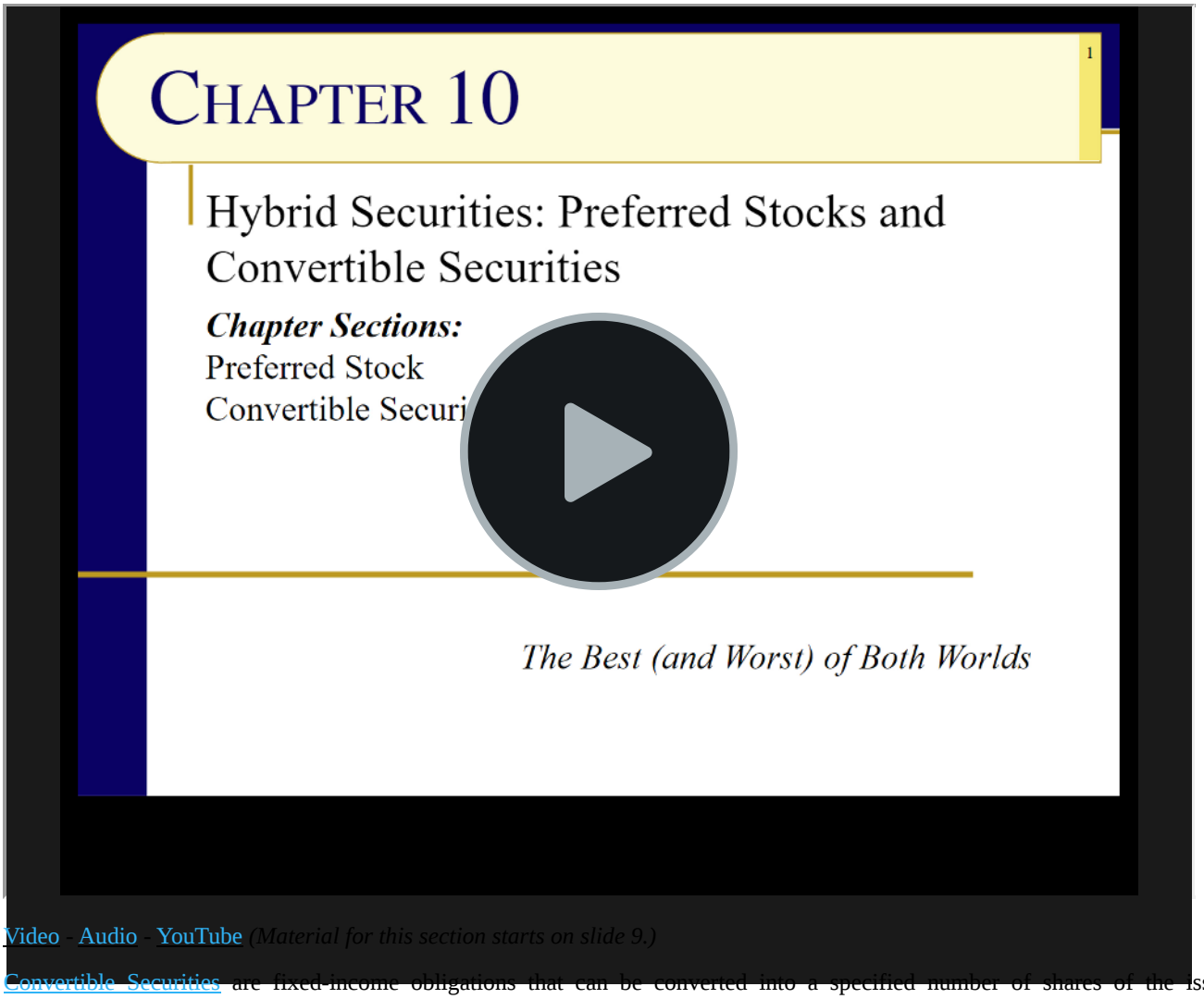
Cumulative versus Non-cumulative Preferred Stock

One of the most sought after types of preferred stock is Cumulative Preferred Stock. Remember that with both preferred stock and common stock, the dividend payments are optional. Both can be suspended at any time. However, with cumulative preferred stock, if the company suspends the preferred stock dividends, those foregone dividends are said to be "in arrears." The "in arrears" dividends must be paid before any future dividends can be paid, whether for preferred or common stock. Hence, cumulative preferred stock is preferable to non-cumulative preferred stock. And as expected, cumulative preferred stock will be able to offer a lower dividend to investors than non-cumulative preferred stock because of this provision.

What is the bottom line on preferred stock? Preferred stock is normally owned by corporations. Some individual investors may acquire a taste for them but it is our opinion you are better off with common stock for growth and income and bonds for income.

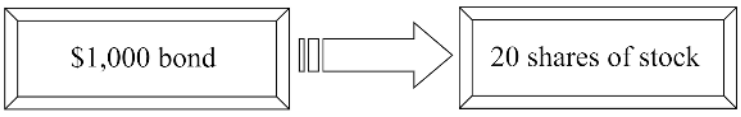
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10.2: Convertible Securities



Video - Audio - YouTube *(Material for this section starts on slide 9.)*

Convertible Securities are fixed-income obligations that can be converted into a specified number of shares of the issuing company's common stock. There are both convertible bonds and convertible preferred stock. Convertible securities are often referred to as Deferred Equity because the convertible securities could become part of the company's pool of common stock in the future. Because of this ability to share in the possible appreciation of common stock, convertible securities are also sometimes referred to as an "Equity Kicker."



Example: A single $1,000 bond can be converted into 20 shares of common stock

One of the major disadvantages of both bonds and preferred stock is that if the company is wildly successful, the bonds and preferred stock do not participate in the success. The ability to convert their convertible security into common stock allows the investor to partake in the potential success of the company. Oh, by the way, once you convert from the convertible bond or convertible preferred stock to the common stock, you can't convert back.

Conversion Measures

There are several measures and conditions of the conversion feature of convertible securities, some are fixed and others depend upon the current price of the company's common stock. The Conversion Period is the time period during which a convertible issue can be converted. The ability to convert a convertible bond or convertible preferred stock is normally deferred for a period of years. This is not usually a serious problem since when the convertible security is issued, a conversion is not normally advantageous to the investor. The common stock price normally will have to rise substantially before an investor would want to convert the security.

The Conversion Ratio is the number of shares of common stock into which a convertible security can be converted and is fixed. In the example above, an investor might receive 20 shares of common stock for each convertible bond. Hence, the Conversion Price is the price per share at which common stock will be delivered to the investor. The formula is:

$$\text{Conversion Price} = \frac{\text{Par Value}}{\text{Conversion Ratio}} = \frac{\$1{,}000}{20} = \$50 \text{ Conversion Price}$$

The Conversion Value is an indication of what a convertible issue would trade for if it were priced to sell on the basis of the price of the corresponding common stock.

$$\text{Conversion Value} = \text{Conversion Ratio} * \text{Market Price of Common Stock}$$

In the example above, if the market price of the common stock were $60, the formula would be:

$$\text{Conversion Value} = 20 * \$60 = \$1{,}200 \text{ Conversion Value}$$

Assuming the conversion period has begun, we would expect the $1,000 convertible bond to be selling for at least $1,200 since an investor can instantly convert the bond into 20 common stock shares worth $1,200. However, the convertible bond would probably sell for more than $1,200 because of its ability to convert to the common stock plus the fact that it is a bond and is generating interest every six months. This extra amount is called the Conversion Premium. It is the amount by which the market price of a convertible security exceeds its conversion value.

$$\text{Conversion Premium} = \text{Market Price of Common Stock} - \text{Conversion Value}$$

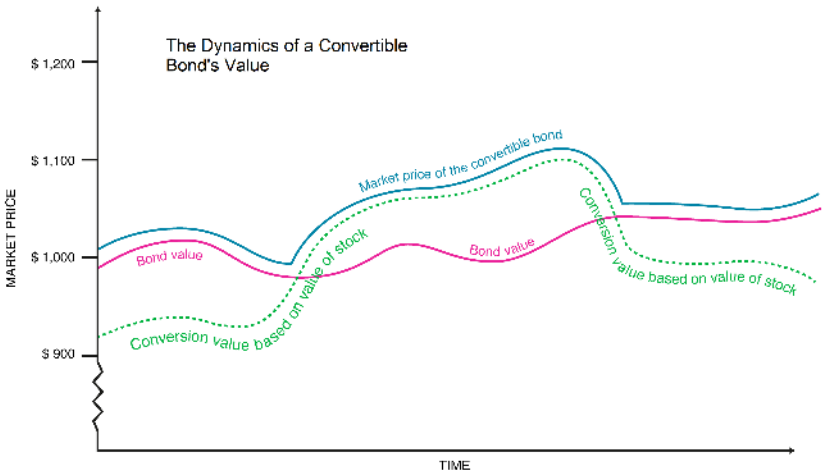
Let's continue the above example. Assume we have a $1,000 bond with conversion ratio of 20 and the common stock shares are trading at $60.00. As computed above, the conversion value is $1,200, 20 shares * $60 market price of the common stock. Let's also assume that the bond is currently selling for $1,400. Therefore, the conversion premium formula would be:

$$\text{Conversion Premium} = \$1{,}400 - \$1{,}200 = \$200 \text{ Conversion Premium}$$

The bond is selling for $200 above the conversion value. The Conversion Parity is the price at which the common stock would have to sell in order to make the convertible security worth its present price. It is also called the Conversion Equivalent. The formula is:

$$\text{Conversion Parity} = \frac{\text{Market Price of Bond}}{\text{Conversion Ratio}} = \frac{\$1{,}400}{20} = \$70 \text{ Conversion Parity}$$

We would expect the market price of common stock to be close to $70. However, the price would most likely be less than $70 because of the convertible security's conversion premium.



Graphic courtesy of Ferran Capo: StudioCapo

The graphic above shows that the value of a convertible bond depends upon both the underlying common stock price and the value of the interest payments and principal repayment that the bond generates. If the underlying common stock price creates a conversion value above and beyond the value of the bond from interest payments and the principal repayment, the bond will sell for more than the value of the bond from just being a bond. However, if the underlying common stock price falls below the value of the bond from just being a bond, the price of the convertible bond will be propped up since the bond is still generating interest payments and the principal repayment.

What's the bottom line on convertible securities? Convertible securities allow you to partake in the potential capital appreciation of the common stock with less risk because of the income from the convertible bond or convertible preferred stock. If the stock price is below the conversion price, then the convertible security's price will be kept up because of its value from being an income producing investment. However, you pay for the reduced risk via the conversion premium. Again, our personal opinion is that we believe individual retail investors are best served by focusing their attention on common stocks for growth and income and bonds for income but there are always exceptions.

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10.S: Summary

Congratulations – You Have Finished Chapter 10 – Hybrid Securities: Preferred Stock and Convertible Securities

You have reached the end of chapter 10, Hybrid Securities: Preferred Stock and Convertible Securities. In this chapter, you have:

- Been introduced to the two major forms of hybrid securities, preferred stock and convertible securities
- Examined the advantages and disadvantages of preferred stocks and convertible securities

You should now be able to:

1. Identify the advantages and disadvantages of preferred stock and convertible securities
2. Describe the main reason that preferred stock is most likely owned by corporations instead of retail investors
3. Calculate the various measures of convertible securities

It is Time to Reflect and Assimilate

We are at a significant milestone, Dear Students. We have covered the major investment alternatives for the vast majority of investors. In our next module, we will look back at what we have covered and attempt to tie it all together. See you in the next module, Portfolio Diversification and Asset Allocation.

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SECTION OVERVIEW

Part 4: Portfolio Diversification and Asset Allocation

Congratulations! We have covered the most important investment alternatives for the vast majority of investors. It is time now to go back to the very beginning of the semester and tie everything together. We will reexamine the eternal struggle of risk versus return. We will see how a well-diversified portfolio can help us reduce risk while still offering us an attractive return. It turns out we can eat reasonably well and sleep reasonably well! We will also take a look at the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging and reexamine the role of mutual funds in diversification. We end with yet another example of what Mr. Benjamin Graham told us many years ago, “The investor’s chief problem, and even his worst enemy, is likely to be himself.”

Chapter 11: Portfolio Diversification and Asset Allocation

11.1: Diversification and Portfolio Risk

11.2: Asset Allocation

11.3: Dollar-Cost Averaging and Mutual Funds, Revisited

11.S: Summary

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CHAPTER OVERVIEW

Chapter 11: Portfolio Diversification and Asset Allocation

> *"Our portfolio is well-diversified. It's 30% hopes, 30% wishes, and 40% prayers."*

Learning Objectives

In this chapter, you will

- Be introduced to the technique of diversification as the major method to reduce risk
- Reexamine the relationship of risk and return
- Examine the role of correlation in assigning risk measurements to asset classes
- Explore the negative correlation, also called the inverse relationship, of stock and bond returns
- Examine the uses of the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging to help reduce risk
- Reexamine the role of mutual funds in reducing risk

By the end of this chapter, you should be able to

- Identify the advantages of a well-diversified portfolio
- Explain the relationship of risk and return and the role of correlation in assigning risk measurements to various asset classes
- Describe the typical negative correlation between stocks and bond and how a diversified portfolio of stocks and bonds can actually help create a portfolio that is less risky than either all stocks or all bonds
- Utilize the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging to help reduce risk
- Describe the role that mutual funds have in reducing risk and how many investors typically sabotage their long-term mutual fund results

It is Time to Reflect and Assimilate

Congratulations! We have covered the most important investment alternatives for the vast majority of investors. It is time now to go back to the very beginning of the semester and tie everything together. We will reexamine the eternal struggle of risk versus return. We will see how a well-diversified portfolio can help us reduce risk while still offering us an attractive return. It turns out we can eat reasonably well and sleep reasonably well! We will also take a look at the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging and reexamine the role of mutual funds in diversification. We end with yet another example of what Mr. Benjamin Graham told us many years ago, "The investor's chief problem, and even his worst enemy, is likely to be himself."

Presentation file - Study guide

11.1: Diversification and Portfolio Risk

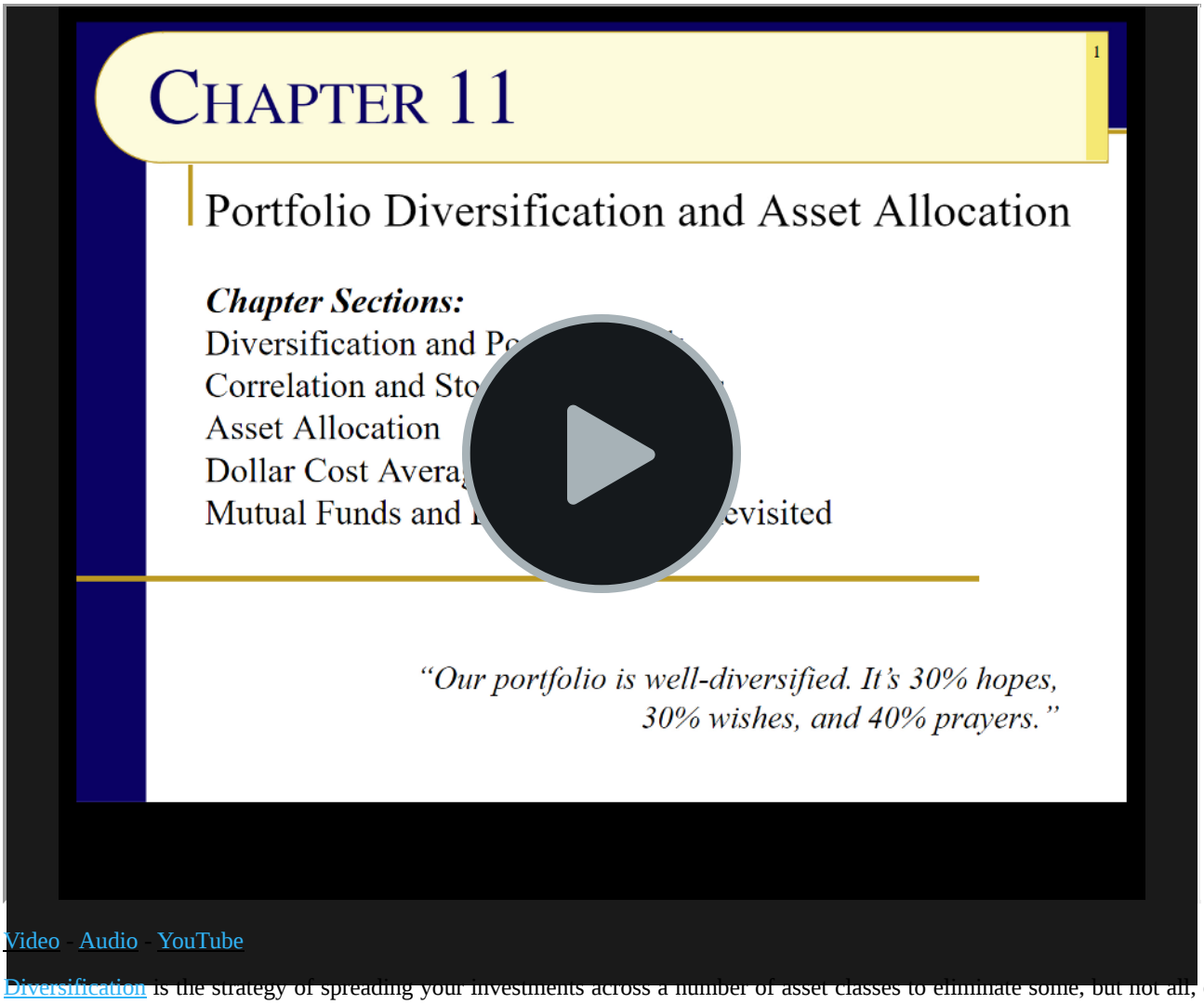
11.2: Asset Allocation

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11.1: Diversification and Portfolio Risk



Video - Audio - YouTube

Diversification is the strategy of spreading your investments across a number of asset classes to eliminate some, but not all, of the risks of investing. We have all heard the saying, "Don't put all your eggs in one basket." Most financial professionals recommend and most investors agree that diversification is a worthy technique for the vast majority of prudent, long-term oriented investors such as ourselves.

However, there are some in the investment community who disagree. They point to the counter advice from famed industrialist Andrew Carnegie, "Put all your eggs in one basket – and watch that basket!" This quote is often attributed to Mark Twain. Mr. Twain made it popular but always attributed the quote to Mr. Carnegie. These two viewpoints once again point to the heart of our choices as investors. Do we want to eat well or do we want to sleep well? Those who follow Mr. Carnegie's advice are more risk tolerant and we wish them well. However, we prudent, long-term oriented investors will hold fast to our diversification strategies, thank you very much.

Why is diversification a good thing? Diversification is one of the best strategies we have for reducing risk.

Market leaders: Total returns (1989–2013)

Calendar year	U.S. large-company stocks	Global small-company stocks	Int'l stocks	Emerging-market stocks	U.S. bonds	Int'l bonds	Cash
1989	31.63%	–	17.03%	64.96%	14.53%	4.31%	8.37%
1990	-3.11	–	-22.74	-10.55	8.96	11.22	7.61
1991	30.40	21.42%	13.95	59.91	16.00	16.04	5.60
1992	7.61	-0.69	-10.97	11.40	7.40	5.80	3.51
1993	10.06	26.95	34.90	74.84	9.75	11.08	2.90
1994	1.32	2.55	6.63	-7.32	-2.92	0.23	3.90
1995	37.53	10.32	9.94	5.21	18.47	19.66	5.60
1996	22.95	7.87	6.68	6.03	3.63	4.91	5.21
1997	33.35	-1.49	2.04	-11.59	9.65	3.79	5.26
1998	28.58	2.19	14.46	25.34	8.69	13.71	4.86
1999	21.04	29.63	30.91	66.41	-0.82	-5.17	4.68
2000	-9.10	-10.28	-15.09	-30.61	11.63	3.10	5.89
2001	-11.88	-6.56	-19.73	-2.62	8.44	1.57	3.83
2002	-22.09	-11.71	-14.95	-6.17	10.26	16.53	1.65
2003	28.67	50.67	40.83	55.82	4.10	12.51	1.02
2004	10.87	23.76	20.91	25.55	4.34	9.27	1.20
2005	4.91	15.90	16.62	34.00	2.43	-1.49	2.98
2006	15.78	20.98	26.65	32.17	4.33	6.64	4.80
2007	5.49	6.83	16.65	39.39	6.97	9.68	4.66
2008	-36.99	-43.68	-45.53	-53.33	5.24	4.79	1.60
2009	26.47	50.67	41.45	78.51	5.93	6.93	0.10
2010	15.08	26.28	11.15	18.88	6.54	5.54	0.12
2011	2.09	-11.30	-13.71	-18.42	7.84	5.64	0.04
2012	15.99	18.06	16.83	18.22	4.21	4.32	0.06
2013	32.37	28.66	15.29	-2.60	-2.02	-2.60	0.02

Source: The Capital Group

The table above highlights the market leaders from 1989 to 2013. Sure, you could have had all your investments in emerging market stocks but be sure to take a close look at the down years. You would have been watching that basket full of all your eggs crash to the floor oodles of times, probably many more than any one person could stomach. It pays to diversify. Also notice that not once was "cash," the common euphemism for short-term investments, the market leader. It pays to invest! This conversation, however, begs the question, how do we measure risk?

Risk versus Return, Revisited

We have come full circle! Way back in chapter 1, we introduced the eternal tug-of-war between risk and return. We saw how the higher the average annual return, the higher the standard deviation and its companion measure variance from the average annual return. We have studied the major financial asset classes, mutual funds, stocks, bonds, "cash" short-term investments. We discussed the risks and returns of each. Return is easy to measure. How much money did you make? How long did it take? That's your return! Risk is very difficult to measure. It is even harder to anticipate.

Most professionals point to variance and standard deviation as the best imperfect measures of risk. To review, variance and its more useful companion, standard deviation, tell us how much an asset class will vary from the expected return. These measures are readily available from the investment community. And da' numbers ain't pretty, For any randomly selected stock on the NYSE, the standard deviation is 49.24%! That means in any one year, many stocks on the NYSE – the most stable stocks! – will vary up or down close to 50% from their annual average return. The company with the largest market capitalization as of May 2023, Apple, for example, has a 5-year standard deviation of over 31.8% (Source: ABG Analytics). So how can we reduce the variance and standard deviation? In other words, how can we reduce the risk?

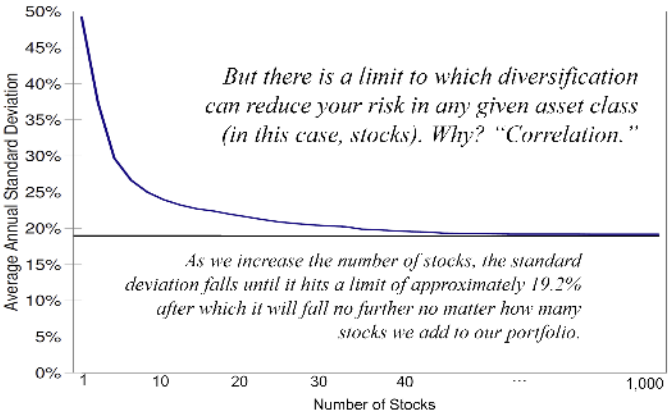
The answer, of course, is to diversify! If we go from 1 randomly selected stock to 2 randomly selected stocks, the standard deviation goes from 49.24% down to 37.36%. If we randomly select 10 stocks, the standard deviation goes down to 23.93%. Choose 20 stocks and the number to 21.68%, and so on. Diversifying our stock portfolio reduces our risk substantially as measured by reduced standard deviation and variance.

The Relationship of the Number of Stocks in a Portfolio and the Standard Deviation of the Portfolio

Number of Stocks	Expected Standard Deviation	Percent Compared to a Single Stock
1	49.236%	100%
2	37.358%	76%
4	29.687%	60%
6	26.643%	54%
8	24.983%	51%
10	23.932%	49%
20	21.677%	44%
25	21.196%	43%
30	20.870%	42%
50	20.203%	41%
75	19.860%	40%
100	19.686%	40%
200	19.423%	39%
300	19.336%	39%
500	19.265%	39%
1,000	19.211%	39%
∞	19.158%	39%

Source: The Capital Group

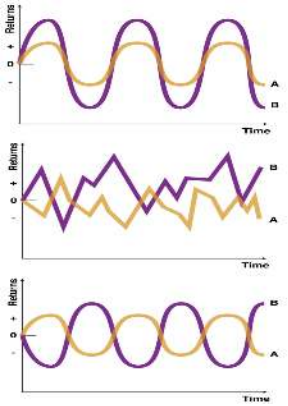
However, there is a limit to how low the standard deviation will go as we add more and more stocks to the portfolio. There is a limit to which diversification can reduce your risk in any given asset class. In this case, we are discussing stocks but the same phenomenon occurs with other asset classes such as bonds or real estate. Notice in the table above, there comes a point where adding more stocks to the portfolio does not lower the standard deviation. Adding more stocks and diversifying more and more does not lower our risk any more. Why is this? What is causing this peculiar behavior? The answer is, "Correlation."



Correlation and the Correlation Coefficient

Correlation is the tendency of the returns of two assets to move together. Of course, no two investment returns will be exactly the same. That is called imperfect correlation and it is the key reason why diversification reduces portfolio risk as measured by the portfolio standard deviation. However asset classes such as stocks tend to move together. We say that assets that tend to move up and down together are positively correlated. On the other hand, assets that move in the opposite direction to one another are negatively correlated.

We measure correlation using the correlation coefficient. The correlation coefficient measures how closely returns on assets move together. The industry uses the letter "r" to denote the correlation coefficient. (Please don't ask me why. It's yet another example of confusing the issue so that you will put your faith in us professionals. My apologies.) The correlation coefficient ranges from 1 or 100% down to 0 down to -1 or -100%. A correlation coefficient of 1 or 100% means that the two assets are perfectly positively correlated. They move in lock step with one another. When one goes up, the other goes up. If the correlation coefficient is -1 or -100%, that means that the two assets are perfectly negatively correlated. When one goes up, the other goes down and vice versa. A correlation coefficient of 0 means that the two are completely unrelated to one another.



*These two investments have **perfect positive correlation**. The correlation coefficient is 1.0 or 100%.*

*These two investments have **no correlation**. They are uncorrelated to one another. The correlation coefficient is 0.0 or 0%.*

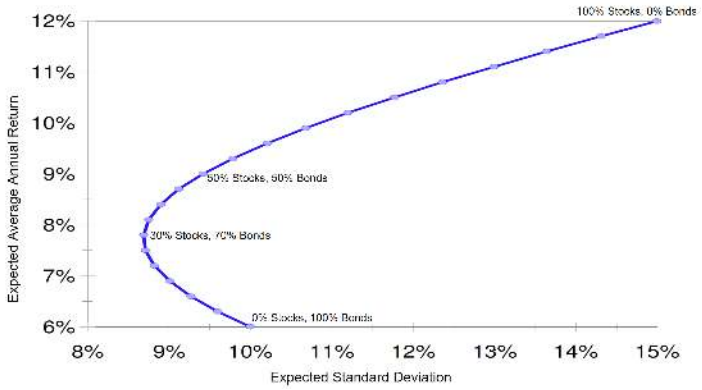
*These two investments have **perfect negative correlation**. The correlation coefficient is -1.0 or -100%.*

Graphics courtesy of Ferran Capo: StudioCapo

So how does this answer our question about why diversification can only reduce by so much the risks of owning stocks? Although stocks are not perfectly correlated, they are positively correlated enough so that stocks in general tend to move in the same direction. This is why we often refer to stock investments as a whole as the stock market, even though at any given time, some companies are doing well, others are doing poorly, and many are simply chugging along as they always have done.

Correlation and Stocks versus Bonds

You may say to yourself, "Darned! That is still too much risk for me! I think I'm gonna' stick to bonds!" You are a very conservative, risk-averse investor and you don't like the volatility of stocks. Therefore, you decide to place all your investments into bonds. You will accept the lower return from the bonds in exchange for the lower risk of the bonds. Oops! Bad idea! Why? This is because, like stocks, bonds are positively correlated with themselves. Bonds also will tend to do well and do poorly as a whole and they are often negatively correlated with stocks! Stocks and bonds often but not always move in opposite directions. Stocks and bonds are typically negatively correlated.



Source: The Capital Group

The effect on return and risk as measured by standard deviation of various stock and bond allocations

Stocks	Bonds		Standard Deviation	Expected Return
100%	0%		15.00%	12.00%
95%	5%		14.31%	11.70%
90%	10%		13.64%	11.40%
85%	15%		12.99%	11.10%
80%	20%		12.36%	10.80%
75%	25%		11.77%	10.50%
70%	30%		11.20%	10.20%
65%	35%		10.68%	9.90%
60%	40%		10.21%	9.60%
55%	45%		9.78%	9.30%
50%	50%		9.42%	9.00%
45%	55%		9.12%	8.70%
40%	60%		8.90%	8.40%
35%	65%		8.75%	8.10%
30%	70%		8.69%	7.80%
25%	75%		8.71%	7.50%
20%	80%		8.82%	7.20%
15%	85%		9.01%	6.90%
10%	90%		9.27%	6.60%
5%	95%		9.60%	6.30%
0%	100%		10.00%	6.00%

Source: The Capital Group

A combination of stocks and bonds actually created a portfolio with less risk while earning you more return than just bonds. If you are seeking less risk, it not only pays to diversify within an asset class, it pays to diversify among asset classes. The same kind of relationship occurs with domestic and foreign stocks and bonds although much less now than in the past. However, you already know what we are going to warn you about, right? Diversification is not a guarantee of positive results. For example, no diversification scheme worked well in 2008! We have a name for choosing the appropriate mix for an investor. It is called asset allocation and it is the subject of our next section.

Correlation and the Real World

Theories that work in the textbooks and laboratories sometimes fall flat on their faces in the real world. This is true for the expected negative correlation of stocks and bonds. Our theory tells us that a balanced portfolio blend of stocks and bonds should exhibit less risk than either a portfolio of only stocks or a portfolio of only bonds. Is this true in practice? The answer is, “Sometimes yes and sometimes no.” This textbook scenario played itself out to perfection in the 2000-2002 stocks bear market. Stocks fell almost 50%

while bonds actually did well as interest rates fell from the effects of the post dot-com bubble recession. (Recall: When interest rates fall, bond prices rise.) This scenario did not work out so well in 2008 when both stocks and corporate and municipal bonds cratered. Indeed, everything except Treasury bonds tanked, including real estate and commodities. In 2022, the theory let us down again when stocks and all bond prices fell as interest rates rose and fears of a recession began to be voiced louder and louder. But this is the exception. You have to go back to 1969 to see a year when both stocks and all bonds fell together.

If we look at the risk measurements for sample stock funds, bond funds, and balanced funds for the last 10 years, we find that our theory has let us down yet again. Below is a table of stock funds, bond funds, and balanced funds. We expected the balanced funds to exhibit less risk than the stock funds and the bonds funds as measured by standard deviation. Ah, it didn't work out that way.

Ten-Year Standard Deviation Measurements for Sample Mutual Funds

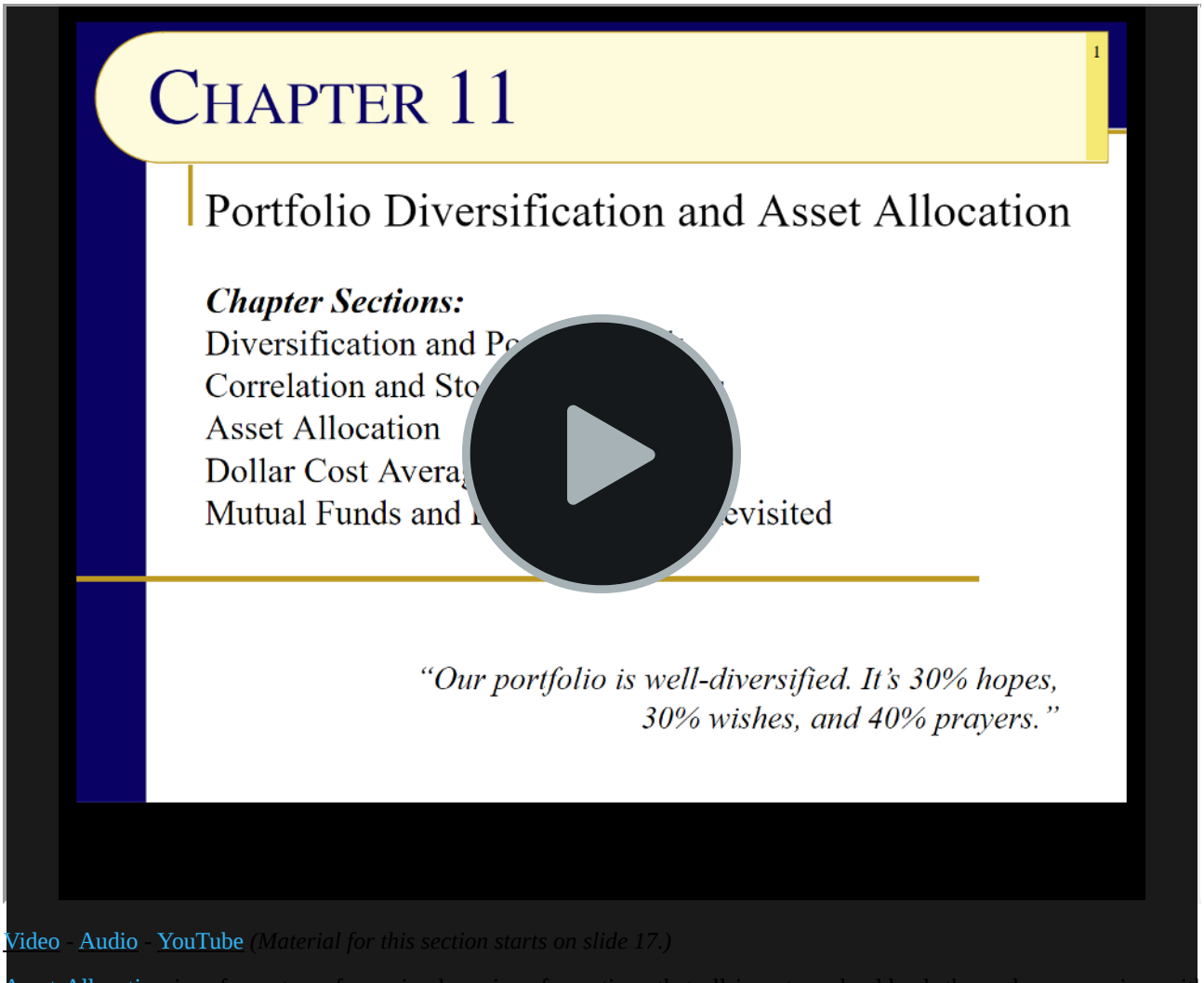
Data as of March 7, 2025	Stocks	Bonds	Balanced
Dodge and Cox Funds Dodge and Cox Stock Fund Dodge and Cox Income Fund Dodge and Cox Balanced Fund	17.63	5.10	12.30
Vanguard Funds Vanguard Windsor Fund (stocks) Vanguard Wellesley Fund (bonds) Vanguard Wellington Fund (balanced)	17.03	7.42	10.31
Fidelity Funds Fidelity Contrafund Fund Fidelity Total Bond Fund Fidelity Balanced Fund	16.22	5.16	11.74
Capital Group (American Funds) Growth Fund of America Bond Fund of America American Balanced Fund	16.79	4.99	9.71

Source: Morningstar.com

Although a balanced portfolio does not always protect us as much as we may expect, the results from balanced funds can be very satisfying for the prudent, long-term oriented investor. Please consult the chapter 11 section of the class website to compare and contrast the results from a stock-only portfolio, a bond-only portfolio, and a balanced portfolio. A balanced portfolio of stocks and bonds helped us to eat reasonably well and sleep reasonably well.

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11.2: Asset Allocation



Video - Audio - YouTube *(Material for this section starts on slide 17.)*

Asset Allocation is a fancy term for a simple series of questions that all investors should ask themselves or review with their financial advisor. "How much should I have in stocks? How much in bonds? How much of each stock & bond type?" Many advisors suggest a formula such as subtract your age from 100 (or maybe now 110 or 120). That is the percentage of stocks you should own and the rest should be in bonds. For example, a 40-year-old would have 100-40 or 60% invested in stocks and 40% in bonds. "Poppycock!" say others. Buy high-quality stocks and put up with the risk. Once you near retirement, start buying bonds. (Why does that number seem to be rising from 100 to 110 or 120? We are living longer! More about investing in retirement later.)

This example asset allocation is for someone who is comfortable with a significant percentage of stock investments. It does have some bonds, though, to add some stability. Notice that there is only a bit of "spice" in the form of aggressive growth and small company stocks. Do you like it? It is yours! But remember that everyone's situation and risk tolerance are different. This allocation might be too aggressive for some and too conservative for others.

Rebalancing

Another very popular diversification strategy is the technique of rebalancing. Let's say you start off with the popular 60% stocks, 40% bonds portfolio. Every year, check to see if your percentages are still in balance. If stocks have had a banner year, you might now be at 70% stocks, 30% bonds instead of your original target of a 60%/40% allocation. You would sell enough stocks and buy enough bonds to bring the balance back to your target 60%/40% allocation. Likewise, if stocks have tanked, you would sell enough bonds and buy enough stocks to bring the percentage back up to 60%/40%. This strategy forces us to, "Do the right thing." It forces

us to, “Buy Low, Sell High.” Think about it. If stocks are rising, who wants to sell? Similarly, if stocks have tanked, who wants to buy? This strategy helps us to remove some of the influence our emotions have on our investing.

Recall the strategy of one of the balanced mutual funds that we discussed: The fund will never be more than 75% stocks, 25% bonds, and never less than 50% stocks, 50% bonds. This strategy forces the balanced mutual fund to stay balanced.

A Stock Portfolio Versus a Bond Portfolio Versus a Balanced Portfolio

The table below compares a 100% stock portfolio versus a 100% bond portfolio versus a balanced portfolio.

Year	U.S. large-company stocks	U.S. bonds	60% stocks 40% bonds	Lipper balanced index
1987	5.3	2.8%	**5.6%**	4.1%
1988	**16.6**	7.9	13.1	11.2
1989	**31.6**	14.5	24.7	19.7
1990	–3.1	**9.0**	1.8	0.7
1991	**30.4**	16.0	24.7	25.8
1992	**7.6**	7.4	7.6	7.5
1993	**10.1**	9.7	10.0	12.0
1994	**1.3**	–2.9	–0.3	–2.0
1995	**37.5**	18.5	29.6	24.9
1996	**22.9**	3.6	15.0	13.1
1997	**33.4**	9.7	23.6	20.3
1998	**28.6**	8.7	21.0	15.1
1999	**21.0**	–0.8	12.0	9.0
2000	–9.1	**11.6**	–1.0	2.4
2001	–11.9	**8.4**	–3.7	–3.2
2002	–22.1	**10.3**	–9.8	–10.7
2003	**28.7**	4.1	18.5	19.9
2004	**10.9**	4.3	8.3	9.0
2005	**4.9**	2.4	4.0	5.2
2006	**15.8**	4.3	11.1	11.6
2007	5.5	**7.0**	6.2	6.5
2008	–37.0	**5.2**	–22.1	–26.2
2009	**26.5**	5.9	18.4	23.4
2010	**15.1**	6.5	12.1	11.9
2011	2.1	**7.8**	4.7	0.7
2012	**16.0**	4.2	11.3	11.9
2013	**32.4**	–2.0	17.5	16.4

Source: The Capital Group

Having a balanced portfolio means that you almost never have the best returns in any one year. However, it also means you will very rarely ever have the worst returns in any one year, either. In addition, although it is very unlikely that you will not equal or surpass an all-stock portfolio, you should do much better than an all-bond portfolio. But you already know what we are going to add, right? There are no guarantees!

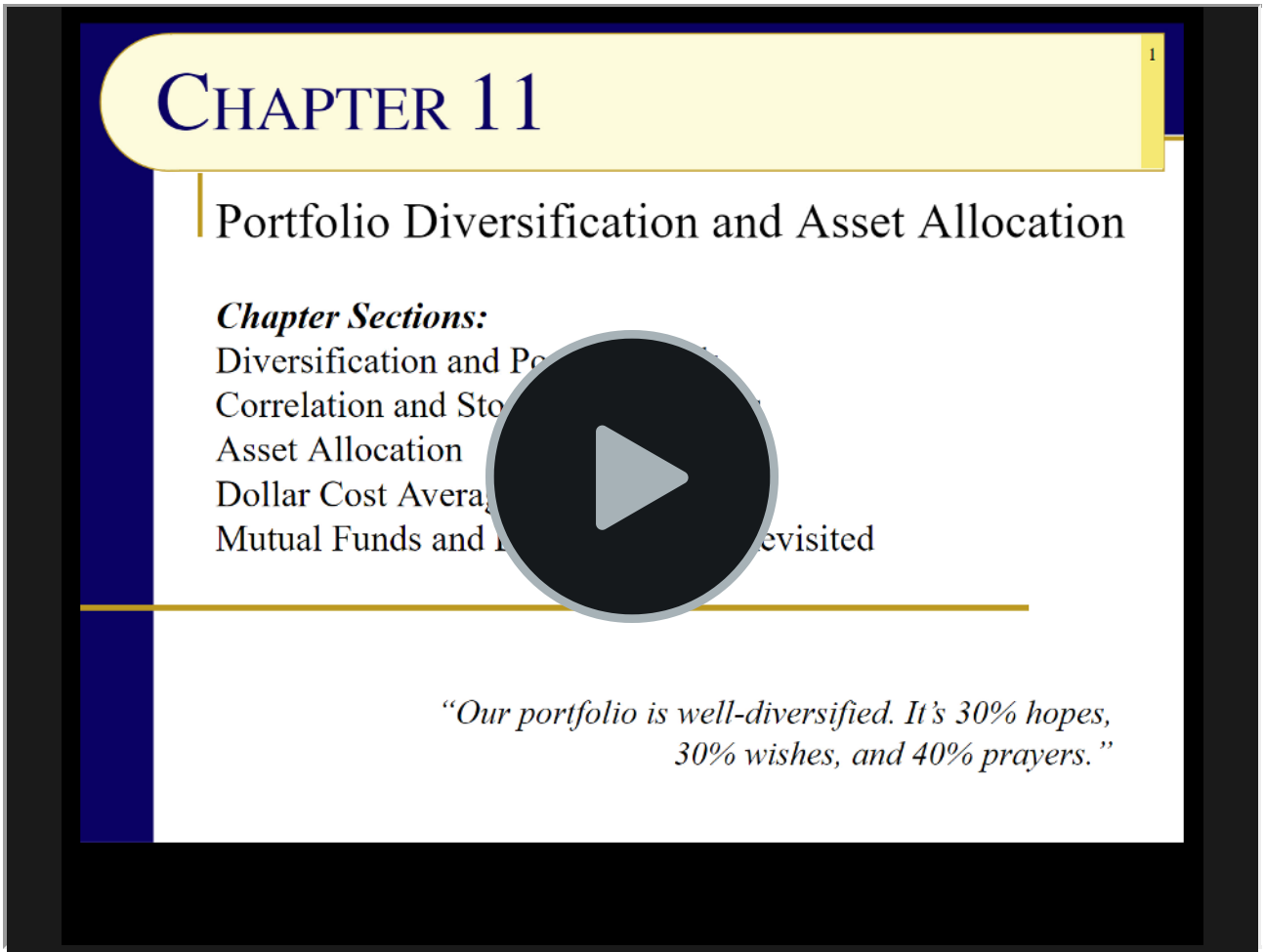
Stocks and Bonds in Retirement

Throughout our journey together, we have been discussing the accumulation phase of investing. In retirement, we move into the distribution phase. To that end, many advisors suggest that retirees shed the bulk of their stock investments in favor of bonds and cash investments in order to protect against market downturns. The only problem is people are living much, much longer today. A 65-year-old couple has a 45 percent chance that one of them will survive to age 90. As you near retirement, start migrating your investments from stocks to bonds but don’t abandon stocks entirely. Retirees still need some growth in their portfolio even as they are in the distribution phase of their investing career. In the chapter 11 section of the class website, there is a presentation that

compares bonds in retirement, stocks in retirement, and then two versions of a balanced portfolio. Both versions of the balanced portfolio were able to generate much stronger returns than the bond portfolio while damping down the volatility that accompanied the stock portfolio.

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11.3: Dollar-Cost Averaging and Mutual Funds, Revisited



Video - Audio - YouTube *(Material for this section starts on slide 22.)*

Dollar-Cost Averaging, Revisited

Recall that dollar-cost averaging is a system of buying an investment at regular intervals with a fixed dollar amount. We essentially set our investment program on autopilot. We don't worry about when it is a good time to invest or when it is not a good time to invest. This technique is another method to help remove emotion from our investing program. Recall the conversation we have with ourselves. With dollar-cost averaging, whenever we wake up in the morning, there is always good news. "The market is up! Good news! Our account is worth more!" or, "The market is down! Good news! Next month, we will get more shares at a lower price when the $50 or $100 comes out of our paycheck or checking account."

Dollar-cost averaging also has another trick up its sleeve. Let's take a look at a very volatile three-month period. The first month, you invest $100 into an investment at a price of $10. You receive 10 shares, $100/$10. The next month, the price falls to $5. You invest another $100. This time, you receive 20 shares, $100/$5. Fortunately, in the third month, the price recovers to $7.50. This month, you purchase 13.333 shares, $100/$7.50. It appears that you have broken even, buying shares at $10, $5, and $7.50. However, because you purchased fewer shares at the high price and more shares at the lower price, you have actually turned a profit. You invested $300 over the three-month period. Yet you now have 43.333 shares at the current price of $7.50 which is worth $325.

Magic?! Hardly. Again, by investing the same amount each month, we are purchasing fewer shares when the prices are high and more shares when the prices are low. **Our average cost per share should be lower than our average price per share.** (Memorize that sentence. Think about it often.) In this case, the average cost per share was $6.92, $300/43.333 shares, while the average price

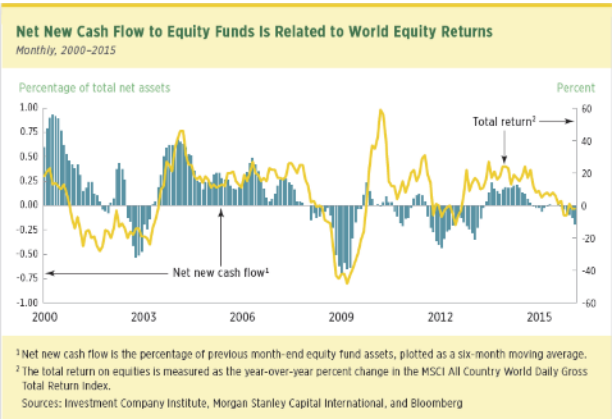
per share was $7.50. You know what comes next, right? Using dollar-cost averaging will not guarantee a successful investment outcome. Dollar-cost averaging is not going to turn a lousy investment into a profitable one. If the investment continues to lose money year after year, we are going to wind up with a whole lot of very worthless shares!

However, the absolute best benefit that comes from dollar-cost averaging is that it makes investing very simple and straightforward. We simply have $50 or $100 or whatever we can afford come out of our paychecks or checking accounts each month. Of course, this is much easier for mutual fund investors. It is a bit trickier for stock or bond investors but not impossible. We just need to allow the cash to accumulate until we can make our purchases. But then again, technology and innovation in the brokerage industry is advancing rapidly. Some brokerage firms such as Schwab are now allowing investors to purchase miniscule fractional shares with as low as $5. (Please check what kind of markup and markdown the brokerage firm is offering. Our guess is that it is not the most advantageous to the investors. We contacted Schwab and asked what kind of spread we can expect from their fractional share purchases and sales. The representative said he would get back to us. He never did. Hmmm. We will try again soon but we have a sneaking suspicion that they really don't want us to know.)

Mutual Funds and Diversification, Revisited

Speaking of mutual funds, wasn't diversification one of the two main reasons why so many investors choose mutual funds? Yes! The other is professional money management. Mutual funds help us reduce our risk by spreading out our $50 monthly investment over hundreds of stocks or bonds. But does that mean mutual funds necessarily have less risk than individual portfolios or the market as a whole? Well, it all depends on which mutual funds we are talking about. Some mutual funds do a very good job of reducing risk. In the assignment for this chapter, we ask our students to research the standard deviation and other popular measurements of risk for at least five mutual funds.

But what about the mutual fund investors? Did the inherent diversification in their mutual funds help them? Recall that most mutual fund investors do worse than the mutual funds they invest in. Revisit the graphic below and note how mutual fund inflows tended to follow strong market performance. When the markets fell, many mutual fund investors then ran for the exits and sold … at the worst possible times! Don't be an average mutual fund investor. Keep a long-term perspective and dollar-cost average. Remember: Mutual funds will bore you to wealth.



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11.S: Summary

Congratulations – You Have Finished Chapter 11 – Portfolio Diversification and Asset Allocation

You have reached the end of chapter 11, Portfolio Diversification and Asset Allocation. In this chapter, you have:

- Been introduced to the technique of diversification as the major method to reduce risk
- Reexamined the relationship of risk and return
- Examined the role of correlation in assigning risk measurements to asset classes
- Explored the negative correlation, also called the inverse relationship, of stock and bond returns
- Examined the uses of the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging to help reduce risk
- Reexamined the role of mutual funds in reducing risk

You should now be able to:

1. Identify the advantages of a well-diversified portfolio
2. Explain the relationship of risk and return and the role of correlation in assigning risk measurements to various asset classes
3. Describe the typical negative correlation between stocks and bond and how a diversified portfolio of stocks and bonds can actually help create a portfolio that is less risky than either all stocks or all bonds
4. Utilize the techniques of asset allocation, portfolio rebalancing, and dollar-cost averaging to help reduce risk
5. Describe the role that mutual funds have in reducing risk and how many investors typically sabotage their long-term mutual fund results

Congratulations, The Course Is Over!

Well, not quite. We have covered the most important investment alternatives for the vast majority of investors. However, we still have a few odds and ends to take care of. We will spend a little time studying options, futures, buying on margin, and shorting … if only to learn that we should stay far away from these exotic and dangerous speculative strategies. We will also spend some time with some miscellaneous topics in investing including a brief overview of real estate, precious metals and other hard assets, brokerage firms, and the various types of investment accounts. We will even take a quick look at kleptocurrencies, ooops!, my apologies, I meant cryptocurrencies and NFTs. We end by highlighting Starting a Business: The Ultimate Investment!

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SECTION OVERVIEW

Part 5: Speculating, also known as Trading, better described as Gambling

Prudent, long-term oriented investors avoid speculating and short-term trading. However, since you are now official Investment Gurus and this is an Introduction to Investments course and textbook, you need to be well-versed in these weapons of mass financial destruction, if only to guard your friends, family members, and colleagues from self harm.

Chapter 12: Options Contracts

12.1: What are Options Contracts?
12.2: Options Characteristics and the Breakeven Point
12.3: Options Strategies; Covered Calls and Naked Puts
12.4: Employee Stock Options and Some Final Topics about Options
12.S: Summary

Chapter 13: Futures Contracts

13.1: Futures Contracts
13.S: Summary

Chapter 14: Buying on Margin and Selling Short

14.1: Buying on Margin
14.2: Selling Short
14.S: Summary

Chapter 15: Precious Metals, Art, and Collectibles

15.1: Precious Metals, Art, and Collectibles
15.S: Summary

Chapter 16: Cryptocurrencies and NFTs

16.1: Cryptocurrencies and NFTs
16.S: Summary

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CHAPTER OVERVIEW

Chapter 12: Options Contracts

> *At a very exclusive party, a high-class, finely clad woman slinked up to the CEO of a Fortune 500 company and said, "I will do anything – anything you want." The CEO flatly responded, "Reprice my options." – Attributed to Warren Buffett*

Learning Objectives

In this chapter, you will

- Be introduced to the concepts and basics of options contracts
- Explore the rationale behind the use the options contracts
- Examine call and put options contracts
- Discuss the difference between the options contracts buyer and the options contracts seller (aka writer, maker)
- Explore the various characteristics of options contracts such as strike price, expiration date, exercise style, break-even price, and time value
- Examine various options contracts strategies including straddles and spreads
- Explore Employee Stock Options (ESOs), the valuation of options contracts, other types of options contracts, and warrants

By the end of this chapter, you should be able to

- Describe the rationale and use of options contracts
- Explain the differences between call options and put option
- Identify the various characteristics of options contracts
- Describe the differences between the options contract buyer and the options contract seller (aka writer, maker)
- Explain various option contracts strategies
- Determine whether an option contract is "in-the-money," "at-the-money," or "out-of-the-money"
- Calculate the breakeven price for call and put options
- Calculate the profit or loss from various scenarios of purchasing and exercising options contracts
- Describe Employee Stock Options (ESOs) and warrants

We now embark upon a very unusual part of our journey. In the next several modules, we will explore various instruments that the vast majority of us should stay far, far away from. "That's a bit odd," you say? "Why are we learning about products that we should stay far, far away from?" The reason we are learning about options is that we can protect ourselves, our family members, our friends, and our colleagues from them. Instruction about syphilis is not an instruction to get syphilis! And the same is true of options, futures, buying on margin, shorting, etc. However, since this is an Introduction to Investments class, we need to learn how these exotic and dangerous vehicles work, if only to protect ourselves and our loved ones from succumbing to their "get-rich-quick" siren calls. Before you start, please have the Options Notes Sheet handy. Get ready to be bedazzled, dazed, and confused by stock options!

Presentation file - Study guide

12.1: What are Options Contracts?

12.2: Options Characteristics and the Breakeven Point

12.3: Options Strategies; Covered Calls and Naked Puts

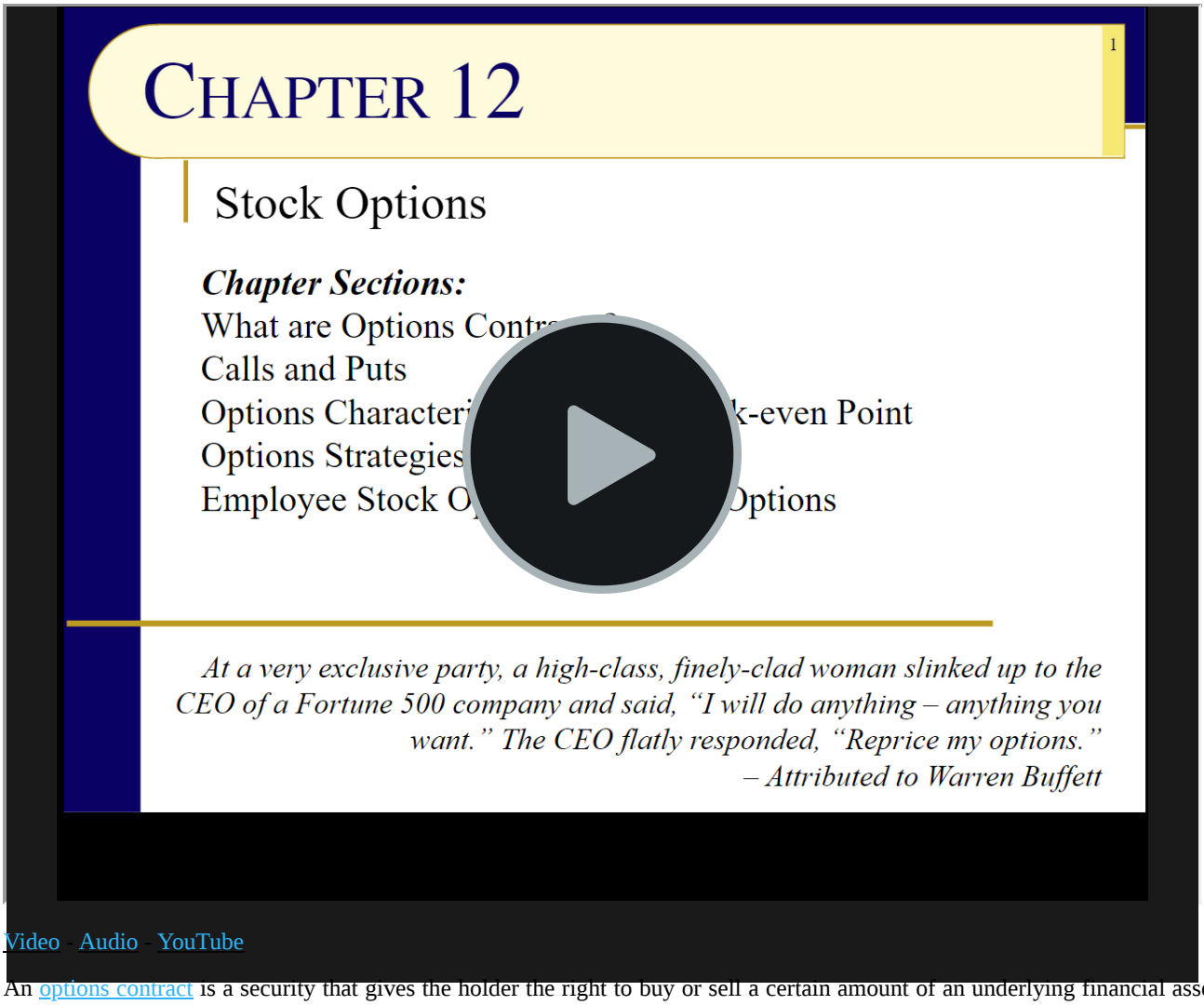
12.4: Employee Stock Options and Some Final Topics about Options

12.S: Summary

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12.1: What are Options Contracts?



Video - Audio - YouTube

An options contract is a security that gives the holder the right to buy or sell a certain amount of an underlying financial asset at a specified price for a specified period of time. Options contracts are typically tied to stocks but any financial assets can be used as the underlying security. Options contracts are not investments. They are speculations which we already know to be a euphemism for gambling. Specifically, they are contracts between two market speculators. The buyer of the option contract gets the right to buy or sell the financial asset at a given price for a given period of time. If the buyer of the contract exercises the option, the seller of the option contract must buy or sell the asset according to the terms of the contract.

Options contracts are part of a class of securities called derivatives. Derivatives are securities that derive their value from the price behavior of an underlying real or financial asset. Options contracts have no voting rights, receive no dividends or interest, and eventually expire. Their value comes from the fact that they allow the holder of the option to participate in the price behavior of the underlying asset with a much lower capital outlay. By the way, options contracts are usually just referred to as options. Just try saying, "options contracts," three times fast.

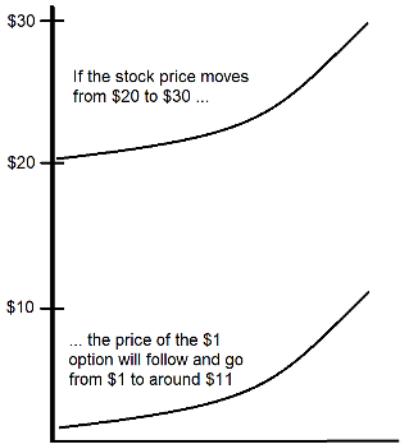
Options allow an investor to leverage their outlay of capital. As we've discussed, leverage is the ability to obtain a given equity position at a reduced capital investment, thereby magnifying returns. With options, you can make the same amount of money from a stock or other security as if you bought it for full price but only come up one-tenth or less of the money. Sounds too good to be true, huh? Well, you are right. It is too good to be true. Much of the time, you lose the entire outlay. Options have a time limit. Most options expire worthless.

What is the Rationale for Options Contracts?

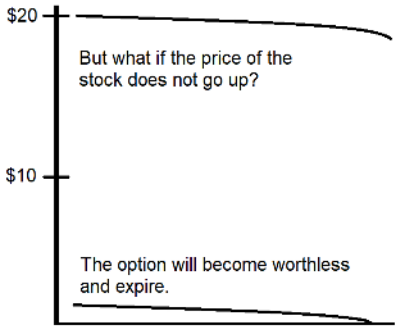
You believe that a stock will do well and that the price will increase. Instead of buying the stock, you buy an option to buy the stock. Repeat: You don't buy the stock; you buy an option to buy the stock. If the stock goes up, your option will go up almost always much, much faster and you can sell the option for a handsome profit. There is only one catch. The option expires in three, six or nine months. If the stock does not go up in that time period, the option will expire worthless. Surprise! Most options expire worthless. There are some scenarios where options can be worthwhile but they are few and far between.

To make the whole concept even more confusing, there are options to sell a stock if you believe that the price of the stock will go down soon. In essence, you are gambling, ooops!, sorry, *speculating* that the price of the stock will either increase or decrease in the short term. Options have limited appeal to prudent, long-term investors. Buying and selling options is speculating. And we all know that speculating is just a fancy word for gambling.

Let's look at an example. There is a stock currently selling for $20 that you believe will do well. Say you buy a share of the stock for $20. If it goes up to $30, you have earned $10 on a $20 investment. That's a 50% return on your money. Pretty good! But that's not good enough for you. Instead, you buy an option to purchase a share of the stock at $20 currently selling at $20. The option might only cost you $1. If the stock goes up to $30, your option price will probably go up to around $11. You have earned $10 on a $1 investment! That's a 1,000% return on your money. Whoa! That is "leverage" in action. Congratulations! Pat yourself on the back!



But what if the stock price stays at $20 or goes down, even by a small amount. Your option will expire worthless at the end of three, six, or nine months.



And, of course, after your option expires, the stock price zooms to $40. You were so sure that this stock was going to hit the big time and you were absolutely right. But because you bought an option that expired, you lost the ability to share in the success of the stock. My advice? Forget about the option and just buy the stock! But since this is an Introduction to Investments class and textbook, we need to become proficient in the concepts, terms, and techniques of options. So…

Calls Versus Puts

There are two types of options contracts, call options contracts and put options contracts. Call options contracts are usually just referred to as calls and put options contracts are usually just referred to as puts. A call option contract is a negotiable security that gives the buyer of the option the right to buy the underlying security at a stated price within a certain period of time. The example above was a call option contract. When people talk about options, they are usually talking about call options unless they specify a put option contract. A put option contract is a negotiable security that gives the buyer of the option the right to sell the underlying security at a stated price within a certain period of time. It is the exact opposite of a call option.

"*This is so confusing! Where did the terms 'call' and 'put' come from and how will I remember which is which?*" The term "call" comes from the idea that when you buy a call option, you get the right to "call the stock away" from the seller of the option. The term "put" comes from the idea that when you buy a put option, you get the right to "put the stock to" the seller of the option. Get the idea? A "call" allows you to "call away the stock" from someone, buy it from them. A "put" allows you to "put the stock" to someone, sell it to them. Let us look at each in detail.

Call Options **"Right to Buy"**	**Put Options** **"Right to Sell"**
The Call Option Buyer can "**call away**" the stock from the Call Option Seller	The Put Option Buyer can "**put**" the stock to the Put Option Seller
BUYER of the Call Option is **Bullish** • Pays for the option via the option premium (usually just referred to as the option price). • Has the right to **buy** the stock from the Call Option Seller at the negotiated price, called the strike price or exercise price • Does not have to exercise the option. The Call Option Buyer can allow the option to expire worthless. • Wants the price of the underlying stock to go **up**.	BUYER of the Put Option is **Bearish** • Pays for the option via the option premium (usually just referred to as the option price). • Has the right to **sell** the stock to the Put Option Seller at the negotiated price, called the strike price or exercise price • Does not have to exercise the option. The Put Option Buyer can allow the option to expire worthless. • Wants the price of the underlying stock to go **down**.
SELLER of the Call Option is **Bearish** or Neutral • Receives the option premium from the Call Option Buyer. • Must **sell** the stock to the Call Option Buyer if the Call Option Buyer exercises the option. • Wants the price of the stock to go **down** or at least stay the same. • Gets to keep the option premium (also called the option price) whether or not the option is exercised. • The Call Option Seller is also referred to as the Option Writer or Option Maker.	SELLER of the Call Option is **Bullish** or Neutral • Receives the option premium from the Put Option Buyer. • Must **buy** the stock from the Put Option Buyer if the Put Option Buyer exercises the option. • Wants the price of the stock to go **up** or at least stay the same. • Gets to keep the option premium (also called the option price) whether or not the option is exercised. • The Put Option Seller is also referred to as the Option Writer or Option Maker.
Neither the Buyer nor the Seller of the Option has to wait for the exercise date. They can always "close out the transaction" before the exercise date.	

The Two Parties of a Call Option

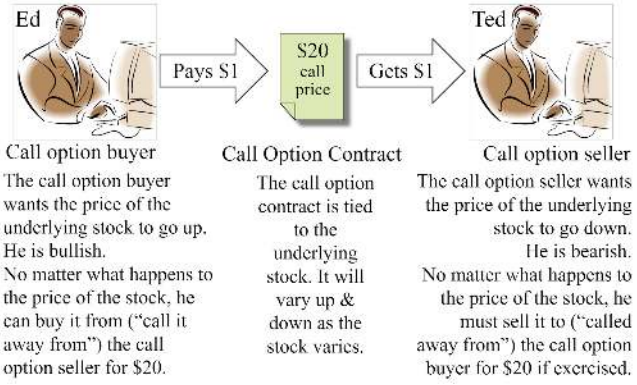
There are two parties to a call option, the option buyer and the option seller. To make options more confusing to the uninitiated, we also refer to the option seller as the option writer or option maker. The call option buyer is the person who will do the "calling away" of the stock. They have the ability to buy the stock from the call option seller if they choose to exercise the option. According to the terms of the contract, when they bought the option, they bought the right to exercise the option and buy the stock at the agreed upon price. Note the call option buyer is under no obligation to exercise the option. They can allow the option to expire worthless. Did we mention that most options expire worthless?

The call option seller is the person who must sell the stock if the call option buyer exercises the option. The stock will be "called away from" from him or her. The call option seller is legally bound to sell the stock to the call buyer if the call buyer exercises the

option. In return, they get the option premium, also called the option price, from the call option buyer. They get to keep the option premium no matter what happens.

"What is the call option buyer hoping for? Why did they buy a call option in the first place?" The call option buyer is hoping that the price of the stock will go up. A call option buyer is bullish. If an option buyer has a call option to buy at $20 and the price goes to $30, the buyer can buy a $30 stock for only $20. More likely, if our intrepid call option buyer sees the value of their call option rise dramatically, they can simply sell the call option – we say, "close out the transaction" – before the option expires. Why bother actually buying the stock? With their profits, they can go buy another call option. The gambling, ooops!, *speculating* never ends!

"What is the call option seller hoping for? Why did they sell the call option to the buyer?" The call option seller is hoping that the price of the stock will go down or stay the same. A call option seller is bearish or at least not very bullish. If the stock stays around $20 or goes down, the call option buyer will not want to exercise the option and it will expire worthless. If the call option buyer exercises the option, the call option seller is contractually required to see the stock to the call option buyer at the agreed upon price. In any event, whether the option is exercised or not, the call option seller gets to keep the price of the option. The seller is also called the writer or maker.



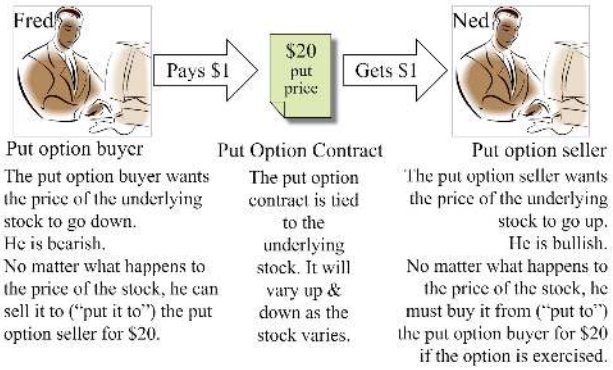
The Two Parties of a Put Option

A put option is the exact opposite of a call option. Everything is exactly the same except the put option allows the put option buyer to sell the stock instead of buy the stock. The put option buyer of the put options contract is the person who will do the "putting to" the put option seller. The put option buyer has the right to "put the stock to" (sell it to) the put option seller at the agreed upon price. Again, they do not have to exercise this right. That is why they are called options. Also, recall the majority of options contracts expire worthless.

In a further effort to confuse outsiders, the seller of the put options contract is also called the put option writer or the put option maker. The put option seller of the option contract is the person who must buy the stock from the put option buyer. The stock will be "put to" them. The put option seller is legally bound to buy the stock from the put option buyer if the put option buyer exercises the option to sell. No matter what, the seller gets the option premium, also called the option price, from the put option buyer.

"What is the put option buyer hoping for?" The put option buyer is hoping that the price of the stock will go down. A put option buyer is bearish. If an option buyer has a put option to sell at $20 and the price goes to $10, the buyer can sell the $10 stock. They can "put it to the option seller" for $20. If the price of the stock goes down substantially, the put option buyer does not have to actually sell the stock. The put option buyer can sell the put option before the expiration date. This is called, "closing out the transaction."

"What is the put option seller hoping for?" The put option seller is hoping that the price of the stock will go up or stay the same. A put option seller is bullish or at least not very bearish. If the stock stays around $20 or goes up, the put option buyer will not want to exercise the option and it will expire worthless. In any case, the put option seller gets to keep the price of the option.



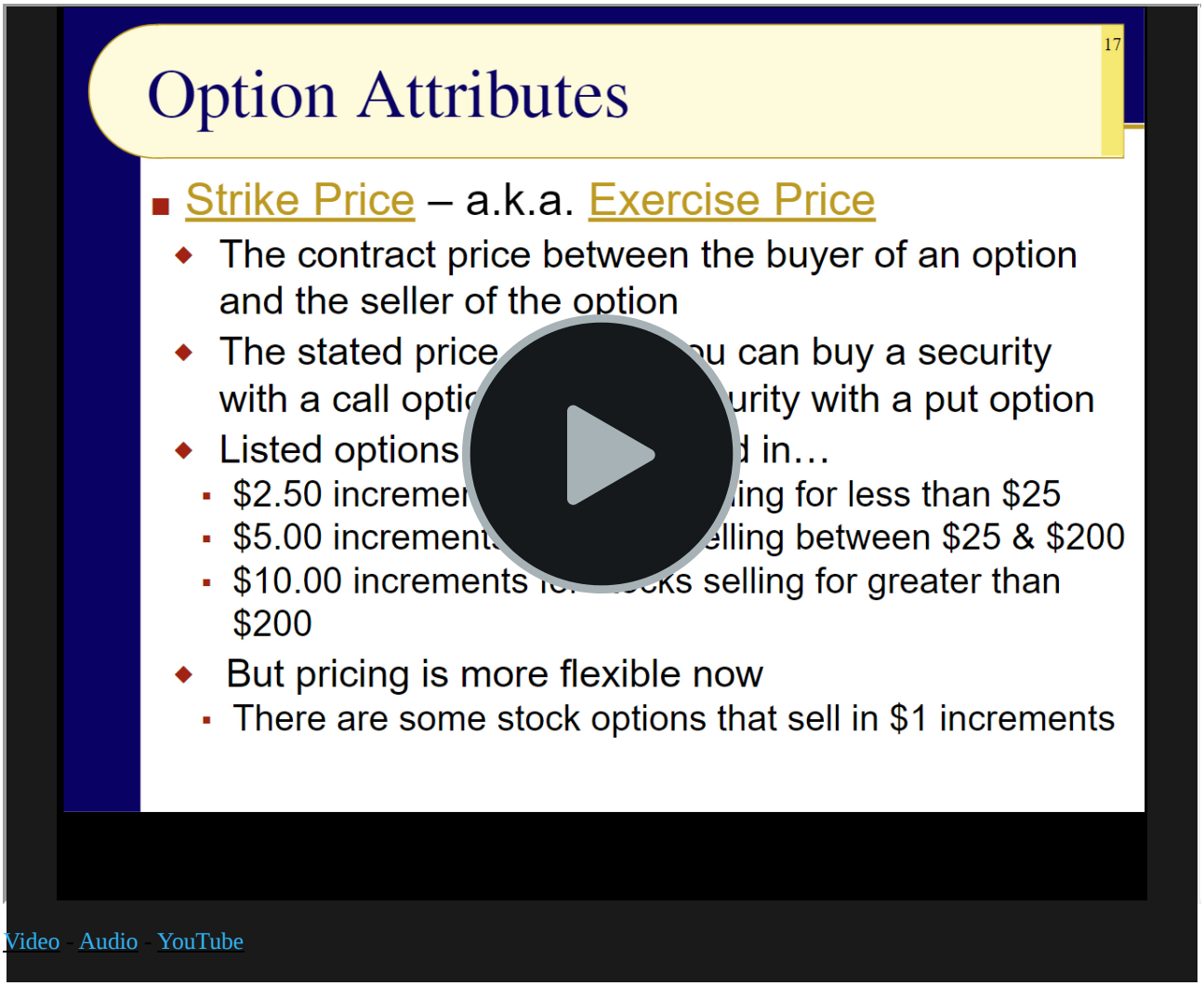
It's Time for Questions about Options

"Options are confusing, aren't they?" Yes! In fact, the section on options is one of the hardest parts of the Series 7 Stockbroker exam. "Options sound like gambling. Am I right?" Yes! Options are a form of gambling. It is a zero-sum game. Someone wins, someone loses. A family acquaintance once called me and exclaimed, "Hey, Frank. I hear you can make a lot of money investing in options!" I said, "Wait a minute. Yes, you can make a lot of money; you can also lose a lot of money. But you can't invest in options. You can speculate with options. You cannot invest in something that has a 60% chance of being worthless in three months! That is not investing."

"You keep saying that most options expire worthless. Well, just how many expire worthless?" That number is a subject of fierce debate. The percentage ranges from 10% to 90%, depending upon who is trying to present options in the best light or the worst light. The number that is most likely closest to the actual number is approximately 55% to 60%. If you want to explore the debate, just type "options contracts how many expire worthless" into your favorite Internet search engine. The management assumes no responsibility.

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12.2: Options Characteristics and the Breakeven Point



Video - Audio - YouTube

The Strike Price, also known as the Exercise Price

The strike price is the contractually agreed upon price of the stock between the buyer of an option and the seller of the option. It is also called the exercise price. It is the stated price at which the call option buyer can buy the stock with a call option or the stated price at which the put option buyer can sell the stock with a put option. Options listed on the major exchanges traditionally sold in $2.50 increments for stocks selling for less than $25, $5.00 increments for stocks selling between $25 & $200, and $10.00 increments for stocks selling for greater than $200. However, pricing is more flexible now. There are many stock options that sell in $1 increments

The Expiration Date

The expiration date is the date at which an option expires. Traditionally, listed options always expired at the close of the market on the third Friday of the month of the option's expiration date. The hour before the close of the market on the third Friday is sometimes called the "witching hour" as markets can exhibit heightened volatility from the unwinding of all the options about to expire. As well as stock options, there are also stock index options and stock index futures which we will discuss later. When all three – stock options, stock index options, and stock futures – expire on the same day, then it is called the "triple-witching hour." To add to your options gambling, oh, I'm sorry, *speculating* enjoyment, there are now weekly options that expire every Friday. Why wait until the third Friday of each month when you can lose money each week?

The Exercise Style

The exercise style describes how and under what circumstances the option can be exercised. American options can be exercised at any time before the expiration. European options can only be exercised at expiration. Normally, if you wanted to take a profit from an option that had done well and there was still significant time until the expiration date, you would simply resell the option instead of actually exercising the option. However, with an American-style option, if you really wanted to buy or sell the stock, you could exercise the option and buy or sell the stock before the expiration date. By the way, there are several other types of options with various provisions. An options seller who thought that he had created a fail-safe, risk-free options position was rudely disabused of that fantasy when one of the options was exercised long before the exercise date.

The Options Chain: How Options are Quoted

Options quotes are available from many free Internet websites. At Marketwatch.com, Yahoo Finance, CBNC or any other site, first search for the stock. At the [Summary] page, choose the [Options] menu choice. The list of available options contracts and their prices for a particular security is called an options chain. Both Marketwatch.com and CNBC have an appealing method for displaying options. The call and put options are displayed next to one another. This is attractive on a larger screen but can be difficult to follow on a smaller screen device.

How Options Contracts Are Bought and Sold

We have discussed options contracts as if they were traded just as stocks are traded. In most ways, they are very similar but there is one major difference. Options are sold as contracts and each contract represents one hundred shares of the underlying stock. There are no odd-lots on the options exchanges. However, some market makers will facilitate old-lot contracts. So if the listed price of the option is $5, then one contract will cost $500, $5 * 100 shares. Two contracts will cost $1,000, etc.

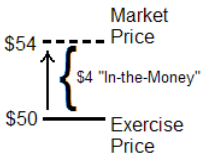
The Option Premium, Also Called the Option Price

The option premium is the quoted price the option buyer pays to buy a listed put or call option. The option seller, also known as the option writer or option maker, receives the premium immediately and gets to keep it whether or not the option is ever exercised. (Did I mention that most options expire without being exercised? That most options expire worthless? Good! Just checking.) To make it even more confusing, the term premium is also used in a more precise manner when valuing options. For this reason, most people simply refer to the price of the option instead of the premium of the option.

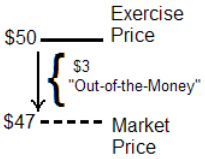
Moneyness: “In-the-Money,” “At-the-Money,” “Out-of-the-Money”

A somewhat silly term used when discussed options is the “moneyness.” Is the option “in-the-money,” “at-the-money,” or “out-of-the-money.” This refers to whether or not it would be advantageous to exercise the option. An option buyer would want to exercise an “in-the-money” option. An option buyer would not want to exercise an “out-of-the-money” or “at-the-money” option. Let’s take a look at some examples.

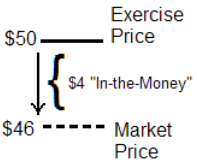
A call option is “in-the-money” if the strike price, also known as the exercise price, is less than the market price of the underlying stock. In this situation, an option buyer would be able to purchase the stock for less than the current market price. For example, if the strike price were $50 and the market price of the stock were $54, then the call option buyer could exercise the option and buy a $54 stock for only $50. The call option would be said to be “$4 in-the-money.”



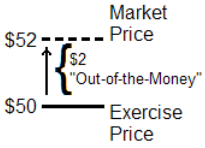
An “out-of-the-money” call option would have no value because the strike price exceeds the market price of the stock. This time, if the strike price were again $50 but the market price were only $47, the call option buyer would have no incentive to exercise the option. They would be buying a $47 stock for $50. The call option would be said to be “$3 out-of-the-money.”



As you might expect, the situation is reversed with put options. An “in-the-money” put option is a put option with a strike price greater than the market price of the underlying stock. If the strike price were $50 and the market price of the stock were $46, then the put option buyer can sell the stock at $50 that is currently selling for $46. The put option would be “$4 in-the-money.”



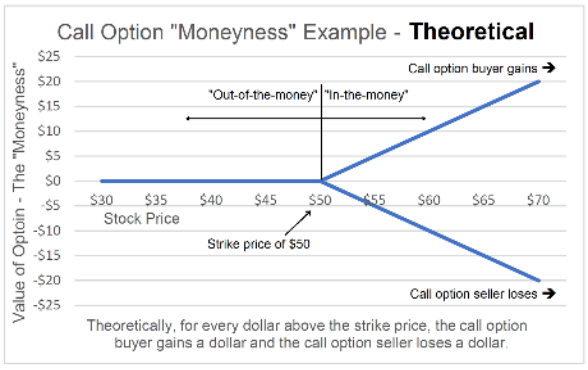
An “out-of-the-money” put option is a put option where the market price exceeds the strike price of the stock. Let’s say the put option strike price was again $50 but the current market price was $52. There is no incentive for the put option buyer to exercise the option since that would mean selling a stock at $50 that is currently selling for $52. The put option would be “$2 out-of-the-money.”



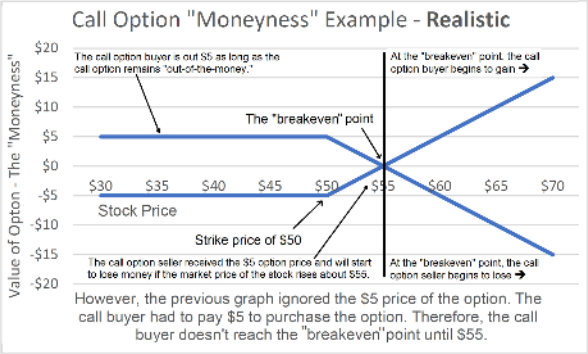
As the name implies, an “at-the-money” option has a strike price that is equal to the market price of the stock. With an “at-the-money” option, as with an “out-of-the-money” option, there is no incentive to exercise the option since the option buyer can buy or sell the stock at the same price as the strike price.

Moneyness and the Breakeven Point

The following graphic illustrates how the “moneyness” of a call option changes as the underlying stock price advances. With a strike price of $50, when the stock price is below the $50, the call option is “out-of-the-money” and the call option has no value. (There may still be some “time value” which we will discuss below.) Once the stock price advances past $50, the value of the call option begins to increase. It is now “in-the-money.” Theoretically, for every dollar past the strike price, the call option buyer gains a dollar and the call option seller loses a dollar.

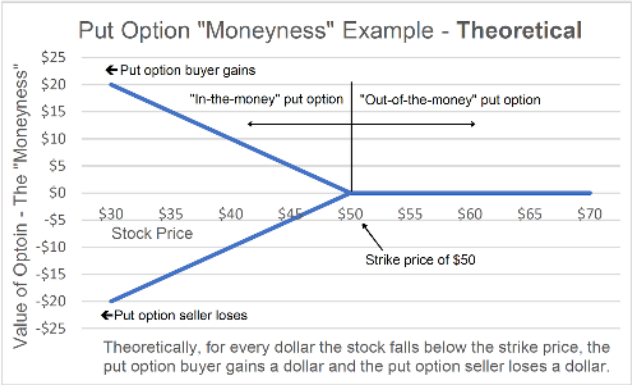


However, the graphic above ignores the fact that the call option buyer had to pay for the option. If the call option price were $5, then the call option buyer would not actually see any payoff until the stock price rose to $55, the strike price and the price of the option. This is called the breakeven point for a call option buyer. The graphic below illustrates this relationship.

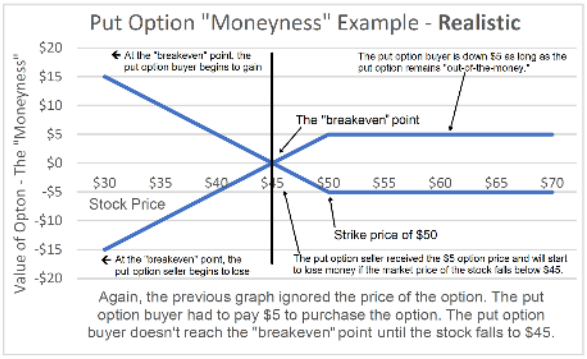


The fact that a call option buyer does not even start to make any money until the stock price reaches the breakeven point is yet another reason that options contracts are not suitable for the prudent, long-term investor. And, by the way, have you noticed we have not even included the cost of the commissions or the kickback that the brokerage firm receives from the transaction?

As you might expect and rightfully fear, the situation is completely reversed with put options. The graphic below shows what happens when the stock price falls below the strike price. The put option buyer starts to make money and the put option seller begins to lose money. The farther the stock price falls below the strike price, the more money the put option buyer will make and the more money the put option seller will lose.



But again, we ignored the option price. Let's again use a put option price of $5. The put option buyer had to pay $5 for the right to sell the stock at the strike price of $50. The put option seller immediately receives the $5 as their compensation for writing the put option. This means that the stock must fall to at least $45, $5 below the strike price of $50, before the put option buyer starts to make money and the put option seller starts to lose money. Here, the breakeven point for the put option buyer is $45. Once the stock falls below $45, the put option buyer begins to make money on the transaction. The graphic below demonstrates this process.



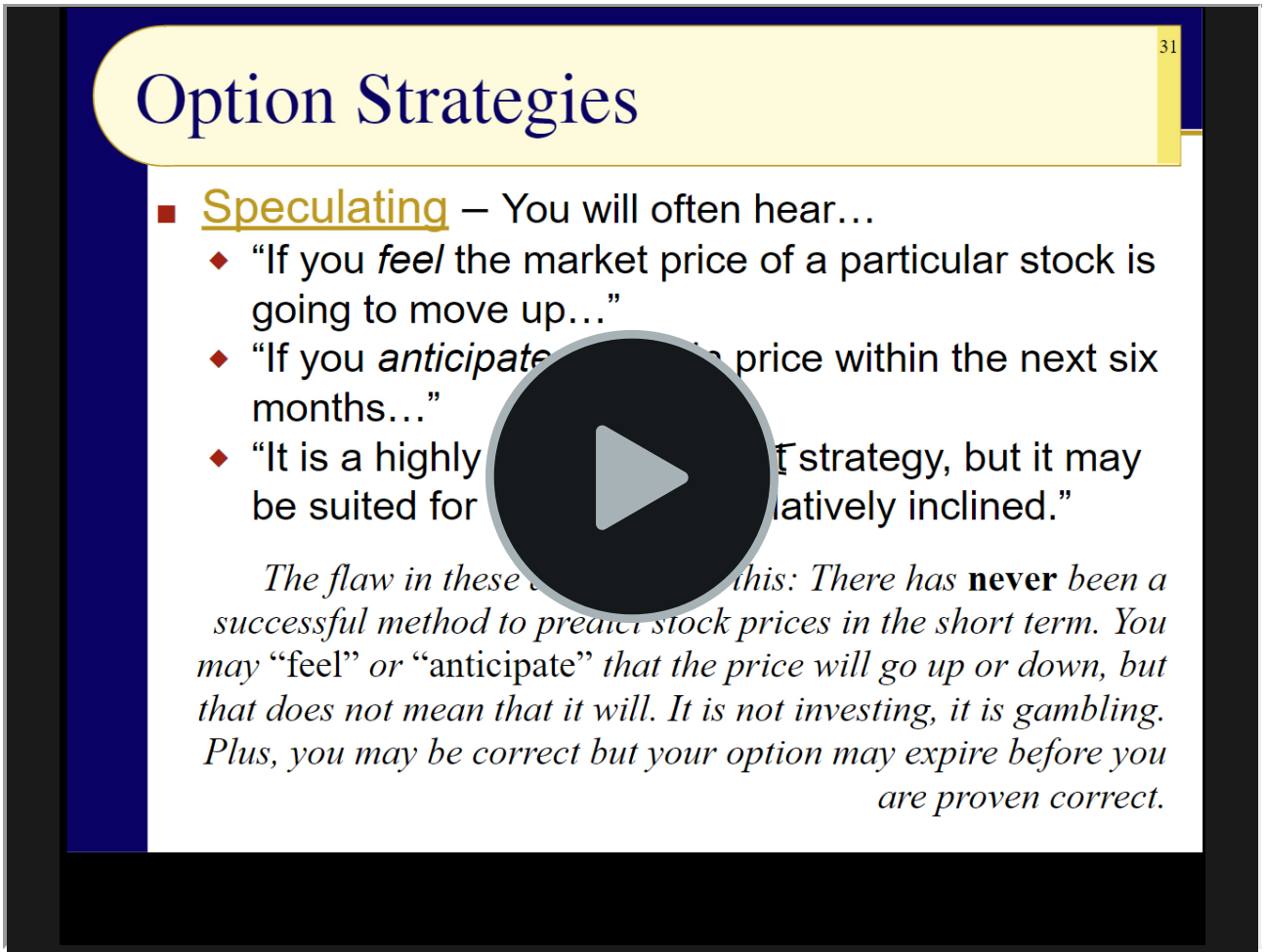
The Time Value, Also Called the Time Premium

The time value, also known as the time premium, is the dollar amount by which the option price exceeds the option's "in-the-money" value. In general, the longer the time to expiration, the greater the size of the time value. If an option is "out-of-the-money," then the entire price of the option is due to the time value. In other words, an option that is "in-the-money" will sell for more than the amount it is "in-the-money" because of the time remaining until the expiration date. Often, an option that is "out-of-the-money" will still have time value. The option still has time to become worth more as the underlying stock price changes. In the theoretical call option "moneyness" graphic above, if the stock price were less than $50 and the call option were "out-of-the-money," the call option might still sell in the options marketplace for above $0. The amount that it sold for would solely be attributed to the time value. Likewise, even in the theoretical put option "moneyness" graphic above, if the put option were "out-of-the-money," it still might sell in the options marketplace for some amount. Again, that amount would be attributed to time value since no one would want to exercise an "out-of-the-money" option.

One last aspect of options deserves mention. Do not forget commissions! In the previous examples, we did not include the cost of the commissions. A commission is charged whenever an option is bought or sold. Both the buyer and the seller pay a commission when the contract is initiated. A commission is charged when and if the buyer exercises the option and buys or sells the stock and again, both the buyer and the seller pay a commission. A commission is also charged if the option buyer or option seller decides to "close out the transaction." The option buyer can sell their option to another option trader. The option seller can buy the exact same call option, thereby canceling their position and handing over the seller's responsibilities to another options trader. When you include the commissions, it makes it that much harder to make money in options. And if you are still somehow saying to yourself, "Well, I don't pay any commissions with my broker so I don't have to worry about that," go back to chapter 3 and read about how your broker is receiving a kickback for every transaction you initiate.

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12.3: Options Strategies; Covered Calls and Naked Puts



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Speculating Versus Hedging

We have discussed speculating at length. Buying and selling options is pure speculation. When traders/speculators defend their speculative practices, you will often hear, "If you feel the market price of a particular stock is going to move up … " or, "If you anticipate a drop in price within the next six months …", or "Options are a highly risky investment strategy, but they may be suited for the more speculatively inclined." The flaw in these arguments is this: There has never been a successful method to predict stock prices in the short term. You may "feel" or "anticipate" that the price of a stock will go up or down, but that does not mean that it will. It is not investing, it is gambling. Plus, you may be correct but your option may expire before you are proven correct.

There is one options strategy that may be useful for a prudent, long-term investor, hedging. Hedging is a transaction or series of transactions made to reduce the risk of adverse price movements in an asset. Hedging can be thought of as insurance and although insurance can be useful in some circumstances, it is not free. You pay for the insurance via the price of the option or options and the accompanying commissions. Investors can use hedging strategies when they are unsure of what the market will do. A perfect hedge reduces your risk to nothing except for the cost of the option and the commissions.

For example, you own 100 shares of FlimFlam.com and it is currently selling for $50. You are afraid the price will plummet within the next 3 months to $10. Therefore, you purchase a put at $50. No matter what happens, you can sell the stock for $50 … but only until the option expires! Then you must go out and buy more insurance. This is called a "protective put." Remember, insurance is not free. Using options as insurance is one way to keep your broker very happy. If you are sure the stock will fall, why not just sell the darned thing?

How about this example? It's late in the year and you want to sell your 100 shares of FlimFlam.com. You bought them at $2 per share and will have a huge capital gains tax bill. You are afraid the price will fall back down to $2 per share once the flimflam is uncovered at FlimFlam.com. In December, you buy the put option to protect yourself and then sell your shares in January and the tax bill is postponed until the next year. Ah, okay, maybe. Maybe there is a place in the prudent, long-term investor's toolkit for the occasional option transaction. But they are few and far between. However, if you listen to your high-stakes broker, you may hear a different story. She tells you, "Let's take a look at a couple of options strategies guaranteed to generate more commissions for your broker, ooops!, I meant, give you tax losses that you can forward to your CPA, no!, no!, no!, help you achieve your short-term goal of becoming fabulously wealthy and retiring in an exotic far-off tropical paradise. Yeah, that's what I meant."

Straddles

An options straddle is the simultaneous purchase or sale of a put and a call on the same underlying stock. If the stock price is volatile in either direction, up or down, you will make money providing you pass the break-even point for both purchases plus the commissions. If the stock price is not volatile, you would sell, also known as write or make the straddle and hope that the stock price does not change greatly. (Two commissions at the same time! Yippee! Your broker is really gonna' love you!)

You see that SwindlerNFTs is selling for $50 and its price is extremely volatile. You purchase a call for $50 and a put for $50. The price of the call option is $4 and the price of the put option is $5. Now, no matter which way the price goes, one of your options will be "in-the-money." But the call cost you $4 and the put cost you $5, so the price has to move at least $9 either way before you break-even. And we did not include the cost of the commissions. You paid two commissions for the straddle and possibly one more for selling or exercising the option. Brilliant strategy, huh? Wait, it gets better.

Spreads

An options spread is the simultaneous purchase and/or sale of two or more options with different strike prices and/or expiration dates. Example: A stock is selling for $50. You buy a call option at a strike price of $50 for $5. You sell a call option at a strike price of $55 for $2. You paid $5 for the call at $50, but you got paid $2 for the call option at $55. If the stock price rises past $53, you will make money. The possibilities are endless … and so are the commissions and tax losses.

Selling Options, Also Known as Writing Options and Making Options

Usually, when speculators discuss their options trades, they are referring to buying call and put options. However, as we are reiterated often, there are two parties to an options contract, the buyer and the seller. Selling options, also known as writing options or making options, allows an individual to play the part of the casino. You become the Las Vegas casino and the option buyers are betting against you. "More often than not, the option writer is right." Why? Did we mention that most options expire worthless? No matter what happens, the option seller gets to keep the buyer's premium, the price the buyer had to pay for the option.

If and when Your Humble Risk-Averse Author ever begins trading options, it will be as an option seller. But that does not mean the option seller still cannot lose big. An option seller can be exposed to tremendous risk, especially if the price of the underlying stock makes a big move, up or down. The amount of risk the option seller accepts depends upon where their options are covered or uncovered. Uncovered options are also referred to as naked options. (Who says that the investment world is boring? Oh, by the way, it is unlikely that Your Humble Author will ever actually employ these options strategies. I just tell myself that I might do it someday. P.S. I have never bought a lottery ticket, either.)

Covered options allow an options seller to protect themselves against large losses. Uncovered options, also called naked options, imply the opposite; the options seller is subject to tremendous loss. The amount of return to the option writer is always limited to the amount of option premium received. However, the loss can be substantial, even unlimited in the case of an uncovered call, also known as a naked call. Using the concepts of covered options, there are two options selling strategies that can help a prudent, long-term oriented investor augment their returns, selling covered call options and selling naked put options.

Selling Options: Writing a Covered Call

You are a long-term oriented investor and you own 100 shares of a particular stock. You have been thinking of selling but you are not quite sure, though, and so you hesitate. The stock is trading for around $50. Therefore, instead of selling the stock, you can "write a covered call," also termed "sell a covered call," or, "make a covered call." Since you already own the 100 shares of stock,

you are “covered.” The price of call options with a strike price of $55 is currently $5. You will receive $5 times 100 shares or $500 for selling the option. If the stock price jumps over $55, it will be called away from you at $55. It is as if you actually sold it for $60, $55 for the price of the stock and $5 for the price of the option. If the stock price stays below $55, you can write another covered call if you are still not sure whether or not you want to sell the stock. This strategy allows you to make extra money from a stock that you already own. Do you see any disadvantages? What if the stock price zoomed up to $100? Oh, well, you were going to sell it anyway, right? What if the stock price plummeted? There would be very little probability that the option will ever be exercised so you don’t have to worry about that anymore. You can now use your valuation techniques to determine if you want to still keep the stock or sell it.

Do you now see why a naked call is so dangerous? If you sold a naked call – wrote the call option without having the shares – and the price shot up manyfold, you are now required to buy a stock for many times what you must sell the stock to the call option buyer. For example, you sold the naked put option on a stock with a strike price of $50 … and the price jumped to $200 per share, you now are legally required to buy 100 shares at $200 per share – $20,000! – and sell them to the call option buyer for only $5,000. You may believe that this is highly unusual but it does happen from time to time.

Selling Options: Writing a Naked Put

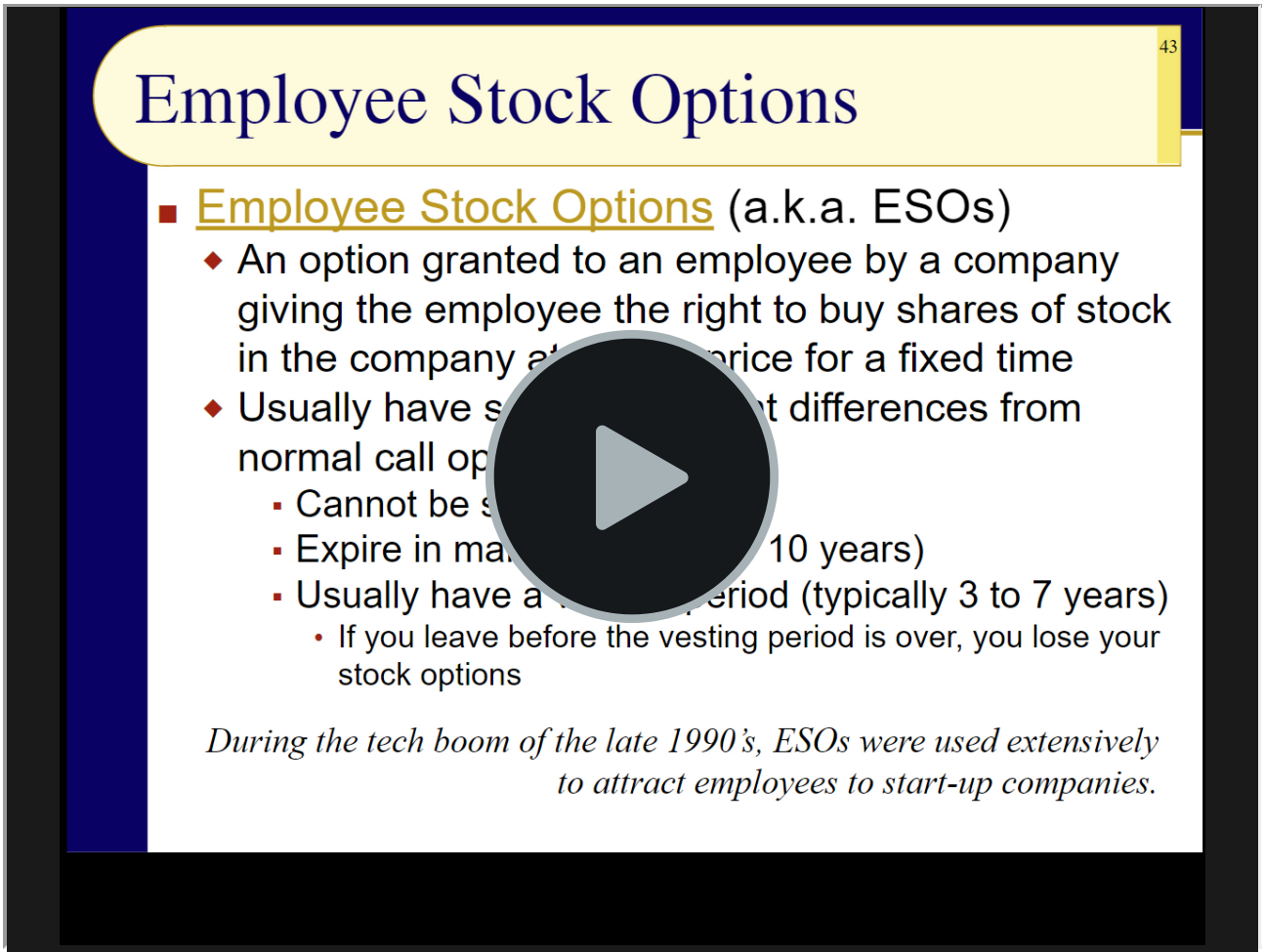
Again, you are a long-term oriented investor. This time, you are interested in purchasing 100 shares of a particular stock. You are not quite sure, though, and so you hesitate. The stock is trading for around $50. You have the $5,000 to buy the 100 shares. Therefore, instead of buying the 100 shares of stock, you write a naked put. Since you have the $5,000 to buy the shares of stock, you are “covered.” The price of put options with a strike price of $50 is currently $5. You will receive $5 times 100 shares or $500. If the price falls below $50, the option will be exercised and you will be legally required to sell the shares to the put option buyer at $50 per share. However, since you received $5 per share from the sale of the put option, it is as if you actually purchased the shares at $45, $50 per share for the stock and $5 from the price of the option. If the stock price stays the same or goes up, the option will expire worthless and you can then write another naked put. In any event, you get to keep the option price, also known as the premium option. Do you see any downsides to this strategy? What if the stock price plummeted to zero? What if the stock price rose? What would be the results of these situations?

Covered calls are the only options transaction that is permitted in an IRA. It is unfortunate that naked puts are not permitted assuming the IRA holder has the cash available in their account. The investment world does not recognize a put seller with sufficient cash to purchase the stock as covered. The way for a put option seller to cover a put option involves a technique we will discuss in detail soon, selling short.

One last word about options strategies is crucial to our understanding of why we want you to steer far away from options. Options are typically not tax efficient. Unlike stocks which, when held for more than one year, enjoy the tax benefits of being long-term capital gains when sold, options typically are considered short-term capital gains. However, options do often generate tax losses. Of course, tax losses could possibly be considered tax efficient since they allow us to reduce our taxable income. Nothing is all bad, yes?

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12.4: Employee Stock Options and Some Final Topics about Options



Video - Audio - YouTube

Employee Stock Options

Employee Stock Options, normally abbreviated as ESOs, are options granted to an employee by a company giving the employee the right to buy shares of stock in the company at a fixed price for a fixed time. They usually have some significant differences from normal call options. They cannot be sold, expire in many years, often up to 10 years, and have a vested period before the employee can take advantage of them, typically 3 to 7 years. If the employee leaves before the vesting period is over, the stock options are lost. During the technology boom of the late 1990's, ESOs were used extensively to attract employees to start-up companies.

During the 2000-2002 bear market, ESOs were the subject of much controversy. There is still some fall-out and publicity as companies and the SEC continue to wrangle over how and even if they should be used. For many years, companies could give ESOs to their employees and not have to pay anything. They did not reduce the company's earnings. However, ESOs must now be expensed according to the Financial Accounting Standards Board. Unfortunately, how do you come up with a price for something that is currently worthless?

To make matters worse, while some people became fabulously wealthy through ESOs during the Internet mania such as John Moores, a previous owner of the San Diego Padres and Peregrine Software, many other people were soaked with crippling tax burdens on worthless pieces of paper when their companies collapsed! How can that be, you ask? The Alternative Minimum Tax, AMT, does not care if you sell the stock of exercised options, only that you exercised them. You still owe the tax on the paper gain, even if you never were able to realize the gain because the stock price collapsed after the options were exercised. Bizarre!

"Wait a minute. Did you ask, 'How do you come up with a price for something that is currently worthless?'" Yes, that is correct. Since many ESOs are "out-of-the-money", often by a large amount, or cannot be exercised for a long time, or both, how does the company put a price on it? The financial world currently uses a system called the Black-Scholes Option Pricing Model. It may sound impressive, but it is really very silly, in the humble opinion of Your Humble Author.

Side note: Myron Scholes won the Nobel prize for Economics for this model and then proceeded to partner with John Meriweather, the famed bond trader that we discussed in chapter 1, to create Long-Term Capital Management. In 1998, they almost brought down the global financial system. The story is recounted in the book, *When Genius Failed*, by Roger Lowenstein, and the PBS NOVA documentary, *The Trillion Dollar Bet*. The story reads like a prequel to the Global Financial Crisis of 2008.

For example, for a stock currently selling for $7.50 per share and ESOs with an exercise price of $10 and options that cannot be exercised for 3 years, the Black-Scholes model might say that the employee stock option is worth $2.50. What? You cannot sell the options. You cannot exercise the options for 3 years. The options are "out-of-the-money." How are they worth $2.50? The stock price might never go over $10. What if the stock price does breach $10 and you exercise the options and then you see the stock price plummet? If you are unfortunate enough to be affected by the AMT, you might have to pay taxes on the paper gain that you never were able to realize!

Stock Index Options

A stock index option is a put or call option written on a specific stock market index, such as the S&P 500. Stock index options allow an investor to purchase or sell options that respond to a stock market index. For example, an investor can hedge a portfolio by purchasing a put on a stock index option that represents the portfolio. If the market goes down and takes the value of the portfolio down with it, the stock index put option will act as insurance against the large loss because it will rise counter to the market. Of course, it will only do this until it expires. And then you have to buy another stock index put option. Let's keep in mind that insurance is not free. There are dozens of indices represented including large-cap, mid-cap, and small-cap stocks, domestic, international, regional, country-specific markets. The possibilities are endless … and so are the fees. Whether speculating or hedging, it is still risky or expensive or both.

Other Types of Options

A few other types of options include interest rate options, currency options, and LEAPS. Interest rate options are put and call options written on fixed-income securities such as bonds. Interest rate options can be used as insurance to protect a bond portfolio from adverse interest rate movements, similar to the stock index options above for stocks. If interest rates rise, the value of the bond portfolio will fall. To protect against this, the investor can purchase insurance in the form of an interest rate option that would rise if interest rates rose. Again, the option eventually expires and the investor would be required to purchase another option to continue any protection.

Currency options are put and call options written on foreign currencies. These can be an important tool for foreign investors and multinational corporations who must periodically convert United States Dollars to and from other currencies. Unless we as retail investors regularly have significant amounts of our U.S. dollars converted to and from other currencies to buy and sell foreign securities or other assets, they would not be a useful tool for us.

Last, LEAPS is the acronym for Long-term Equity Anticipation Securities. LEAPS are long-lived options that expire in 9 months to 3 years. These instruments were introduced by the Chicago Board Options Exchange (CBOE) in 1990. Because of the increased time value, LEAPS command a higher option price, also known as the option premium, than shorter term options.

Warrants

A warrant is a long-lived option that gives the holder the right to buy stock in a company at a price specified on the warrant. Warrants are often issued as an incentive to investors. They may be issued by the same company that issued new shares of stock to the public. They sometimes accompany newly issued bonds or are given to employees as compensation, similar to ESOs. Unlike options, where each contract represents 100 shares of stock, one warrant represents the right to buy one share of stock. Warrants are usually always call options, however, there are some put warrants.

STAY AWAY FROM THEM!

The possibilities are endless, and so are the losses and commissions. Options are a zero-sum gamble. Someone wins, someone loses. Of course, the brokerages and exchanges make money no matter what happens. But don't take my word for it! There are dozens of folks who want to take your money, ah, I mean, teach to make riches beyond your wildest dreams. As of April 2025, here are just three:

Online Trading Academy, 7 Days, 42 Hours, Only $7,495!

The Day Trading Academy - Used to be only $2,997. Ooops! They were sued out of existence.

TradeWins.com - These folks have got to be seen to be believed! ! Scroll down to see Chuck and Wendy and Bubba They want's t' learn ya' good!

Here is one last attempt to steer you far away from options. Check out this unfortunate soul who committed suicide when he thought he had racked up $700,000 in debt selling options. He was wrong. He did not actually incur the debt. He was just reading his account status incorrectly.

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12.S: Summary

Congratulations – You Have Finished Chapter 12 – Options Contracts

You have reached the end of chapter 12, Options Contracts. In this chapter, you have:

- Been introduced to the concepts and basics of options contracts
- Explored the rationale behind the use the options contracts
- Examined call and put options contracts
- Discussed the differences between the options contracts buyer and the options contracts seller (aka writer, maker)
- Explored the various characteristics of options contracts such as strike price, expiration date, exercise style, break-even price, and time value
- Examined various options contracts strategies including straddles and spreads
- Explored Employee Stock Options (ESOs), the valuation of options contracts, other types of options contracts, and warrants

You should now be able to:

1. Describe the rationale and use of options contracts
2. Explain the differences between call options and put options
3. Identify the various characteristics of options contracts
4. Describe the differences between the options contract buyer and the options contract seller (aka writer, maker)
5. Explain various option contracts strategies
6. Determine whether an option contract is “in-the-money,” “at-the-money,” or “out-of-the-money”
7. Calculate the breakeven price for call and put options
8. Calculate the profit or loss from various scenarios of purchasing and exercising options contracts
9. Describe Employee Stock Options (ESOs) and warrants

And You Thought Options Were Risky?!

Well, just wait until we get to our next chapter on futures contracts. Unlike options contracts, futures contracts are financial instruments that actually have a valid reason for existence and are very important to our global economy. However, for the vast majority of us retail investors, they are extremely risky and dangerous and can turn a prudent, long-term investment portfolio into a pool of tears overnight. Remember, we are teaching you about these derivatives so that you will be protected against their siren calls of “get rich quick.” Once again, Dear Readers, instruction about syphilis is not an instruction to get syphilis.

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CHAPTER OVERVIEW

Chapter 13: Futures Contracts

> *"There are two times in a man's life when he should not speculate;*
>
> *when he can't afford it and when he can." – Mark Twain*

Learning Objectives

In this chapter, you will

- Be introduced to the concepts and basics of futures contracts
- Examine the rationale and uses of future contracts for producers and consumers of commodities
- Discuss the uses of future contracts in the financial world
- Explore the differences between hedging and speculating with future contracts
- Examine the potential enormous adverse consequences that can result from speculating with futures contracts

By the end of this chapter, you should be able to

- Describe the rationale and use of futures contracts
- Explain the differences between call options and put options
- Explain the uses of futures contracts for producers and consumers of commodities
- Describe the differences between hedging and speculating with futures contracts
- Explain the potential enormous adverse consequences that can result from speculating with futures contracts

So, what did you think about options, eh? Ready to start gambling, oops!, I mean, speculating with stock options contracts? Well, Dear Students, as the saying goes, "You ain't seen nothin' yet!" The amount of money that you can lose speculating with futures contracts is staggering. However, unlike options contracts, futures contracts actually do have a very important usage in the global financial system ... for large producers and consumers of commodities such as wheat, oil, and pork bellies. (The last one being used for comedic effect in the 1983 movie *Trading Places*. Pork bellies, Dear Students, are what they make bacon out of. You know, that tasty stuff that is responsible for colorectal cancer?) For the rest of us, we are best served by staying away from these "Weapons of Mass Financial Destruction." This is a phrase coined by famed investor Warren Buffett.

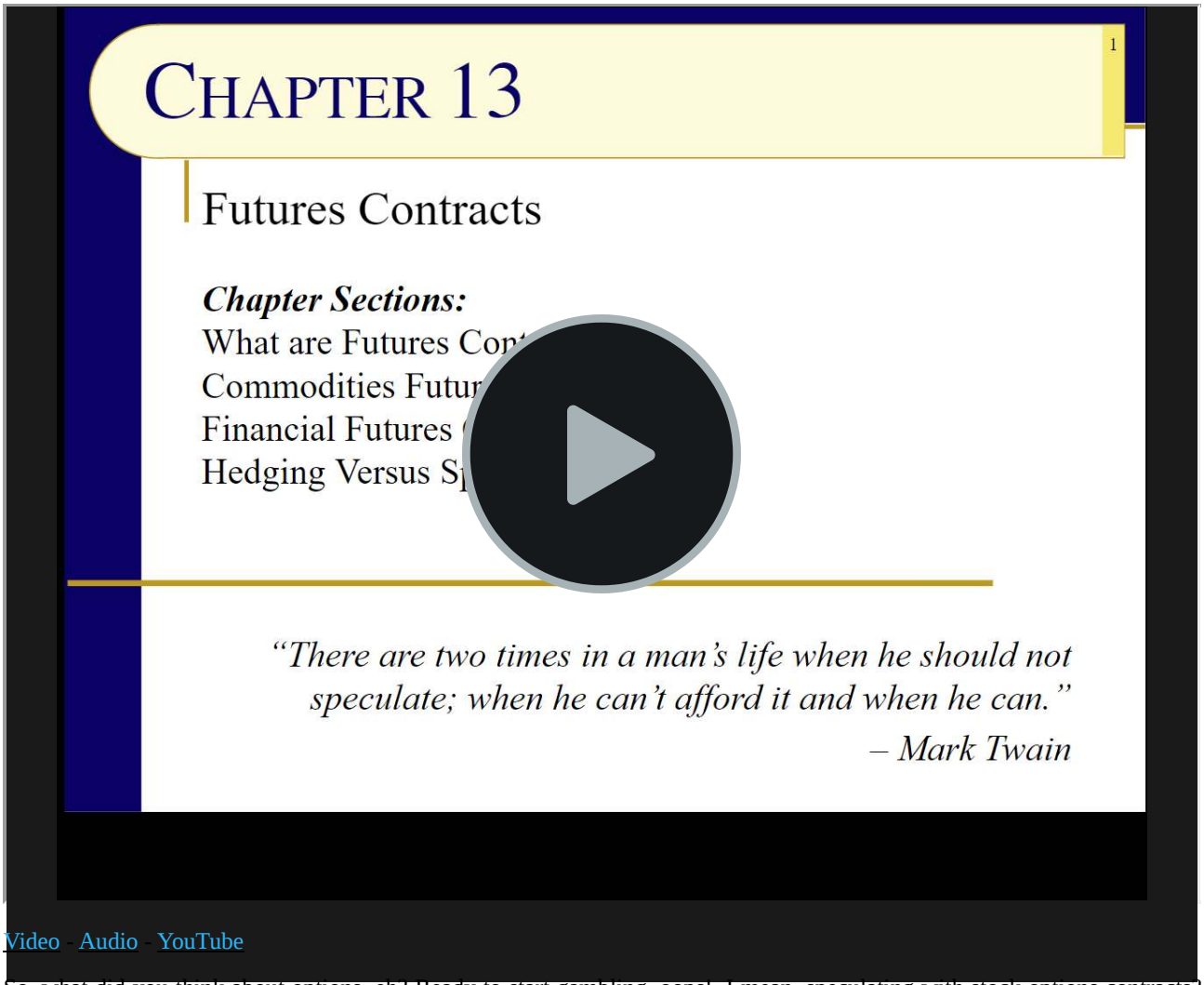
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13.1: Futures Contracts
13.S: Summary

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13.1: Futures Contracts



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So, what did you think about options, eh? Ready to start gambling, oops!, I mean, speculating with stock options contracts? Well, Dear Students, as the saying goes, "You ain't seen nothin' yet!" The amount of money that you can lose speculating with futures contracts is staggering. However, unlike options, futures actually do have a very important usage in the global financial system ... for large producers and consumers of commodities such as wheat, oil, and pork bellies. (The last one being used for comedic effect in the 1983 movie *Trading Places*. Pork bellies, Dear Students, are what they make bacon out of.) For the rest of us, we are best served by staying away from these "Weapons of Mass Financial Destruction." (This is a phrase coined by famed investor Warren Buffett.)

What Are Futures Contracts?

A futures contract is a commitment to deliver a certain amount of some specified item at some specified date in the future. A futures contract buyer and a futures contract seller specify a commodity or financial instrument to be delivered and paid when the contract matures. The futures price is guaranteed by the contract. Futures contracts started with commodities, also referred to as hard assets or real assets. Examples include wheat, soybeans, cattle, pork bellies, gold, silver, copper, oil, and gas. However, there are now futures contracts that cover financial assets such as stocks, bonds, and currencies.

Commodities Futures Contracts

Producers of commodities use futures contracts extensively. For example, a wheat farmer in Iowa plants 1,000 acres of wheat in April. He knows that if all goes well, Lord willin' and the creek don't rise, come September he will have 50,000 bushels of wheat.

September wheat futures are currently selling – in April! – for $6 per bushel. Our farmer can "sell" his wheat via a wheat futures contract while it is still germinating in the ground. He can guarantee a price that he is happy with and will result in a profit for him. The contract states he will deliver the wheat in September and receive $6 per bushel no matter what happens to wheat prices.

Consumers of commodities also use future contracts. For example, cereal companies such as Kellogg's, General Mills, and Post Cereal need tons and tons of wheat each year to make cereal and other foodstuffs. Via futures contracts, in April, they can purchase the wheat to be delivered in September and pay $6 per bushel no matter what happens to wheat prices. In this way, we can think of futures contracts as insurance. The farmer and the food companies are using futures contracts like insurance to protect themselves.

Can you see the rationale behind these instruments? Futures contracts allow producers and consumers of commodities to hedge. Hedging is taking a futures position opposite to an existing position in the underlying commodity or financial instrument. "Hedge your bet!" Have you ever heard this saying? The farmer will have tons of wheat so he is taking a position opposite to his holdings; he is selling his wheat. The food companies will need tons of wheat so they are taking a position opposite to their need; they are buying wheat.

What are the disadvantages of using futures contracts when you are the producer and when you are the consumer? If wheat prices plummet, the farmer is protected, yes, but on the other hand, if wheat prices rise substantially, the farmer cannot take advantage of the higher prices since he is already contractually obligated to sell his wheat for $6 per bushel. Likewise, although the food companies are protected against considerable price increases, if prices fell appreciably, they will not be able to take advantage of the lower prices since the food companies have already promised to pay the farmer $6 per bushel, no matter what happens to wheat prices.

Here is a list of common commodities:

Food and Fiber	**Livestock and Meat**	**Forest Products**	**Precious Metals**
Barley	Feeder Cattle	Hardwood Pulp	Gold
Canola	Lean Hogs	Lumber	Palladium
Cocoa	Live Cattle	Softwood Pulp	Platinum
Coffee	Pork Bellies		Rhodium
Corn			Silver
Cotton			
Flaxseed	**Energy**	**Metals**	**Other**
Milk	Brent Crude	Aluminum	Amber
Oats	Electricity	Aluminum Alloy	Palm Oil
Orange Juice	Ethanol	Cobalt	Rubber
Rapeseed	Gulf Coast Gasoline	Lead	Wool
Rice	Heating Oil	LME Copper	
Soybean Meal	Natural Gas	LME Nickel	
Soybean Oil	Propane	Molybdenum	
Soybeans	RBOB Gasoline	Tin	
Sugar	WTI Crude Oil	Zinc	
Wheat			

Financial Futures Contracts

The financial world adopted the technique of futures contracts to financial assets, treating financial assets like commodities. Financial futures contracts work similarly to commodities future contracts. Examples include currencies, interest rates, stock and bond indexes. “I will deliver $25,000 worth of British Pounds to you next April.” “I will purchase $10,000 worth of the S&P 500 stock index from you next August.”

For those working in the World of Finance and especially, the World of International Business, financial futures contracts can be very useful tools. For example, a car manufacturer based in the United States knows it will need to purchase 50,000 engines from Japan next October. The manufacturer can buy a currency futures contract for $30,000,000 worth of Japanese Yen payable in October. This protects the manufacturer from adverse currency fluctuations. Again, we can use the analogy of insurance. The manufacturer bought insurance against the United States dollar falling relative to the Japanese yen. If the dollar does fall relative to the yen, the manufacturer is protected. If the dollar rises against the yen, the manufacturer bought insurance that they did not need.

Speculating with Futures Contracts

Can anyone buy futures contracts? *Lucky You!* You do not have to work in either the commodities world or the finance world to buy and sell futures contracts. You can be a speculator! You simply buy and sell the futures contracts. You never actually deliver or take delivery of the commodity nor the financial asset. You could buy the 50,000 bushels to be delivered in September even though you live in a condo in West Los Angeles and have never even seen a farm!

Speculating with futures contracts is accepting the futures price risk without having a position opposite to an existing position in the underlying commodity or financial instrument. It is the opposite of hedging. One boring Introduction to Investments textbook said, “… futures speculation is risky, but it is potentially rewarding if you can accurately forecast the direction of future commodity price movements.” Can anyone accurately forecast the future? If our LA speculator sitting in her condo had purchased the futures contract for 50,000 bushels of wheat to be delivered in September and wheat prices plummeted, she could potentially lose hundreds of thousands of dollars!

Note: When and if you ever start speculating with futures contracts, your broker will be watching your account like a hawk. They will do their best to make sure that you never get close to losing hundreds of thousands of dollars. Why? Because if you disappear and send them a postcard from East Jabip, the brokerage firm is required to make good on the transactions. If you start to lose too much money, they are permitted to close you out of the transaction, even if you will lose a substantial amount on the deal. We will discuss this in detail in our next chapter.

Final Characteristics and Comments on Futures Contracts

The largest, most active futures exchange is the Chicago Board of Trade although futures contracts are traded on many other exchanges. The “long position” is the buyer of the futures contract and is protected from futures price increases. In our example, these are the cereal companies, Kellogg’s, General Mills, and Post Cereal. The “short position” is the seller of the futures contract. The seller is protected from future price decreases. In our example, this was the farmer. We will discuss the terms long and short in detail in our next chapter.

Futures contracts seem similar to options contracts. In fact, the two are very similar. Financial futures work very much like options. There is the potential for great rewards but there is also much more of the likelihood of sustaining great losses. In fact, the potential losses from futures contracts are staggering! And, just like options, they are a tremendous source of commissions for your broker. Oh, by the way, you can purchase options contracts on futures contracts. What do you think about that?

Our final comments on futures contracts?

STAY AWAY FROM THEM!

They are even more potentially dangerous than options. Here is an article about how hapless would-be speculators lost tremendous amounts of money in the world of futures contracts. If you search for other examples using an Internet search, unfortunately the

numerous advertisements for how to teach you to get rich quickly “investing” in futures crowd out the articles trying to warn you about their dangers.

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13.S: Summary

Congratulations – You Have Finished Chapter 13 – Futures Contracts

You have reached the end of chapter 13, Futures Contracts. In this chapter, you have:

- Been introduced to the concepts and basics of futures contracts
- Examined the rationale and use of future contracts for suppliers and consumers of commodities
- Discussed the use of future contracts in the financial world
- Explored the differences between hedging and speculating with future contracts
- Examined the potential enormous adverse consequences that can result from speculating with futures contracts

You should now be able to:

1. Describe the rationale and use of futures contracts
2. Explain the uses of futures contracts for suppliers and consumers of commodities
3. Explain the uses of futures contracts in the financial and investment world
4. Describe the differences between hedging and speculating with futures contracts
5. Explain the potential enormous adverse consequences that can result from speculating with futures contract

So, are ya' gonna' stay far, far away from options and futures? I hope so! But wait, we are not yet finished learning how to lose a lot of money. In our next module, we will learn two more techniques designed to make your brokerage firm rich, ah, I mean, designed to help separate you from your money, no!, no!, I mean, designed to help you take advantage of other speculative strategies. We are ready to tackle buying on margin and selling short.

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CHAPTER OVERVIEW

Chapter 14: Buying on Margin and Selling Short

> *"October: This is one of the peculiarly dangerous months to speculate in stocks. The others are July, January, September, April, November, May, March, June, December, August and February." – Mark Twain*

Learning Objectives

In this chapter, you will

- Explore the differences between cash accounts and margin accounts
- Examine the technique of buying on margin which entails borrowing money to buy securities, typically stocks
- Discuss the use of buying on margin to magnify investment returns and the potential adverse results
- Examine the technique of selling short, also known as shorting stocks
- Discuss the use of shorting stocks to profit from falling prices and the potential significant adverse results
- Explore the phenomenon known as a "short squeeze"

By the end of this chapter, you should be able to

- Explain the technique of buying on margin and its potential advantages and disadvantages
- Calculate various profit and loss results from various buying on margin scenarios
- Explain the technique of selling short, also known as shorting stocks, its potential advantages, and its significant potential pitfalls
- Calculate various profit and loss results from various selling stocks short scenarios
- Identify potential "short squeeze" situations and how a prudent, long-term investor can take advantage of such situations

As if options contracts and future options were not bad enough, the investment world has two more strategies to help separate you from your money, aye!, I mean increase your wealth through speculative transactions. (Have I ever mentioned that I am not very popular with many brokers?) In this chapter, we discuss buying on margin and selling short. Both involve borrowing from your broker. Both have significant risks. And as we have said in the past, instruction about syphilis is not an instruction to get syphilis. Okay, okay, maybe someday down the line, you may find a suitable situation for buying on margin. But selling short is downright dangerous. It's right up there with futures contracts. Let's see if we can scare you away from selling short for good!

Presentation file - Study guide

14.1: Buying on Margin

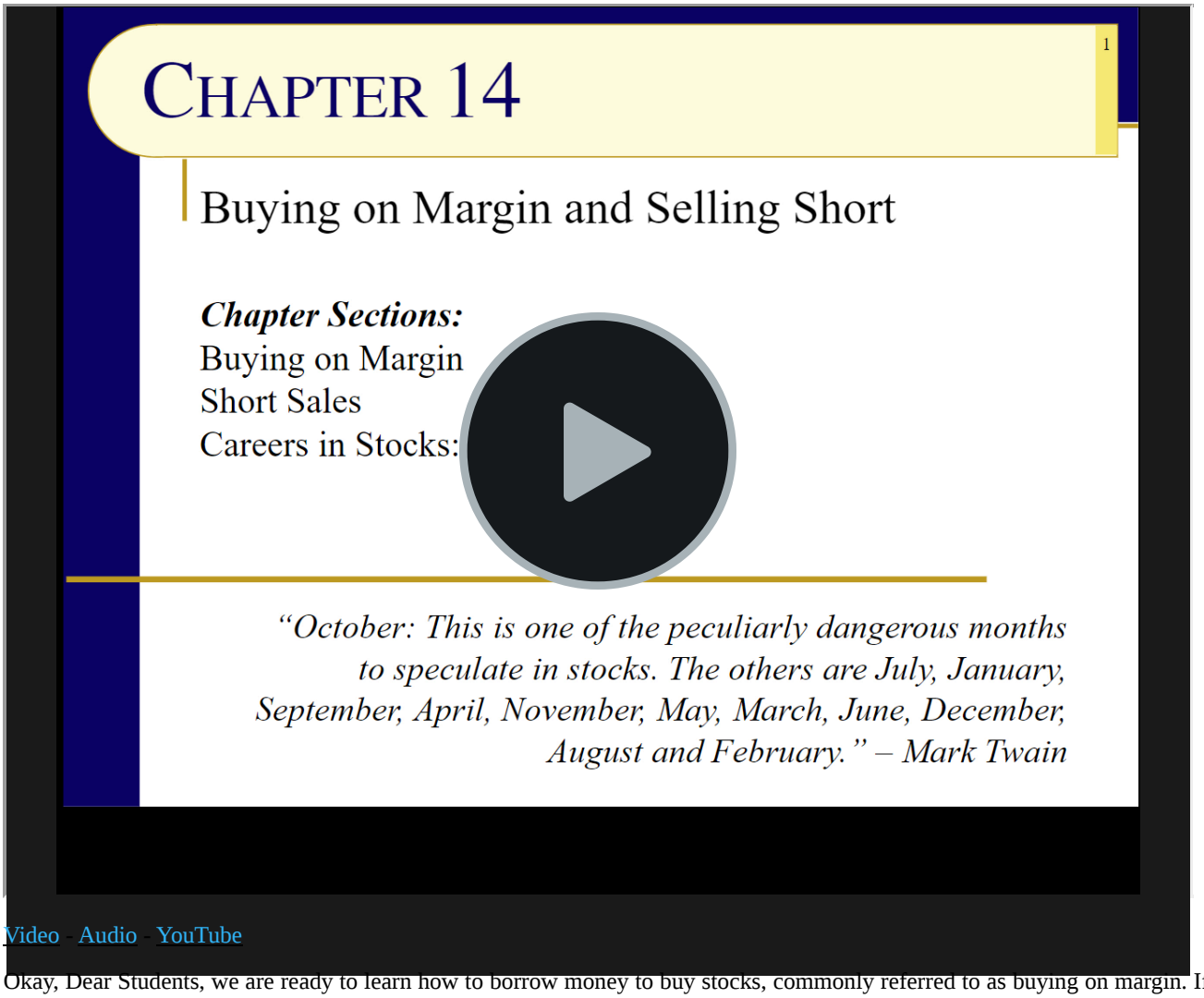
14.2: Selling Short

14.S: Summary

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14.1: Buying on Margin



Video - Audio - YouTube

Okay, Dear Students, we are ready to learn how to borrow money to buy stocks, commonly referred to as buying on margin. If you borrow money to buy stocks – buy on margin – not only will your brokerage firm be earning commissions from you but you will also be paying them interest! This will make your broker very happy. What's that, you say? You say you are really not that interested in whether or not your broker is very happy and you are more concerned with your own financial success. My apologies. Well, did I mention that buying on margin can magnify your investment returns? Yes, indeed, it can! But I guess I also have to mention that buying on margin can also magnify your investment losses. Oh, well, nothing is perfect!

Cash Account

A cash account is a brokerage account in which all transactions are made on a strictly cash basis. Cash accounts are the simplest arrangements requiring no credit check of the customer by the brokerage firm. Once you have established a good relationship, most brokerage firms will allow you to purchase shares of stock even if you do not have enough cash in the account. This is because stock transactions settle in one business day. You have one business day to get the money into the account. Some of the deep-discount Internet brokers do not allow this. The cash must already be in your account. Conversely, when you sell a stock, it takes one business day to receive the money. Again, once you establish a good relationship with your brokerage firm, if you need the money sooner than one day, they will usually make arrangements so that you can immediately have access to the proceeds from the sale of the stock.

Margin Account

A margin account is a brokerage account in which, subject to specified limitations, securities can be bought and sold on credit. If you open a margin account, the brokerage firm will do a credit check to determine your creditworthiness, since you will be borrowing money from them. The interest rate you pay on the money borrowed from your broker is called the margin rate. It is actually a very good interest rate. It is often the prime rate plus 1 or 2 percentage points or 2 or 3 points above the current money market rates, depending on how much you borrow. The margin rate is almost always much better than credit card rates.

A margin account allows you to perform margin trading, commonly referred to as buying on margin. Buying on margin entails the use of borrowed funds from your broker to purchase securities, typically stocks. Hence, your account is often referred to as a leveraged account. You can use the borrowed funds as a lever to magnify your returns by reducing the amount of equity that you must deposit. Of course, leveraging as it is often called is a two-way street. The use of borrowed funds can magnify your returns but it can also magnify your losses. Ain't nuthin' free!

The margin is the portion of the value of your investment that is not borrowed. (This has always seemed odd to me. Shouldn't it be the other way 'round? Shouldn't the part that you borrowed be called the margin? Oh, well. I don't make the rules.) The margin is the amount of equity stated as a percentage in the investment. An example would be if you bought a stock for $100 and you deposited $75 and borrowed $25. Your margin would be 75% while 25% of the investment is money you borrowed from your broker.

The Rationale for Buying on Margin

Why buy on margin? Buying on margin allows the investor to use financial leverage. (There's that word again, *leverage*!) Leverage is the use of debt financing to magnify investment returns. We will see some examples shortly. Another use of buying on margin allows an investor to tap into the equity in their account without actually selling their investments and generating commissions and taxable transactions. Buying on margin is much like buying a house. When you purchase a house, you do not come up with the total amount. You deposit 10% or 20% down and finance the rest. However, when you buy stocks on margin, you are required to deposit at least 50%.

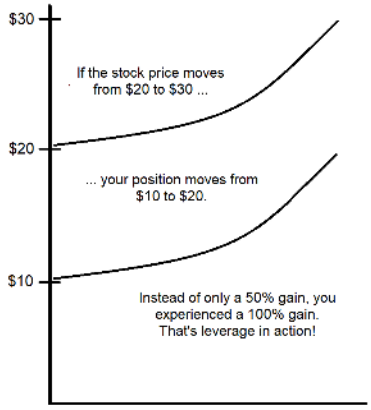
Generally, at first, a prudent, long-term investor would avoid buying on margin. We will see examples of why it is best to avoid buying on margin very soon. However, there may be situations where buying on margin is a suitable strategy. Let's say an investor has built a solid, long-term oriented portfolio of high-quality stocks from many years of prudent and successful investing. The investor has an unforeseen incident which now requires a large purchase or outlay. The investor, though, does not want to sell their stocks. This would generate commissions and taxes and also, maybe they just believe that these are stocks that they want to continue to hold for the long term. The investor can use buying on margin to borrow on the value of their portfolio, similar to a Home Equity Line of Credit (HELOC) loan that homeowners can employ when in need of cash.

The important point to remember here is that in both cases, you are borrowing money, whether it is a HELOC loan from your bank or credit union or a margin loan from your broker. In our BUS-121, Principles of Money Management, class, we recommend that our students follow this tried and true wisdom, "Make Love, Not Loans."

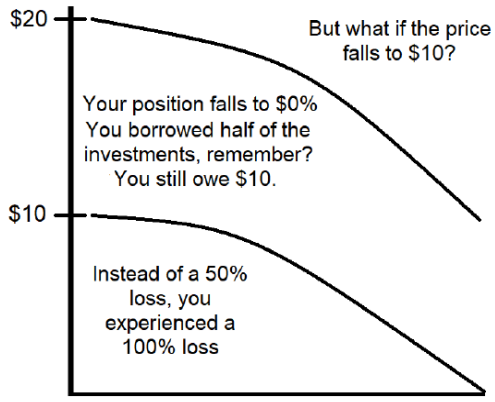
The Aspects and Mechanics of Buying on Margin

As mentioned, buying on margin requires an initial deposit called the initial margin. This initial margin requirement is the minimum amount of equity that must be a margin investor's own funds. The initial margin requirement is set by the Federal Reserve Board and can change over time but has been set to 50% for many decades. You must deposit at least 50% of your own funds. This allows you to purchase the same amount of stock with half the money. The margin loan, also known as the debit balance, is the amount of your account borrowed.

Let's take a look at an example. You deposit $10 and borrow $10 from your broker. You purchase one share of common stock for $20. Your initial margin is $10 or 50%. The margin loan is $10 or 50%. Now let's say the market price of the stock rises to $30. Congratulations! You made $10 on a $10 investment! That is half of what you had to come up with when you simply purchased the stock outright with your own money. Instead of a 50% return on your investment, you received a 100% return on your investment.



Let's revisit the example, you deposit $10 and borrow $10 from your broker. You purchase one share of common stock for $20. Everything is the same as before, however, this time the market price of the stock drops to $10. Oops! Only ½ of the money was yours! You borrowed the rest. You have lost your entire investment! Buying on margin magnifies your gains *and* magnifies your losses. Margin buying was one of the major contributing factors to the Crash of 1929. At the time, the margin requirement was only 10%. For this reason, the above scenario is prohibited today and our intrepid investor would have had a "margin call" long ago.



Because margin trading is inherently riskier, margin accounts are more highly scrutinized by brokerage firms. A restricted account is a margin account whose equity is less than the initial margin requirement. The investor may not make further margin purchases and must bring the margin back to the initial margin requirement when the securities are sold. Information technology has made the brokerage firm's job of scrutinizing margin clients much easier. Now, the computer spits out a list of customers that are restricted.

The maintenance margin is the absolute minimum amount of margin that an investor must maintain in the margin account at all times. The Federal Reserve Board sets the minimum and it has been set at 25% for many decades. However, your brokerage firm may set the minimum higher for individual clients depending upon their creditworthiness. A client's maintenance margin might be set at 35% or 40% if the brokerage firm believed that the client would have trouble absorbing the very large losses that may accompany a margined transaction.

If the amount of margin falls below the maintenance margin, the investor will receive the dreaded margin call, a notification of the need to bring the equity of an account whose margin is below the maintenance level up to the initial margin level or to have enough margined securities sold to reach this standard. If the investor does not meet the margin call in sufficient time, typically 48 hours, the brokerage firm is authorized to sell enough of the securities to meet the margin call. There is an old Wall Street saying: "Never meet a margin call!"

As the Internet bubble was deflating in the early 2000's and many technology firms were seeing their prices plummet, some brokerage firms would send out the margin call notifications in the form of email messages overnight. However, the brokerage firms did not wait for the clients to respond. Immediately, when the market opened the next day, the brokerage firms sold the losing shares in an effort to stem the clients' losses. How could they do this? When you open a margin account, you agree to many

provisions that state that the brokerage firm is allowed to close out your transactions without your consent or approval. Why did they do this? They did this to protect themselves. If stock prices fall fast enough, an investor might lose enough money such that they now have what is called negative equity. This is a fancy term for having all the value of their portfolio wiped out and now they are losing borrowed money. If they disappear or declare bankruptcy, the brokerage firm is on the hook for the loss.

Of course, if your investments do very well, you will have excess margin in your margin, more equity than is required in a margin account. You can then use the excess margin you create in your margin account to purchase additional stock without having to come up with more money. This is called pyramiding, the technique of using excess margin from paper profits in margin accounts to partly or fully finance the acquisition of additional securities. What do you think of this strategy? Sorta' flies in the face of, "Make Love, Not Loans," eh?

And remember that you have borrowed money from your brokerage firm. You are paying interest on that borrowed money. Paying interest on the margin loan also adds yet another drag on your investment returns. Your margined investments must meet or exceed the margin interest rate in order for you to just break even! Commissions and interest, what a combination! Now you know why your broker is always so happy to take your calls.

You might be asking yourself the question, "So, why would I buy on margin?" The easy answer is, "You shouldn't." The risks are not worth the potential reward, in the opinion of Your Humble Author. Of course, you will find many other more adventurous individuals who disagree and believe buying on margin is worth the risks. Do you want to eat well or do you want to sleep well?

However, as discussed, there is a valid, logical reason for having a margin account. A margin account allows you to temporarily borrow against your investments without having to sell them. You do not incur commission costs and you do not trigger capital gains taxes, but you do pay interest. Do you think you would want to buy stock on margin?

The Account Balance Sheet

Traditionally, with margin accounts, the brokerage firms would create an account balance sheet to keep track of the account. It is all computerized now. Those of you with accounting experience will recognize this as a simple balance sheet using the formula:

```
Assets = Liabilities + Equity
```

The assets on the left of the account balance sheet must equal the liabilities and equity on the right of the account balance sheet. The account balance sheet also makes it easier to calculate the margin. To calculate the account margin, we use the formula:

```
Account Margin = Account Equity / Total Assets
```

Let's take a look at an example and construct the account balance sheet. You purchased 100 shares of a stock at $100 per share. That is $10,000 in total. You deposit $5,000 and you borrow the rest, another $5,000. You owe your brokerage firm $5,000. You are, of course, paying interest on the $5,000.

Margined Account with Initial 50% Margin

Assets		Liabilities and Equity	
100 Shares @ $100/shr	$10,000	Margin Loan	$5,000
		Account Equity	$5,000
Total Assets:	$10,000	Total Liabilities and Equity:	$10,000

Using the formula for the account margin above, we get:

```
Account Margin = Account Equity / Total Assets = $5,000 / $10,000 = 50%
```

Now what if the stock price rises to $120 per share?

Margined Account After Significant Price Gain of Securities

Assets		Liabilities and Equity	
100 Shares @ $120/shr	$12,000	Margin Loan	$5,000
		Account Equity	$7,000
Total Assets:	$12,000	Total Liabilities and Equity:	$12,000

Using the formula again for the account margin above, we get:

```
Account Margin = Account Equity / Total Assets = $7,000 / $12,000 = 58.33%
```

Congratulations, you have excess margin! You can use the excess margin to help purchase additional shares of stock. But what happens if the stock price drops to $60? Your company was caught artificially inflating earnings!

Margined Account After Significant Price Reduction of Securities: Margin Call!

Assets		Liabilities and Equity	
100 Shares @ $60/shr	$6,000	Margin Loan	$5,000
		Account Equity	$1,000
Total Assets:	$6,000	Total Liabilities and Equity:	$6,000

We have a problem. The results from the formula for the account margin are now quite different:

```
Account Margin = Account Equity / Total Assets = $1,000 / $6,000 = 16.67%
```

Margin call! Unless your brokerage firm already sold the shares before giving you a chance to respond, you have a choice. You can either sell the shares and take a brutal loss. Or you can meet the margin call by depositing more cash into your account. What was the old Wall Street saying? “Never meet a margin call!” Take the loss and vow never to buy on margin again.

Final Thoughts Regarding Buying on Margin

Do you want to eat well or do you want to sleep well? Buying on margin allows an aggressive investor to magnify their returns but also magnify their losses. Of course, once a prudent, long-term oriented investor has built a solid portfolio of high-quality stocks and is in need of cash, the investor can borrow from their portfolio at attractive interest rates without the need to sell stocks generating commissions and taxable transactions. (And if you dared to say to yourself, “Oh, I don’t pay commissions,” then shame on you! Robinhood has brainwashed you!)

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14.2: Selling Short



Video - Audio - YouTube

Okay, Fun Seekers, have we got a strategy for you! You say you believe a stock, or any security, for that matter, is overvalued and the price is bound to fall? Well, you can sell that stock short, also called shorting the stock, and if the price goes down, you will make money. Of course, if the price goes up, you will lose money. In fact, if the price goes up, you can lose a whole lot o’ money very quickly. Selling short is much more dangerous than buying on margin. And you know how we feel about buying on margin, right?

Don’t miss the article at the end of our discussion of selling short. We don’t want you to wind up like that poor slob. (If you want to see what happened to him before you understand how to sell short, please see the sad story here.)

Long Purchases

A long purchase is a transaction in which investors buy securities in the hope that they will increase in value and can be sold at a later date for profit. Long purchases go by various names such as “buying long,” “going long,” “long position,” or simply just, “long.” Long purchases are the type of transaction that people commonly think of when they hear that someone bought stock. They are the transactions that we have been discussing since the beginning of our journey together. Buying long is the most common form of transaction. Investors have the expectation of dividends or capital appreciation or both. “Buy low, sell high.”

Here is an example: You purchase one share of common stock for $20. The market price rises to $30. Congratulations! You made $10 on a $20 investment! That is a 50% increase. Of course, if the price dropped to $10, you lost $10, or one half of your investment, a 50% decrease.

But what if we told you that buying long was not the only way to make money with stocks? That there was another method other than, “Buy low, sell high?” Oh, boy, you’re gonna’ love this!

Short Sales

Participants in the stock marketplace can engage in short selling. Short selling also goes by various names such as “selling short,” “shorting the stock,” “going short,” or again, simply just “short.” Short selling is the sale of borrowed securities, their eventual repurchase by the short seller, and their return to the lender. It is the opposite of “buying long.” You are hoping that the price goes down. You have reversed the process. You want to, “Sell high, buy low.” Selling short must take place in a margin account since you are borrowing the stock you sell from the brokerage firm. However, with short selling, you are borrowing stock instead of cash.

“Wait a minute!” you exclaim. “That doesn’t sound legal! How can you sell something that isn’t yours?” This is the first reaction that many individuals experience. Although from time to time, some call for short selling to be banned, it’s perfectly legal. The first short sales took place hundreds of years ago and it doesn’t appear that the practice will be barred any time soon.

Here is how selling short works: You borrow the stock from another shareholder without their knowledge and sell it on the market. You receive money for selling stock that you do not own. You wait for the stock price to go down. You then buy back the shares at a lower price, pocketing the difference. The shareholder you borrowed the shares from never knows that the shares were borrowed. The brokerage firm does all the financial sleight-of-hand. Oh, by the way, you must pay any dividends the company declares to the investor who you borrowed the shares from. Why? The company is now paying the dividends to whomever bought the shares you sold short.



The graphic above details the process. Today, you initiate a short sale. You believe that a company’s share price will decline. You borrow shares from another investor at your brokerage firm. Again, that investor never knows that the shares were borrowed; your brokerage firm takes care of all the accounting. You then sell those shares in the open market. You are now “short.” Eventually, some day in the future, you will need to buy back those shares and return them to the investor that you borrowed them from. If the price goes down, you have made money. If the price goes up, you have lost money. It is the opposite of buying long. Oh, by the way, if the investor wants to sell their shares and the brokerage firm doesn’t have any other shares available to borrow, the brokerage firm can close out your transaction without your consent. This does not happen very often but it can happen.

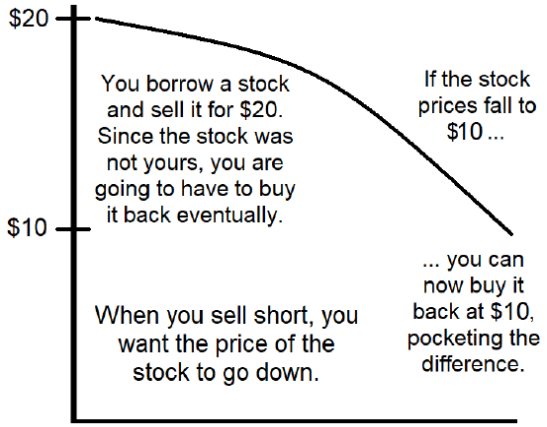
The Rationale for Selling Short

If you find yourself in a conversation with an economist or a market professional, they will often defend selling short as an efficient method to “root out hype and irrational exuberance” or “keep prices in line with reality.” It’s all hogwash! Selling short is dangerous speculation. As with all the previous speculations we have been exploring, you can make a lot of money quickly but you can also lose a whole lot more money quickly, sometimes instantly. It is also anathema to capitalism. (Anathema is a fancy word for hateful or offensive.) As we have learned, as the global economy has expanded over the last two centuries, stock prices have risen along with it. We want the global economy to expand and for companies to do well so that we citizens of the world will enjoy a better standard of living and everyone will have their basic needs met, food, clothing, and shelter … and Internet access. When you sell short, you are betting against this future. You want a company to do poorly. Yes, we know that some companies will fail. That is part of capitalism. However, we as a society should be rooting for all individuals and companies to prosper.

In short (ah, pun intended), if you really want to know why certain speculators and traders short stocks, you will need to discuss the topic in earnest with them. Yours Truly is one of those fanatical outliers who believe that short selling should simply be banned, once and for all. (Don’t worry. We fanatics won’t get our way. Short selling is not going anywhere anytime soon. Okay, end of rant. Let’s get on with the mechanics of selling short.)

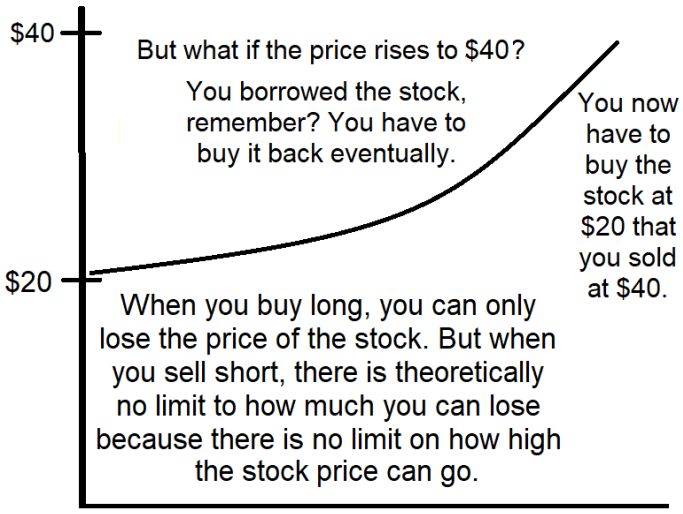
The Aspects and Mechanics of Selling Short

Let's take a look at an example which is the opposite of the buying long example above. You sell a stock short for $20. You receive $20 from the sale of the stock even though the stock was not yours. You borrowed it from someone else. The stock price goes down to $10. You buy back the stock at $10, "closing out the transaction." You give the stock back to the person you borrowed it from. You get to keep the $10 difference. Congratulations! You just made $10 on a $0 investment! Well, not quite.



You cannot actually make $10 on a $0 investment. It is a margin account, remember? You borrowed the stock that you sold. The rules for a margin account still apply. You must deposit at least 50%. "*50% of what?!*" you ask confusedly. 50% of what you borrowed! "*Huh? What?*" You must deposit 50% of the proceeds from the sale of the borrowed stock. You borrowed the stock that you sold. Again, the brokerage firms use the Account Balance Sheet to keep track of the investor's margin. We will revisit the Account Balance Sheet shortly. But first, let's see what happens if the price rises instead of falls.

Again, you sell a stock short for $20. You receive $20 from the sale of the stock even though the stock was not yours. You borrowed it from someone else. This time, the stock price goes up to $40. You buy back the stock at $40. Remember, you *borrowed* the shares. You *must* replace them at some future date. You *must* buy the shares back. Uh-oh! You just lost $20 on your short transaction!



When you buy long, you can only lose the purchase price of the stock. If you buy a stock for $20 and it goes to zero, you lose $20. But once a stock reaches $0, it cannot go any lower. However, when you sell short, there is no limit to the amount of money you can lose theoretically. Why? Because there is no limit to the price of a stock. The price can always go higher. The playful Wall Street saying for this situation is, "He who sells what isn't his'n, must buy it back or go to prison." Of course, since you sell short in a margin account, your account is still being watched carefully for signs of trouble and if the price rises enough, you will get a

margin call. Remember, if you don't make good on the transaction, the brokerage firm is left holding the bag. And they don't want that scenario to take place!

The Account Balance Sheet, Revisited

Let's see how the Account Balance Sheet works with short sales. The previous formula for margin now becomes:

```
Account Margin = Account Equity / Short Position
```

In this example, we short 100 shares of a stock priced at $100. We receive $10,000 from the proceeds from the sale of the shares. We must deposit $5,000, 50% of the $10,000 proceeds.

Account Balance After Initial Short Sale

Assets		Liabilities and Equity	
100 Shares @ $100/shr	$10,000	Short Position	$10,000
Initial Margin Deposit	$5,000	Account Equity	$5,000
Total Assets:	$15,000	Total Liabilities and Equity:	$15,000

Our initial margin is 50%. The account equity of $5,000 divided by the short position of $10,000. Now what happens if the stock price falls to $80. The Account Balance Sheet becomes:

Account Balance After Price Falls of Security Sold Short: Account Balance Grows

Assets		Liabilities and Equity	
100 Shares @ $100/shr	$10,000	Short Position	$8,000
Initial Margin Deposit	$5,000	Account Equity	$7,000
Total Assets:	$15,000	Total Liabilities and Equity:	$15,000

The short position fell and the account equity rose. You made money because the stock price fell. So far, you have made $2,000 on the transaction with an initial outlay of only $5,000. Well done! But what if the stock price rose to $120. The situation is very different.

Account Balance After Price Rises of Security Sold Short: Account Balance Falls and You Get a Margin Call!

Assets		Liabilities and Equity	
100 Shares @ $100/shr	$10,000	Short Position	$12,000
Initial Margin Deposit	$5,000	Account Equity	$3,000
Total Assets:	$15,000	Total Liabilities and Equity:	$15,000

The short position, the value of the shares, has risen to $12,000 and the account equity has fallen to $3,000. The account margin formula is now:

```
Account Margin = Account Equity / Short Position = $3,000 / $12,000 = 25%
```

Uh, oh! Your brokerage's maintenance margin is 35%. You have another margin call! Notice how the stock only had to rise 20% for you to get the margin call. Selling short is very risky. The brokerage firm will keep a close eye on you and may buy back the shares without even consulting you. (Isn't it time you decided to close your margin account and open a cash account?)

Short Squeeze, Short Interest, and Shorting Against the Box

When a stock or the market as a whole is going down, momentum speculators often short stocks to try to take advantage of the downward momentum. This pushes the stock or the market down even further but eventually, the short shares must be repurchased.

The subsequent up movement of the market is often dramatic as short sellers cover their positions. This is called a short squeeze. It is the reason that we often see powerful upswings in stocks and the market as a whole after a stomach-churning downturn. When there is a strong downturn, friends and family members will often ask me, “Aren’t you worried? Shouldn’t we sell?” I always respond, “Nah. Just wait a few days.” When the market responds, they invariably ask me, “How did you know that was going to happen?” I answer, “First, I didn’t know. I was just playing the odds. But it is very typical. It’s called a short squeeze. It is especially typical if there is a tremendous amount of short interest.”

Short interest is the amount of stock shares that have been sold short. The more short interest, the more shares that will need to be purchased in the future to cover the short positions. It is similar to a spring being pushed downward and then released. In August of 2002, short interest was the highest it had ever been in the history of the United States stock markets. That gave Your Humble Author great comfort because it signaled that the long market downturn that started in March of 2000 was close to an end. The market bottom was October of 2002.

Actually, there used to be a valid reason for shorting a stock. It was called, “shorting against the box.” Yes, it’s a dumb name but it had a valid purpose. You shorted a stock that you already owned. This allowed you to essentially sell the stock without creating a taxable transaction until you closed out the transaction with your own stock. For example, you could sell the stock short in December, receive the money and then deliver your shares in January, effectively postponing the taxes for another year. The IRS removed this loophole in 1997. Oh, well.

Final Thoughts Regarding Selling Short

NEVER SHORT A STOCK!

Do you happen to remember the quote attributed to Sir John Maynard Keynes? "The market can stay irrational longer than you can stay solvent." He was responding to market professionals who believed that stocks were overpriced. These market professionals were shorting stocks based on that belief. They were eventually proven correct. The market eventually experienced a sharp downturn. However, before that happened, stocks continued to rise. And the short sellers lost tremendous sums of money in the process. They were absolutely right but as Sir Keynes so astutely observed, "The market can stay irrational longer than you can stay solvent." My advice? Never short a stock!

But you don’t have to take my word for it. Take it from Peter Lynch, who racked up 29% per year as the mutual fund manager of the Fidelity Magellan fund over 13 years. Peter Lynch says, “Never short a stock!” And if that doesn’t convince you, take a look at this poor, unfortunate soul who woke up one morning and found that his $37,000 margin account now had a negative balance of over $106,000. Yes, you read that correctly. He wound up owing his brokerage firm $106,000, and unless he declares bankruptcy or flees the country, he will be required to repay the amount. (Aye, what is he going to tell his wife? “Honey, we have a small problem.”) Dear Students, never short a stock!

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14.S: Summary

Congratulations – You Have Finished Chapter 14 – Buying on Margin and Selling Short

You have reached the end of chapter 14, Buying on Margin and Selling Short. In this chapter, you have:

- Explored the differences between cash accounts and margin accounts
- Examined the technique of buying on margin which entails borrowing money to buy securities, typically stocks
- Discussed the use of buying on margin to magnify investment returns and the potential adverse results
- Examined the technique of selling short, also known as shorting stocks
- Discussed the use of shorting stocks to profit from falling prices and the potential significant adverse results
- Explored the phenomenon known as a “short squeeze”

You should now be able to:

1. Explain the technique of buying on margin and its potential advantages and disadvantages
2. Calculate various profit and loss results from various buying on margin scenarios
3. Explain the technique of selling short, also known as shorting stocks, its potential advantages, and its significant potential pitfalls
4. Calculate various profit and loss results from various selling stocks short scenarios
5. Identify potential “short squeeze” situations and how a prudent, long-term investor can take advantage of such situations

More Congratulations! We Are Finished with Securities.

We have finished all our coverage of securities, financial investments that represent equity or debt or the legal right to acquire or sell an ownership interest. As we have said in the past, securities is the fancy word for stocks, bonds, mutual funds, short-term instruments, derivatives and other financial vehicles. We hope by now that you are accustomed and comfortable with the term securities. Personally, I have never liked the term securities since most people look at you oddly when you use it. They think you are talking about law enforcement or a private security company or administration of justice or something that has to do with reducing danger or threat.

In our next two chapters, we will continue discussing speculations as we first cover precious metal, art, and collectibles and then turn our attention to something that is on everyone’s mind these days, kleptocurrencies, ooop!, I mean, cryptocurrencies. We will then be ready to take a quick look at some other miscellaneous topics and some of the other investment alternatives such as real estate or starting a business. Most of us will never get involved with real estate as an investment or starting a business, the ultimate investment. But who knows? Maybe one of these will pique your interest and you will build a real estate empire or start the next Google. As always, we wish you the best of luck and success in whatever endeavors you choose!

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CHAPTER OVERVIEW

Chapter 15: Precious Metals, Art, and Collectibles

> *Let's see. No dividends. No interest. No rent. It doesn't create new products, technologies, or innovations. It doesn't expand into new markets. There sure is a lot to like about gold!*

Learning Objectives

In this chapter, you will

- Explore various hard asset investment alternatives such as precious metals and gems, fine art, and collectibles
- Examine the opportunities and difficulties inherent in investing in hard asset alternative investments such as precious metals and gems, fine art and collectibles
- Discuss the tax consequences of investing in hard assets

By the end of this chapter, you should be able to

- Discuss the aspects of various hard asset investment alternatives such as precious metals and gems, fine art, and collectible
- Describe the opportunities and difficulties inherent in investing in alternative investment assets such as precious metals and gems, fine art and collectibles
- Explain the tax consequences of investing in hard assets

Gold! Gold! Gold! It's gold! (So what? Big deal. Who cares?)

This quick overview of hard asset investment alternatives will hopefully dispel many of the myths and hype around gold, silver, and other precious metals and stones. We also discuss fine art and collectibles and stress that we should consider them possessions that bring us joy, pleasure, and wonder first and foremost ... and then as investments second.

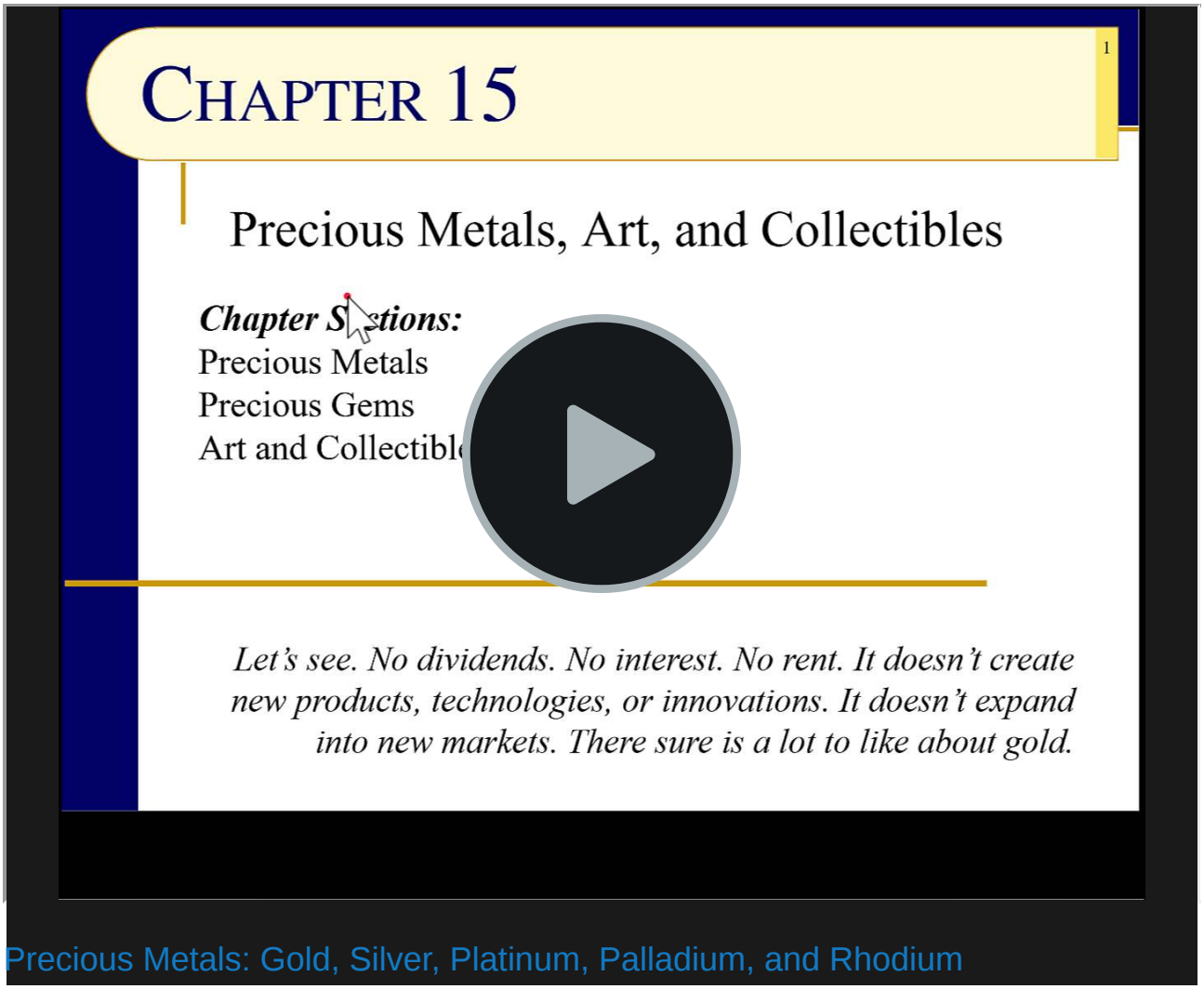
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15.1: Precious Metals, Art, and Collectibles
15.S: Summary

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15.1: Precious Metals, Art, and Collectibles



Precious Metals: Gold, Silver, Platinum, Palladium, and Rhodium

Okay, 'fess up! Your first thoughts when you decided to take this class included gold. Gold! Gold is so beautiful! It's the only real asset that holds value, right? Everything else is just paper. In fact, stocks, bonds, mutual funds, short-term investments, etc. are not even paper anymore. All these other investments are just bits of electronic data stored away in some computer system somewhere across the world. Over a hundred years ago, none other than J. P. Morgan famously testified before the United States Congress that, "Gold is money, and nothing else." The Gloomsters and Doomsters claim that when, not if, technologically based civilization collapses, gold will be the only way for you to survive.

It turns out, they all are wrong. Gold has been a very disappointing long-term investment. Sure, you can buy gold bullion bars and wafers and gold bullion coins but where will you store them? Hide them in your home and hope they are hidden away well enough that some thief doesn't find them but not well enough that you can't remember when you put them? Don't bother storing your gold in a safety deposit box in a bank because if the economy collapses, you won't be able to get into the bank. There will be an armed guard at the door. I know. Why not use an Exchange-Traded Fund (EFTs) dedicated to gold or buy the stocks of gold mining companies. Oh, but wait. Those are just the same bits of electronic data that you were worried about with the other "paper" investments.

Tom Petruno, who retired from the *Los Angeles Times* many years ago, said it best, in my humble opinion, "…if your reason for owning gold has something to do with the end of the world as we know it, shotguns and canned food probably would be more practical investments." Sure, if you believe that the world economy is going to fall apart anytime soon, put your money here! But at

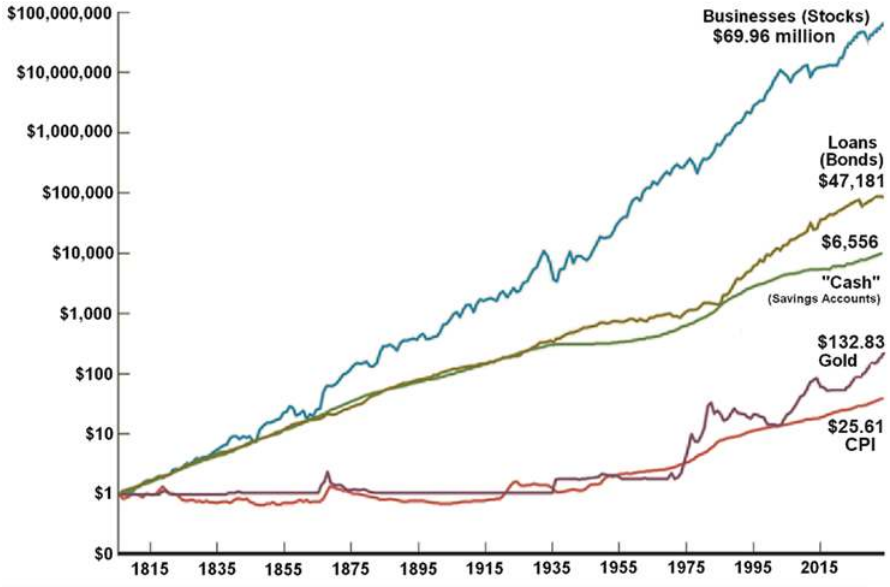
the same time, you better get out of the Northern Hemisphere, make your way down to Tierra del Fuego or Tasmania and learn to grow sorghum and raise goats! There is an old saying: “Don’t bet on the end of the world because you can’t collect.”

Also, what is gold, anyway? What is it good for? Who uses it? Who needs it? Gold is a commodity similar to the other commodities that we discussed when we covered futures contracts. Can you think of any uses of gold other than jewelry? Probably not. Gold is one of the best conductors of electricity and some very important electrical components still use tiny amounts of the precious metal. However, electrical engineers have found much better and more plentiful substitutes. The dentists will tell you that it is still the best material for dental work but again, there are much cheaper and suitable materials that work almost as well.

So what is gold good for, then? It turns out, not much. Warren Buffett quipped that, “Gold gets dug out of the ground in Africa, or someplace. Then we melt it down, dig another hole, bury it again and pay people to stand around guarding it. It has no utility. Anyone watching from Mars would be scratching their head.” Plus, there just isn’t that much of it. According to some estimates, all of the gold discovered thus far would fit in a cube that is 28 meters wide on every side. That is much smaller than would fit in a modern sports stadium.

The gold bugs, as they are called, will say that the scarcity of gold is what actually makes it so valuable. This argument falls flat on its face. Just because something is scarce does not necessarily make it useful or desirable. We will see the same argument in our next chapter on kleptocurrencies, ah, my apologies, cryptocurrencies.

Finally, the long-term returns of gold as an investment have been pitiful. Gold has barely kept up with inflation. Do you remember the following graphic from chapter 1?



However, even when you explain all the disadvantages of gold, even when you show them this very illuminating graphic, many people still want to own gold. Because, of course, it’s gold! Fine. You want to buy gold, buy gold. We will come back in 30 years and compare your return versus a portfolio of high-quality growth and income stocks via individual stock selections or a high-quality mutual fund. Can you guess who will have done better?

On the other hand, silver is a much more useful precious metal commodity. Silver is actually the best conductor of electricity and because it is much more plentiful, it is very useful and essential to industry. Unfortunately for silver producers, the largest usage of silver is long gone. Does anyone remember those ubiquitous yellow boxes available in every grocery store, drug store, and convenience store. You know, the ones with the brand name Kodak on the box. Silver was essential in the production of film. Ah, many of you have never even seen a camera in your lifetime except maybe in a museum or your grandparents’ attic.

There are three other precious metals that might actually be a useful instrument for those more speculatively inclined, platinum, palladium, and rhodium. These precious metals are becoming more and more essential to the economy. They are used in catalytic converters in cars and other high-tech industrial products including medical devices, electronics, and waste treatment and purification. Recently, their prices have spiked so high that criminals, including organized crime syndicates, have begun stealing

the catalytic converters from cars, most notably those of the Toyota Prius and other hybrids, as the precious metals are consumed much more slowly in hybrid vehicles.

Precious Stones: Diamonds, Sapphires, Rubies, and Emeralds

Precious stones may be beautiful to behold but as an investment, they are horrible. Diamonds, sapphires, rubies, and emeralds, are not an investor's best friends. Only a small number of the most elite stones will ever increase in value. And to make matters worse, precious stones are highly illiquid investments. It will be difficult and maybe impossible to find someone who will want your precious stones, even if they are of elite value. Unlike precious metals that have industry standards for quality and quantity, the valuation of precious stones is highly subjective and an uninformed investor will be at the mercy of informed brokers and dealers.

However, the worst is yet to come. It turns out, diamonds and other precious stones are really not that rare. For decades, De Beers was a cartel that controlled the diamond trade and artificially restricted supply to keep prices high. They were also masters of marketing and were able to convince a majority of the population that diamonds were actually a good investment. But as *The Atlantic* so penetratingly asked, "Have you ever tried to sell a diamond?" To make matters worse, the world has been creating artificial diamonds since the 1950's. Currently, companies can make artificial diamonds that are indistinguishable from natural diamonds. In fact, some enterprising companies will sell you a diamond made from the ashes of your beloved pet or loved one. That's right. Diamonds are made of carbon and so are we. Your beloved Abuelita Juana can be displayed prominently on a ring on your finger or on earrings dangling from your ear.

Art and Collectibles

Collectibles include rare coins, works of art, antiques, stamps, rare books, sports memorabilia, rugs, Chinese ceramics, cars, paintings and other items that appeal to collectors and investors. They can be both a good investment and a hobby, or a financial disaster. One example of the latter was a gentleman from San Diego who had a collection of Barbie Dolls that supposedly were worth a million dollars at the time back in 1992. His entire collection disappeared. Fortunately for him, the story had a happy ending as his collection was returned within two weeks.

If you do decide to dabble in collectibles, be careful of investment scams, know the dealer's reputation, and comparison shop. Better yet, take the advice of Christopher Burge of Christie's Auctions, "Don't buy art as an investment." Whatever collectible you decide upon – art, baseball cards, cars, Beanie Babies, whatever! – do it because of the joy and fulfillment it gives you, not because you want it to make you rich. Who knows? You might just find that $10 painting at someone's garage sale that you know is selling for $98,000 on the art market. But don't rely on this for your retirement savings, okay?

Tax Considerations of Hard Assets

The maximum capital gains tax rate on most all investments for the vast majority of individuals is currently 15% and could be as low as 5% or even zero in some unusual cases. The capital gains tax rate on precious metals, art, and collectibles is 28%. By the way, none of these investments are eligible for tax-qualified accounts such as retirement accounts. Do you think the Congress is trying to tell you something? (*Disclaimer:* There are ways to hold gold and other precious metals in an IRA. But it ain't easy and it ain't cheap. Plus, if you do not handle the gold according to IRS rules, you could be liable for outrageous taxes and penalties.)

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15.S: Summary

Congratulations – You Have Finished Chapter 15 – Hard Assets: Precious Metals, Art, and Collectibles

You have reached the end of chapter 15, Hard Assets: Precious Metals, Art, and Collectibles. In this chapter, you have:

- Explored various hard asset investment alternatives such as precious metals and gems, fine art, and collectibles
- Examined the opportunities and difficulties inherent in investing in hard asset alternative investments such as precious metals and gems, fine art and collectibles
- Discussed the tax consequences of investing in hard assets

You should now be able to:

1. Discuss the aspects of various hard asset investment alternatives such as precious metals and gems, fine art, and collectibles
2. Describe the opportunities and difficulties inherent in investing in alternative investment assets such as precious metals and gems, fine art and collectibles
3. Explain the tax consequences of investing in hard asset

We hope we did not burst any nascent dreams of striking it rich with precious metals or gems, fine art, or collectibles. However, if any of those are your passion and you choose to invest in them, we wish you the best of luck and success. We now enter new, uncharted territories in the world of speculative investments, kleptocurrencies, ooops!, cryptocurrencies. It's tulip bulb mania all over again, Dear Students! Our technology changes; our desire to get rich quickly doesn't.

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CHAPTER OVERVIEW

Chapter 16: Cryptocurrencies and NFTs

> *"I think the Internet is going to be one of the major forces for reducing the role of government. The one thing that's missing but that will soon be developed is a reliable e-cash." – Milton Friedman*
>
> *"You have to really stretch your imagination to infer what the intrinsic value of Bitcoin is. I haven't been able to do it. Maybe someone else can." – Alan Greenspan*
>
> *"It's gold for nerds." – Stephen Colbert*
>
> *"Nothing so undermines your financial judgment as the sight of your neighbor getting rich." – J. P. Morgan*

Learning Objectives

In this chapter, you will

- Explore the new phenomena known as cryptocurrencies and Non-Fungible Tokens (NFTs)
- Compare the current phenomena of cryptocurrencies and NFTs to manias and bubbles of the past
- Explored the issues of criminal behavior and scams in the world of cryptocurrencies

By the end of this chapter, you should be able to

- Discuss the new phenomena known as cryptocurrencies and Non-Fungible Tokens (NFTs)
- Describe the characteristics of cryptocurrencies and NFTs that are similar to manias and bubbles of the past
- Explain the issues of criminal behavior and scams in the world of cryptocurrencies

"We're All Gonna' Get Rich, Rich, Rich!"

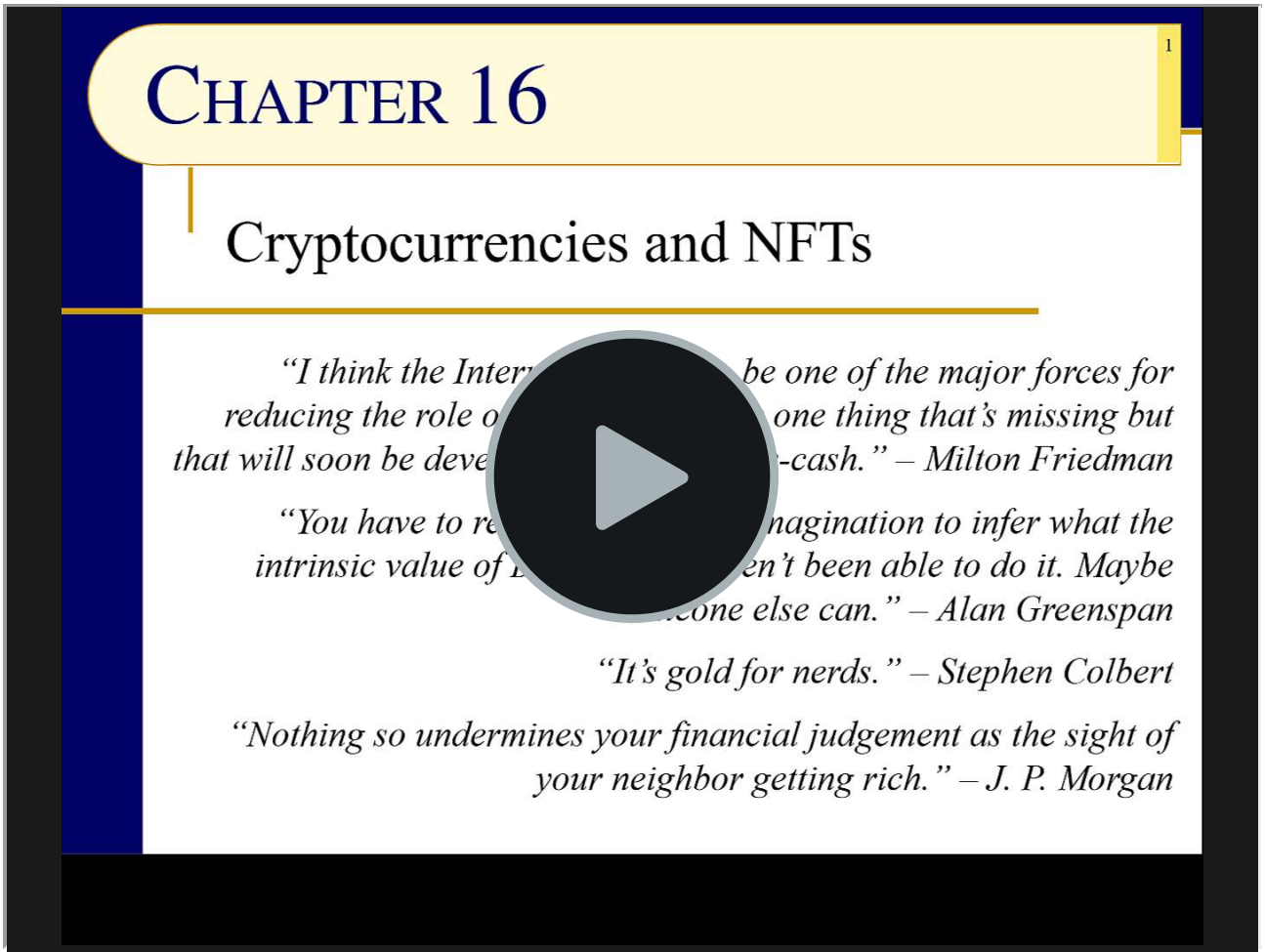
If you thought the previous chapter on precious metals, art, and collectibles was a downer, just wait until you see what we have to say about Bitcoin and the other cryptocurrencies as well as NFTs. It's Tulip Bulb Mania all over again!

16.1: Cryptocurrencies and NFTs
16.S: Summary

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16.1: Cryptocurrencies and NFTs



Video - Audio - YouTube

Cryptocurrencies

Bitcoin and other cryptocurrencies are not investments. They are pure speculations. You must "buy low, sell high." In this manner, they are similar to gold and the other precious metals. In truth, cryptocurrencies are even worse than gold and other precious metals. At least gold and other precious metals have some practical applications in engineering and manufacturing. There is no practical application or use other than for pure speculation on the part of the general public and for creating systems for criminals to bypass the established financial systems. Let's recall our definition of an investment from our very first chapter:

> *An investment is any vehicle into which resources can be placed with the expectation that it will generate positive income, or that its value will be preserved or increased, or both.*

Cryptocurrencies do not generate positive income. Of course, currently, there is the expectation that their value will increase. However, that is only because of the Greater Fool theory. Somewhere there is a Greater Fool than I am who will buy my cryptocurrency for more than I paid for it. This is nothing new. This is the reasoning behind all bubbles and manias of the past. While the bubble is inflating, you will hear, "It's different this time," and "The old ways of valuing assets are gone," and, "It's a new era." Many individuals become fabulously wealthy; most others will lose. Some will lose everything.

On the bright side, the technology behind cryptocurrencies, blockchain, is valuable and will survive. Eventually, legitimate currencies backed up the economies of governments will utilize this technology to create digital currencies that are regulated and

stable and resistant to the criminal elements who utilize cryptocurrencies to bypass the established anti-money laundering mechanisms.

Yes, yes. I can already hear some of you yelling. “Aw, c’mon, Paiano. Whatcha’ got against Bitcoin and the other cryptocurrencies? You’re just old, that’s all! This is the future! We’re all gonna’ get rich, rich, rich!”

Let’s reiterate. You can’t invest in a cryptocurrency; you can only speculate. The value is worth only what others believe it is worth. Cryptocurrencies do not pay interest, dividends, rent, etc. In other words, there is no cash flow. And most importantly, there is nothing backing the currency.

Now it’s your turn to scream, “But what about the ‘fiat’ currencies, huh? Aren’t they the same? Dollars and Euros and yen or other fiat currencies are only worth something because we believe they are!” Not so fast.

You will hear people say that our dollars and other fiat currencies are not backed by gold and are therefore worthless. Poppycock! (By the way, what is gold worth? As we have seen, gold, as an investment, is also a speculation except for jewelry and the few industrial uses that it has.) Our dollars are backed by our economy, the Great American Economic Machine. Our dollars are backed by what the United States can produce and consume, our Gross Domestic Product. Walk into any grocery store and look around and then tell me that our dollars are worthless. Ha! And if you still believe that our dollars are worthless, I will give you your own special bag. You can run to your bank, take out all your worthless dollars, put them in the special bag, and give the special bag to me. Problem solved! You won’t have any worthless dollars holding you back anymore.

The job of the Federal Reserve Board is to make sure that there are enough dollars in circulation to match the production of our economy with the consumption of our economy. Too many dollars and you get inflation, not a desirable outcome. Too few dollars and our economic output is stifled and opportunities for growth of our wealth are lost, also not a desirable outcome. It is not an easy job. Being humans, the Fed has made mistakes in the past, sometimes monumental ones, and we can expect them to make mistakes in the future. However, most of the time, they have actually been able to achieve this delicate balancing act of full employment of economic resources and keeping inflation under control fairly well. I love it when you hear people scream, “End the Fed!” Oh, yeah, as if you could do a better job?!

So now how does this relate to cryptocurrency and how do you explain the success of Bitcoin? Well, there is absolutely nothing to stop other individuals or groups from starting their own cryptocurrencies. Indeed, isn’t this what has happened? All you need is a computer algorithm and a celebrity to hawk your new coin. There are approximately 23,000 cryptocurrencies at the time of this writing. Just a few years ago, there were over 2,000. (My favorite is Jesus Coin. Don’t believe me? Look it up!) It’s tulip bulb mania all over again! Eventually, the bottom will fall out and some people will get very rich and many others will lose a whole lot o’ money.

However, as Stephen Colbert so astutely observed, “It’s good for nerds.” Most likely, a few of the larger currencies will survive and eventually start to behave like gold, which we have seen, has barely kept us with inflation. Until then, if you do indulge in speculation of cryptocurrencies, prepare yourselves for some serious “volatility!”

The Scarcity Argument, Revisited

Many cryptocurrencies enthusiasts will point to the provision of Bitcoin and other cryptocurrencies that limits their production. There is a finite number of Bitcoins and once they are all produced, no more can be created. In contrast, the central bankers can create an infinite number of the dreaded “fiat” currencies, thereby making them worthless. Although there are times when central banks have issued too many dollars or Euros or yen, etc., it makes absolutely no sense to tie the ability of your economy to produce and consume goods and services to a set number of digital assets governed by a computer algorithm, just as it makes no sense to tie your economy to a certain amount of a precious metal such as gold.

The scarcity argument is an echo of the scarcity argument of gold used by the gold bugs. Again, it falls flat on its face. Just because something is scarce doesn’t mean that it is valuable, except for the die-hard fans whose belief in the scarce asset class will never be shaken. “It’s gold for nerds.”

Cryptocurrencies, Criminals, and Scams

Do we even need to mention the criminal activity and scams that have been accompanying cryptocurrencies? Many cryptocurrency advocates declare, “We don’t want the government involved in our business! That’s why we want cryptocurrencies.” Unfortunately for them, for a modern, technologically based civilization to survive, the proper duly appointed authorities will always have the need to be able to track criminal elements much in the same manner that can be done with established anti-money laundering techniques. If anyone really wants to escape the authorities, we suggest they purchase an island somewhere far from civilization and establish their own laws and institutions. We wish them luck.

Currently, there is no regulation in the cryptocurrency markets. Hence, we would expect there to be plenty of scams and, of course, we have been proven correct. They have been plentiful. The owners of a Turkish cryptocurrency exchange raided their exchange to the tune of US$2 billion dollars. A cryptocurrency tied to the popular Netflix series *Squid Game* turned out to be a scam. Again, eventually, authorized central banks supported by the production and consumption of national and regional economies will create well-regulated cryptocurrencies. Until then, you are at the mercy of criminals.

Non-Fungible Tokens (NFTs)

This is how we can be sure that we are in a bubble/mania with regard to digital assets. Individuals are now paying small, medium-sized, and enormous sums of money for Non-Fungible Tokens (NFTs). Someone paid $69 million dollars for a collage of digital artwork that is freely available to anyone on the Internet. However, that special someone can claim that the NFT is theirs, even though anyone can download the graphic from the Internet. That special someone is also quoted as saying that they thought the price was a bargain. Mark Twain is quoted as saying that, “History never repeats itself but it rhymes.” During the height of the dot-com bubble in late 1999, Excite@Home bought the online greeting card company Blue Mountain Arts for over $700 million dollars. Two years later, Excite@Home sold Blue Mountain Arts to the American Greetings card company for $35 million. Excite@Home then promptly declared bankruptcy the next year. Also during the dot-com mania of the late 1990’s, someone paid $10 million dollars for the website *year2000.com*. What do you think it is worth today? How much do you think that $69 million dollar NFT will be worth twenty years from now?

Of course, for those of you who are artistically inclined, by all means, bundle together some of your artwork and start hawking it as NFTs. While the music is playing, why not dance? We wish you much success. But don’t spend the money yet, okay?

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16.S: Summary

Congratulations – You Have Finished Chapter 16 – Cryptocurrencies and NFTs

You have reached the end of chapter 16, Cryptocurrencies and NFTs. In this chapter, you have:

- Explored the new phenomena known as cryptocurrencies and Non-Fungible Tokens (NFTs)
- Compared the current phenomena of cryptocurrencies and NFTs to manias and bubbles of the past
- Explored the issues of criminal behavior and scams in the world of cryptocurrencies

You should now be able to:

1. Discuss the new phenomena known as cryptocurrencies and Non-Fungible Tokens (NFTs)
2. Describe the characteristics of cryptocurrencies and NFTs that are similar to manias and bubbles of the past
3. Explain the issues of criminal behavior and scams in the world of cryptocurrencies

This Isn't Going to End Well

These new phenomena of cryptocurrencies and NFTs are following the same trajectory as the bubbles of the past. Like a Greek tragedy, we know the final outcome. There will be dead bodies all over the stage. We just don't know how long it will take. However, you may decide that want to take the plunge and get involved. If this is case, we wish you much luck. (Ah, you will need it.)

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SECTION OVERVIEW

Part 6: Miscellaneous Topics in Investing Including Real Estate

Chapter 17: Real Estate and Real Estate Investment Trusts (REITs)

17.1: Real Estate and Real Estate Investment Trusts (REITs)

17.S: Summary

Chapter 18: Brokerages, Account Types, and Annuities

18.1: Brokerages

18.2: Account Types

18.3: Annuities

18.S: Summary

Chapter 19: Starting a Business: The Ultimate Investment

19.1: Starting a Business: The Ultimate Investment

19.S: Summary

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CHAPTER OVERVIEW

Chapter 17: Real Estate and Real Estate Investment Trusts (REITs)

> *I like to say, "Real estate is tricky."*
> *Translation: "Real estate is a real pain-in-the-…"*

Learning Objectives

In this chapter, you will

- Explore real estate and Real Estate Investment Trusts (REITs) as investment vehicles
- Examine the use of financial leverage to purchase direct real estate investments

By the end of this chapter, you should be able to

- Explain the use of direct real estate as an investment and the potential real estate investor's much easier choice, the Real Estate Investment Trust (REIT)
- Calculate the return on a direct real estate investment with and without using financial leverage and demonstrate the significant potential pitfalls of using financial leverage

Real Estate Can Be Very Profitable

But don't let anyone tell you that it is easy! You will see articles and advertisements for real estate seminars touting the benefits of real estate investing and how simple it is to build your real estate empire. Ha! Do you remember the very low PITA factor – Pain In The A** factor – with regard to mutual funds? Well, the PITA factor with real estate is high, sometimes off the scale! In an effort to not scare away potential real estate investors, I like to say that, "Real estate can be very profitable, but it is also very tricky." The translation for that is, "Real estate is a real pain in the ***!"

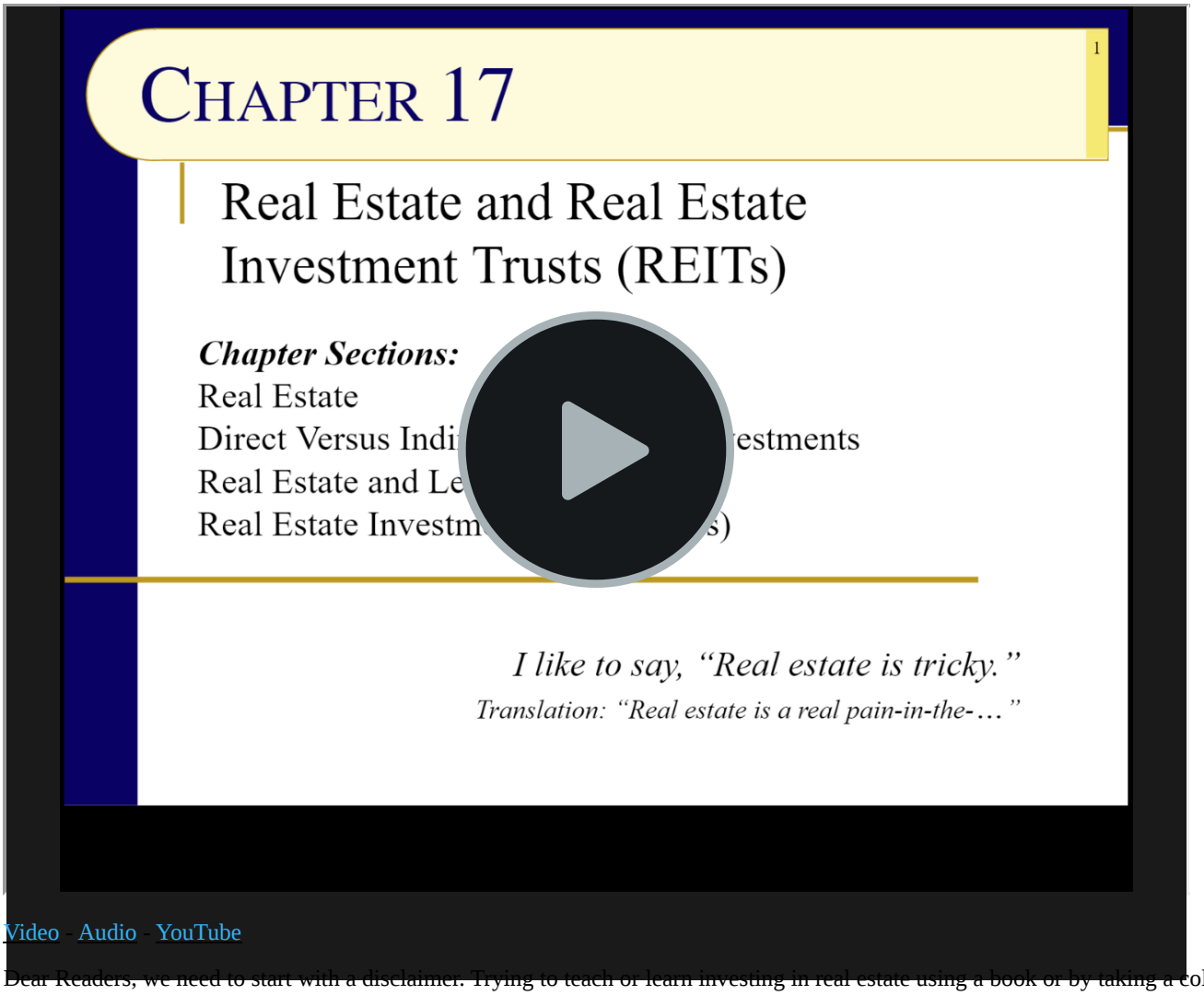
17.1: Real Estate and Real Estate Investment Trusts (REITs)

17.S: Summary

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17.1: Real Estate and Real Estate Investment Trusts (REITs)



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Dear Readers, we need to start with a disclaimer. Trying to teach or learn investing in real estate using a book or by taking a college class on investments or even a class dedicated to real estate, for that matter, is very difficult, if not impossible. It is similar to trying to teach someone how to drive without ever putting them behind the wheel of a car or teach someone how to swim without ever having them jump into the water. With stocks, bonds, and mutual funds, we can do most all the necessary research needed to identify, choose, and maintain our investments. We can even practice with simulated portfolios. You simply don't have that ability with real estate. You must learn on the job. For that reason, we strongly recommend that if you are serious about becoming a real estate investor, work in the industry first. Working for a property management firm, an appraisal firm, escrow company, or title insurance company would allow you to see the real estate world from the inside out. When you do take the plunge, you will have your eyes wide open, a desirable advantage.

It is often claimed that real estate has created more millionaires in the United States than any other investment class. Whether or not this is true is debatable. However, it is certain that real estate investments can be very profitable or very disastrous. Why? It has to do with the way real estate investments are normally made. Do you remember the financial leverage that you get from buying stocks on margin? With real estate, the leverage is normally enormous. We also take a look at Real Estate Investment Trusts (REITs) which are vehicles that allow you to invest in real estate without having to have a large down payment or deal with toilet or tenant problems.

Direct Versus Indirect Real Estate Investments

There are two ways to invest in real estate, directly and indirectly. With direct real estate investments, as the investor, you hold the title to the property. Your name is on the public record down at the local municipality. Examples include your home, your vacation home, rental property, and undeveloped land. When individuals ask about investing in real estate, we often remind them that many people aspire to own their own home. When they do, they will have a real estate investment. Now it's a home first, an investment second, in our humble opinion. But it does have one major advantage over securities. You will be able to live in your home. You can't live in a stock, bond, or mutual fund!

Vacation homes have the similar benefits as your principal residence but the tax rules are different so please make sure you talk to a tax professional if you plan to use it more as an investment than a permanent vacation home that someday may become your principal residence upon retirement.

Rental property is a whole course unto itself, and as we mentioned above, is better taught or learned on the job. We will do our best to touch on the major areas of concern that a real estate investor must learn. However, as we have warned you, it is very difficult. The first foreboding omen is that lenders now typically want at least a 25% down payment for rental property. You may ask, "But what about this article on the Internet that says this 26-year-old built her real estate empire with no money down?" Well, what about her? Please read the article thoroughly and when they come to the part where they discuss exactly how said individual was able to pull off that spectacular stunt, copy down the steps they took carefully and send them to me, okay? I will wager real money that this individual did not build that empire in San Diego, California. Here, the lenders want at least 25% as a down payment. And don't forget closing costs!

The largest gains from real estate come from developing undeveloped land. However, this type of investment poses enormous risks. However, it is best left to those who have many years of real estate experience. Your money is riding on a parcel of land that is not producing any cash flow while you still have to pay the property taxes. To make matters worse, there is often no guarantee that you will be able to develop the land either economically or politically. The old industry adage is, "Never invest in dirt." Although there are always exceptions to every rule, please don't make undeveloped land your first real estate investment.

With indirect real estate investments, someone else is in control of the real estate. Your name is not on the title. The largest examples of indirect real estate investments are Real Estate Investment Trusts, also known as REITs. We will discuss REITs in more detail at the end of this chapter. Other types of indirect real estate investment are real estate syndicates and Limited Liability Partnerships (LLPs). These investment choices were hurt by the 1986 tax reform bill. Both real estate syndicates and limited partnerships are complicated and not typically used by retail investors. But what the law taketh, the law giveth. Also in the 1986 tax reform bill was the creation of low-income housing tax credits. These tax credits may be very valuable to high-net-worth and high-income investors and are not usually beneficial to the majority of us investors.

Two investment choices are a blend of direct and indirect real estate investing are equity sharing and investing in first and second trust deed mortgages. With equity sharing, you as the investor provide the down payment for someone else and then share in the appreciation. This type of arrangement is typical within a family where the young adults don't have the necessary down payment. The parents or grandparents can provide the down payment. However, it doesn't have to be a familial relationship. An investor can pair with a couple or a single person who wants to buy a house but does not have the down payment. In any event, talk to a competent real estate lawyer who will draft the equity sharing agreement. Don't try to create the agreement alone!

Investing in first and second mortgages is not an equity position. You play the part of the bank or credit union and are selling a mortgage to the individual or couple who want to buy a home. In some ways, this is similar to investing in bonds, junk bonds. These types of loans are called hard money. They are typically short-term loans, up to three years, but can also be long-term loans. The individual or couple looking to purchase a home cannot get a loan from a bank or credit union. This should tell you something about the risks involved in lending to these individuals. However, because the loan is based on the home, a hard money lender does have the ability to foreclose on the property. Suffice to say, hard money loans are not for the typical risk-averse lender looking for investment-grade bonds.

That is not to say that there aren't reputable companies that deal in hard money loans. In San Diego, California, we are fortunate to have one such lender, Federal Home Loans. Your Humble Author was asked to accompany a friend to their presentation. Suffice to say, I was very skeptical at first. After the presentation, my first question was, "May we ask what your default rate is?" It turned out at the time that 1% were in default and another 1% were having troubles but expected to pull through. Those were not bad

numbers, especially considering these lenders were receiving typically 10% to 11% from their customers. One of the representatives of Federal Home Loans, Joanna Rivera-Ortega, has spoken to our Investment Club a couple of times. (Disclaimer: This plug was totally unsolicited. I don't get any kickback for referring clients to them. Personally, I was just very impressed with their operation. Their task is not an easy one! They are the exception that proves the rule. In general, prudent, long-term investors should stay far away from hard money.)

Residential and Commercial Investment Property

Most individuals are vaguely aware of the prices of residential properties such as condos, single family dwellings, and duplexes in their area. If those prices give you chills, just wait until you investigate the prices of commercial rental property. Commercial rental property includes hotels, office buildings, stores, and many other types of commercial establishments. The typical investor who wants to get started can think of duplexes or small apartment buildings as commercial property but these are still residential properties. In many areas of the country, San Diego included, residential rental property is simply out of the reach of the average investor. Although difficult to comprehend for average investor, commercial property is many times more expensive.

The rule of thumb for both residential and commercial real estate investments is to search for a price that is equal to seven to ten times the annual rental stream of income. In several parts of the country, that is simply not attainable. Do not be surprised if you are looking at negative cash flow for several years. The 2008/2009 turmoil changed the investing landscape for real estate for several years. But now prices in San Diego are untouchable again for the majority of potential real estate investors. For the readers in our area, if you are so inclined, the South Bay is where the bargains are now. Speaking of bargains ...

Fixer-Uppers

Who doesn't want a bargain? If you are handy with home repair and maintenance, a fixer-upper might just be the best way to begin building your real estate empire. Concentrate on smaller properties first. One strategy is to buy a duplex or triplex and live in one of the units. That way, you will know if any tenants are having wild parties at 2 am in the morning. Seek out low down payments and seller financing of rundown properties. The seller may just want to rid themselves of the chore of being a landlord and are now looking for another way to keep the steady stream of income that they enjoyed from the rent. Again, use the services of a competent real estate attorney to ensure that all the documentation is correct.

One issue with rundown properties is that banks and credit unions usually do not want to loan to distressed properties. However, the banks and credit unions are usually more motivated to finance a rundown foreclosure on their books. Our area of San Diego, California, is a very difficult area to search for foreclosures. We have some of the most savvy and aggressive real estate investors found anywhere. In any event, no matter where you are, do not expect your sojourn into flipping homes to be anything like the reality television shows.

One last recommended strategy is to avoid property managers. This is not to say that some investors may not want to take advantage of the services of a competent and reputable property manager. The hard truth is that nobody cares about your property as much as you do and the typical fee for a property management firm is 10% of the rent. Keep in mind, though, that landlords must be savvy dealing with a toilet and dealing with a tenant. If you are not handy dealing with both, then a property management firm might be worth the expense.

Advantages and Disadvantages of Real Estate Investments

Real estate has traditionally been one of the best protections against inflation. Real estate also benefits from a liberal amount of financial leverage, the use of borrowed funds for investment purposes allows you to acquire a more expensive property than you could own on your own. It is very unusual for investors to pay cash for their real estate investments. But as we saw with buying on margin, leveraging can magnify our returns but also magnify our losses. We will take a close look at this phenomenon soon.

For indirect real estate investments such as Limited Liability Partnerships (LLPs) and Real Estate Investment Trusts (REITs), there are no management concerns. Both LLPs and REITs allow for much easier entry than direct real estate investments. REITs allow for easy exit as they trade like stocks and the liquidity is similar to stocks. Finding someone to purchase your LLP can be more difficult hence LLPs can exhibit liquidity risk.

One of the major advantages of real estate used to be that you just couldn't check the prices of your real estate investments every day as stock investors could. Thanks – or should we say, no thanks – to websites such as Zillow and Trulia, now we can. This is unfortunate as real estate transactions are simply not as numerous as stock transactions so the predictive pricing of these websites is very unreliable and fretting over your investment prices day to day is simply unproductive and can wind up being counterproductive, especially if our emotions get the best of us when markets are falling.

What are the disadvantages? Real estate is the poster child for poor liquidity. Real estate transactions can take months. A thirty-day or less transaction is very uncommon. Also, it may be difficult to even find a buyer for your property or your share of a partnership. Liquidity is not a problem for Real Estate Investment Trusts (REITs) as they are traded on the major exchanges like stocks. When an individual begins investing in real estate, there is a lack of diversification and often everything is dependent upon one property. However, REITs and partnerships do offer diversification. For the real estate syndicates, the passive tax shelter provision in the tax code can be problematic.

The most discussed problems with real estate center around management or tenant problems. Landlords love to get together and relate horror stories to one another or to just anyone who is sympathetic enough to listen about the tenants from Hell. Remember, with real estate, the PITA factor goes through the roof. Although real estate prices have generally risen over decades as the global economy has risen, there are times when property values can decline. During the real estate bubble of the mid-2000's, excited new real estate investors and even real estate professionals who should have known better were saying that real estate never goes down. These people obviously had not looked at the historical record.

Allow me to relate a story from that time period, it was mid-2006 and our brokerage firm had been offered the ability to engage as mortgage brokers. We now could jump into the mortgage business. Hey, why not? Mortgage brokers were making two or three times what stockbrokers were making at the time. We were invited to a seminar to discuss real estate investing and our newly acquired mortgage products. One of the panel discussions was about whether or not there was a real estate bubble and the panelists were first asked to give their brief comments on the market before being open to questions. The first panelist started his comments with, "Bubble? What bubble?"

That sealed it for me. Although I was already sure that the housing market had entered mania/bubble territory, these events convinced me. We were stockbrokers and we were being pulled into the latest money maelstrom in an area where we had no expertise. Real estate experts were convinced that, "It's a New Era. It's Different This Time. Quick! They are giving away free money! Buy a home now and in three years, it will be worth hundreds of thousands more!" Individuals who couldn't afford $500,000 mortgages were lying about their income and given adjustable-rate mortgages with the ability to pay half the monthly payment that conventional mortgages would charge, but only for the first year or two. Then, the payments escalated dramatically. "What are you worried about? In three years, when you can't afford the payments, your house will be worth $850,000! You can sell. Or we can just refinance with another adjustable-rate mortgage!"

For me, this all meant that it was only a matter of time. We didn't know how long it would last but we knew there would be dead bodies piled up when it did end. However, personally, I was not anywhere near as pessimistic as I should have been. I thought real estate prices would fall around 20% to 25% and that the economy and the stock market would not be overly affected. Real estate and stock prices fell over 50% or more and we entered into the worst economic downturn since the Great Depression. The question for us now in 2025 is how much damage will the rise in interest rates do to the real estate market and the economy. Again, I may be too optimistic, but I don't believe it will damage the economy as much as the real estate bubble of the mid-2000's. Stay tuned.

However, by far, the biggest disadvantage to real estate investing is realizing the down payment. As mentioned, lenders typically want at least a 25% down payment for investment property. Let's say that in your area, you can find a duplex for $400,000. This means that the lender will want a $100,000 down payment. You will also need several thousand dollars for assorted closing costs. How many individuals have approximately $110,000 lying about the house? This brings us back to the ubiquitous claims on the Internet about people starting their real estate investment empire with no money down. Again, please investigate these claims and when you find how to do it, either please tell the rest of us or, better yet, keep it a secret and duplicate their success on your own. The nagging question for me is that if anyone really is doing this, why would they tell others how to do it, too? My guess is they want you to enroll in their sure-fire, guaranteed, 5-day, $2,995 seminar on how to invest in real estate with no money down! (I'm not cynical, am I?)

Your Home as an Investment

For the typical individual or couple homeowners, their home is their major asset. Your home offers a hedge against inflation and functions as one piece of your overall diversified investment portfolio assuming that you are investing in stocks and bonds through individual choices or mutual funds. Traditionally, a home produces an after-inflation return of about 2.5 percent a year although in some areas, the return has been much higher. There are also generous tax benefits for homeowners. Along with the ability to itemize deductions on your yearly income tax returns, every two years, you can sell your principal residence and claim $250,000 capital gains tax-free for single people and $500,000 capital gains tax-free for married couples. However, it is a home first, an investment second, in the opinion of Your Humble Author. And unlike stocks, bonds, and mutual funds, you get to live in your home.

"My house is the best investment I have ever made!" is what you often hear from individuals when you find yourself in a discussion about investments. However, when you question them further, you will typically hear, "Of course, it is pretty much the only investment that I have ever made, except for that penny stock my brother-in-law, the ex-stockbroker, conned me into buying but those shares are worthless now. And those gold coins I bought back when the first Gulf War started back in '91. What did I do with those things, anyway?" Again, in my humble opinion, a house is a home first, an investment second.

"But what about San Diego?!" is another question you will get when discussing real estate as an investment here in our little corner of the world. It is not a secret that California has a housing supply and demand imbalance. However, prices in San Diego have gone down in the past. Ask those who bought in 1990 and then sold in 1993 and saw their prices go down 20% to 25%. Or ask those who in 2007 bought that condo that wasn't even finished being built yet thinking they would "flip it" before it was time to move in only to watch the price fall over 50% over the next two years. The cycle will repeat. Real estate prices will go down again sometime in the future even though prices are currently skyrocketing. But if you plan on staying here, by all means, buy whatever you can afford. San Ysidro and National City are two of the best values in our region, by the way. Imperial Beach is also a great beach value.

Here is a sign seen over a desk in a San Diego office, circa 1993, after the boom of 1980's had turned to a bust in 1991 and 1992: "Please, God, let there be another real estate boom and I promise I won't piss it all away this time!" What do you think? Did they piss it all away in 2006 and 2007?

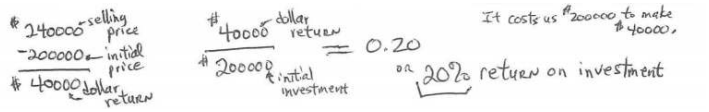
When I would point out in 2006 and 2007 that real estate was in a bubble, people would respond, "C'mon, Paiano, admit it! Real estate is the 'Perfect Investment!' Look at what has happened in the past five years!" Do you remember the warning from Andrew Tobias, "Beware the Permanent Trend?" There ain't no such thing! But assuming they were able to hold on through the turmoil, even those who bought during the bubble of the mid-2000's eventually turned a profit. If you plan to hold for the long-term, you should do well. It is not as if real estate in San Diego is becoming less desirable. By the way, there is no "Perfect Investment." Folks were saying the same things back in 1999 about stocks and they are saying the same things about cryptocurrencies and NFTs now.

Financial Leverage using Real Estate

"But what about leverage?! Huh? What about the ability to make money with other people's money? Isn't that what makes real estate such a great investment?" We have already touched on that aspect of real estate investing, haven't we? Yes, leverage can magnify your real estate investment returns manyfold. However, what leverage giveth, leverage taketh away. There are pitfalls. Just as with buying stocks on margin, leveraging real estate magnifies your gains and magnifies your losses.

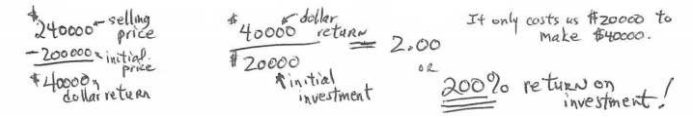
The following two problems are from a financial planning and money management textbook from around late 2004. We will see that even college textbook authors can get caught up in the emotions of a bubble.

Calculating the Return on Investment. Dave bought a rental property for $200,000 cash. One year later, he sold it for $240,000. What was the return on his $200,000 investment?



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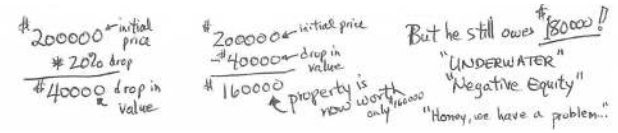
Calculating the Return on Investment using Financial Leverage. Suppose Dave invested only $20,000 of his own money and borrowed $180,000 (90% financing). What was his return on investment?



In the first problem, the hero of our story, Dave, bought a $200,000 house with cash. When the price jumped 20% in one year, as housing prices were doing during the mid-2000's, Dave made 20% on his $200,000 investment for an absolute return of $40,000. In the second problem, however, Dave only had to come up with $20,000, 10% of the purchase price. He financed the rest, $180,000. This time, when the price jumped 20%, he made $40,000 on a $20,000 investment. That's a 200% return on his investment. That is leverage in action! "Quick! Go buy a condo! They are giving away free money! That idiot down the street just made $40,000 in one year and he only had to come up with the $20,000 down payment. Yeah, go ahead, burn your credit cards. They are only charging 25% per year."

Do you remember the quote from J. P. Morgan, "Nothing so undermines your financial judgment as the sight of your neighbor getting rich." He was right. Let's take a look at a question that was conveniently left out of the textbook because everyone, including the author of the financial planning money management textbook, believed that housing prices would never go down.

Calculating the Return on Investment using Financial Leverage and things do not go as planned. Suppose Dave invested only $20,000 of his own money and borrowed $180,000 (90% financing) … and the property value went down 20%. Now the most important question is, "What is he going to tell his wife?"



Because he leveraged the property, instead of losing 20% on his investment, he lost his entire down payment investment and still owes $20,000 more than the house is worth because the loan is $180,000 and the current market price is only $160,000. The bank won't let him sell the house – they won't "release the title" – without Dave paying them the entire loan amount of $180,000 first. He has negative equity. He is underwater. He joined hundreds of thousands of other speculators who bet the farm – bet the house? – and lost everything. Friends and family would ask me how I was doing during the crisis and I would say, "Well, I am not happy about losing 40%. But I sure do feel sorry for those real estate speculators who lost everything and still owe tens of thousands or even hundreds of thousands of dollars."

Many tens of thousands of real estate speculators simply walked away from their house or went through bankruptcy or foreclosure. Some were able to negotiate a "short sale" with the bank. In the example above, if Dave were able to negotiate a short sale with his bank, the bank would allow the house to be sold for $160,000 and forgive the extra $20,000 of the loan. Along with losing his entire investment, his credit score would be damaged, but that's not the worst part. The IRS treats a forgiven loan as income. Dave would have to pay taxes on $20,000 that he did not receive! Talk about kicking a guy when he is down! Luckily for the tens of thousands who negotiated short sales during the Great Recession, the United States Congress waived this IRS rule until 2013.

As we saw with buying on margin, leverage can magnify your gains *and* magnify your losses.

Real Estate and Capital Gains

"Wait a minute. Did you say that there are no capital gains taxes on real estate?" Currently, as the law stands now, as long as the real estate is your primary residence for 2 out of the last 5 years, you pay no capital gains on the first $250,000 if you are single or $500,000 if you are married. In some parts of the country where there are many distressed houses, this is an excellent strategy for those who are handy with house repairs. You can fix up a property and sell it every two years and pay no capital gains taxes on the sale. Buy your home for $200,000. Sell it for $700,000. If you are married, then you pay Federal no capital gains taxes! By the way, capital losses on your primary residence are not tax-deductible.

Have you seen the ads? "Start your real estate empire with No Money Down! You, too, can take advantage of the tremendous opportunities now in the wide-open Real Estate Foreclosure Market! Just buy our Guaranteed, Sure-Fire Real Estate Investment Kit

for $3,995. You will be on your way toward Riches beyond your Wildest Dreams!" You think I am exaggerating. Here is a reality television actor who wants you to pony up $34,000 to learn how to flip houses in your spare time and earn $70,000 or $80,000 per year, more if you decide to do it full time.

What is the bottom line on direct real estate investing? Buy a house. Make it your home. After you have digested that purchase, then look for some rental property. But learn as much as you can from the folks who are already doing it, maybe even working for a property manager or other type of company involved in real estate to get the feel for what you will need to be able to do. We wish you the best of luck. Remember, that although real estate investing can be profitable, the PITA factor is very, very high. You will earn every penny!

Real Estate Investment Trusts (REITs)

Okay, let's say that you don't want all the headaches that come with owning real estate investment properties. No problem! One of the easiest ways to invest in real estate without all the accompanying hard work is to invest in Real Estate Investment Trusts, commonly abbreviated as REITs. Real Estate Investment Trusts are "pass-through" investments that hold real estate properties and pass through the rent and any capital gains to the investors. In this way, they are very similar to closed-end mutual funds. REITs typically own shopping centers, office buildings, warehouses, and apartment complexes.

The managers of the REITs find the tenants, manage and maintain the properties, collect the rent, and pass the earnings on to you. By law, they must distribute 90% of their earnings to shareholders. They legally are not stocks but for all practical purposes appear to investors as if they were stocks. They are traded on the exchanges and their liquidity is very similar to stocks. There is one major difference between REITs and stocks with regard to taxes. The dividends from REITs are not given the same tax preference that dividends from stocks receive. Dividends from REITs are taxed as income whereas dividends from stocks are taxes as capital gains, a much lower rate for most investors.

Similar to mutual funds, the management fees for REITs typically range between 1% and 2% per year. Their returns over the long-term are approximately 7% to 8%. Although not quite as diverse as stocks, there is a wide range of different types of REITs. There are also sector mutual funds that are dedicated to REITs. You can have someone choose and maintain your REIT investments as the REIT managers choose and maintain your real estate investments, both charging their annual operating expenses, of course.

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17.S: Summary

Congratulations – You Have Finished Chapter 17 – Real Estate and Real Estate Investment Trust (REITs)

You have reached the end of chapter 17, Real Estate and Real Estate Investment Trust (REITs). In this chapter, you have:

- Explored real estate and Real Estate Investment Trusts (REITs) as investment vehicles
- Examined the use of financial leverage to purchase direct real estate investments

You should now be able to:

1. Explain the use of direct real estate as an investment and the potential real estate investor's much easier choice, the Real Estate Investment Trust (REIT)
2. Calculate the return on a direct real estate investment with and without using financial leverage and demonstrate the significant potential pitfalls of using financial leverage

For those who are serious about learning about real estate investing, we strongly recommend working in the industry first. With the lack of diversification and the substantial amount of money needed just to buy one property, learning on the go as you plunge into the world of real estate investments can be a very painful and unpleasant experience. In our next module, we will discuss brokerage firms and the types of brokerage accounts they offer. We will also spend a bit of time thwacking ugly annuities, those insurance products that entice the uneducated with the promise of a lifetime income. Often too late, buyers of annuities find that the lifetime income they receive is only a small fraction of what they could have received if they had simply educated themselves about the various investment choices or consulted an ethical and competent financial advisor.

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CHAPTER OVERVIEW

Chapter 18: Brokerages, Account Types, and Annuities

> *"I tell ya' this stock market is bad. It's even worse than a divorce. You lose 50% of your net worth, but you still keep your spouse." – With warm regards to Rodney Dangerfield*
>
> *(Psst. Have you ever wondered why they call us, "BROKErs?")*

Learning Objectives

In this chapter, you will

- Be introduced to various types of brokerage firms and other options for holding your securities
- Examine various types of investment accounts including regular taxable accounts and tax-qualified accounts
- Investigate the constraints and benefits of using tax-qualified accounts for long-term investing
- Examine the few advantages and the more numerous disadvantages of annuities as investments

By the end of this chapter, you should be able to

- Describe various types of brokerage firms and other options for holding your securities
- Explain various types of investment accounts including regular taxable accounts and tax-qualified accounts
- Discuss the constraints and benefits of using tax-qualified accounts for long-term investing
- List the few advantages and the more numerous disadvantages of annuities as investments

'Cuz Ya's Gots' t' Put Yer Money Somewhere!

It is time to discuss brokerage firms and the types of brokerage accounts they offer. Hey! Ya' gots' t' put yer money somewhere, right? We will also spend a bit of time thwacking those ugly blood-sucking creatures from the black lagoon of the insurance world, annuities. These miscreant contracts entice the uneducated with the promise of a lifetime income. Often too late, buyers of annuities find that the lifetime income they receive is only a small fraction of what they could have received if they had simply educated themselves about the various investment choices or consulted an ethical and competent financial advisor.

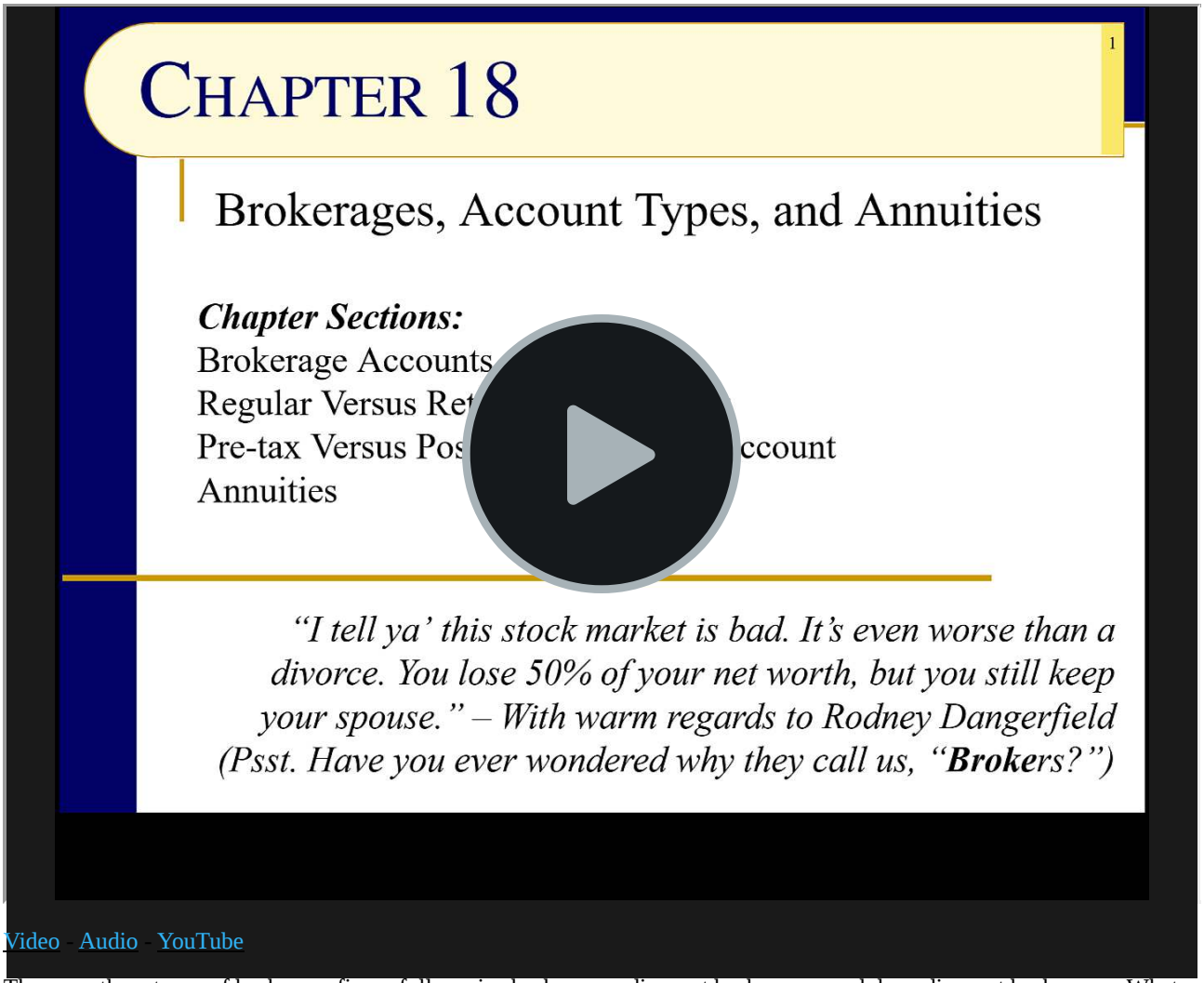
Presentation file - Study Guide

18.1: Brokerages
18.2: Account Types
18.3: Annuities
18.S: Summary

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18.1: Brokerages



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There are three types of brokerage firms, full service brokerages, discount brokerages, and deep-discount brokerages. What can you expect to pay for each? What kind of service can you expect from each?

Full-Service, Discount, and Deep-Discount Brokerages

Full-service brokerage firms are companies such as Merrill Lynch (now known simply as Merrill) and Morgan Stanley. Investors can expect personalized service as well as customized research and investment recommendations. Of course, you can also expect to pay dearly for these services. You might also receive services for which you might not expect. In the past, brokerage firms would direct their registered representatives, also known as stockbrokers or account executives, to encourage their clients to buy certain securities for which the firm would be compensated handsomely.

Retail investors often ask how they can get the shares of an Initial Public Offering (IPO) at the IPO price. Customers of full-service brokerage firms, especially accredited investors, a fancy term for people with lots of money, are typically privy to the IPOs at the initial prices. You and I won't typically be able to purchase the IPO shares at the initial offering price.

Every brokerage firm is different but do not expect to be treated well unless you are going to bring a substantial sum of money to your account. A few decades ago, these brokerage firms wanted you to deposit at least $50,000. Of late, many appear to want at least $500,000 and some years ago, a client related to me that the stockbroker of her parents was ready to set the minimum initial deposit to at least $750,000.

Does all this full service necessarily translate into outsized performance? On at least one occasion, Your Humble Author encountered a situation where a client was using the services of a full-service brokerage firm. The client was recommended Class C shares of various mutual funds, the ones with the higher annual operating expenses in lieu of the front-end sales charge. The client had well over $1,000,000 of assets in the account. If you remember, with over $1,000,000, the front-end sales charges of Class A shares are waived. In this situation, the client was paying far more in annual operating expenses that was necessary. After pointing this out to the client, their response was, “I guess I should talk to them about this.” I sure hope they did and gave them hell!

Discount brokerage firms began to emerge in the 1970’s. After much consolidation in the industry, the largest discount brokerage firm is Charles Schwab. Others include Edward Jones and LPL Financial. These brokerages traditionally left the stock picking to the investor but now have their own sophisticated stock rating and recommendation services. The commissions were much less than the full-service brokers.

The advent of the Internet saw the emergence of deep-discount brokerage firms in the late 1990’s. These firms emphasized technology to reduce brokerage costs dramatically. Investors using deep-discount brokerage firms typically would never speak to a broker when executing transactions. However, they do have the option of consulting with a registered representative, for which they will be charged similarly to what a discount brokerage firm would charge.

Commissions, Then and Now

Traditionally, virtually all brokerage firms made their money from transaction commissions. Full-service brokers would charge from $70 to $100 or more per trade. Discount brokerages began with commissions at $45 per trade but then progressed to $29, $19, $13, and then below $10 per trade. Deep-discount brokerage firms started at $5 to $10 per trade. A few deep-discount brokerage firms experimented with $0 commissions. One failed and the other raised their commission to $5 per trade.

One company, Robinhood, has been successful in charging $0 commissions and earned the love and affection of young traders as Robinhood encouraged tech-savvy younger adults to trade as often as they liked since there are no commissions. “I am trading for free!” is what you will hear from Robinhood customers. Robinhood then earned the scorn of the younger adults when, for reasons that are still subject to controversy, Robinhood halted trading of certain popular “meme stocks” that were the target of groups of traders that had banded together to push the prices up. Robinhood is now a publicly traded stock having gone public in mid-2021. As is typical with Initial Public Offerings, Robinhood fell far below its IPO price until finally recovering in 2024.

Wait a minute! How can a brokerage firm make any money with a $0 commission schedule? We hope you remember from chapter 3 that the deep-discount brokerage firms are receiving a kickback from the dealers and market makers who buy and sell the stocks from their own inventories. It is innocently called Payment for Order Flow or simply, Order Flow. Dear Readers, Robinhood is not free! Please refer back to our extensive discussion in chapter 3 about how Payment for Order Flow works. Order Flow is currently in the news as the Securities and Exchange Commission has been floating the idea of banning it. There is even a change.org petition to ask the SEC to ban Order Flow. Stay tuned!

Assets Under Management (AUM)

Over the years, commissions have received bad publicity, especially when a few brokers would “churn” their clients' accounts. A broker is guilty of churning when they encourage their clients to initiate excessive trades in their accounts for the purpose of generating commission income for themselves. As such, the brokerages have experimented with alternative methods of charging for their services. Many years ago, Merrill Lynch experimented with charging $3,000 per year for unlimited trades but they do not have that program anymore.

By far, the most popular method to charge for brokerage services today is called Assets Under Management, commonly abbreviated as AUM. An account that is charged Assets Under Management is also referred to as a wealth management account, a wrap account, an investment advisor account, or simply an advisor account. With AUM, instead of charging per transaction, the brokerage firms tack on a yearly 1% or 2% wealth management fee. Do you remember the mutual fund F shares? These types of programs are being pushed by all the major full-service brokerage firms and many discount brokerage firms. There are several flavors of this program.

Performance-Based Wealth Management

The latest wrinkle to this method is the new performance-based wealth management program. With performance-based wealth management, you are only charged Assets Under Management investment service fees when your account advances past the previous quarterly total. Only pay your advisor when you make money! The advisor receives 10% to 20% of your earnings when you make money. The advisor receives nothing when you lose money or do not make anything. It is a variation of the way hedge funds charge their shareholders. These accounts are aggressively marketed to high-net worth investors.

One San Diego-based firm that offers this model is Dunham & Associates. When the Global Financial Crisis of 2008 and 2009 hit, Dunham had to change their model somewhat since it took several years for most clients' accounts to rise to the point they were before the collapse. Dunham altered their fee structure so they now charge much less when your account does not gain instead of charging nothing.

Both the Assets Under Management and the performance-based wealth management models sound tempting to the potential investor. The investor pays no commissions and with the latter model, they pay no or very low fees if their account does not grow. However, the reality is that you have the potential to pay far, far more for your investment services using this method. For prudent, long-term investors who do not partake in excessive buying and selling of their investments, the Assets Under Management model will most likely be the costliest of any option.

Your Humble Author is an anachronism. Personally, I do not believe that these accounts are in the best interests of the clients. Prudent, long-term oriented investors will typically pay far more with the Assets Under Management model as opposed to just paying the traditional commissions. However, you will be hard pressed to find investment advisors that do not use these models. Several years ago, sitting at the table while attending an investment seminar, the topic of discussion turned to the commissions versus Assets Under Management models of charging clients. My contribution was, "I simply do not believe that the Assets Under Management model is in the best interests of the clients. Prudent, long-term oriented investors who do not engage in excessive trading are going to pay far more over the long term. I believe we are doing our clients a disservice."

A gentleman with perfectly quaffed hair and wearing a very expensive suit shot back with, "What are you worried about? You send them a bottle of wine on their birthdays, take them to the golf course and the steak house. They'll love you!" I decided that it was time for me to cease any contributions to the conversation.

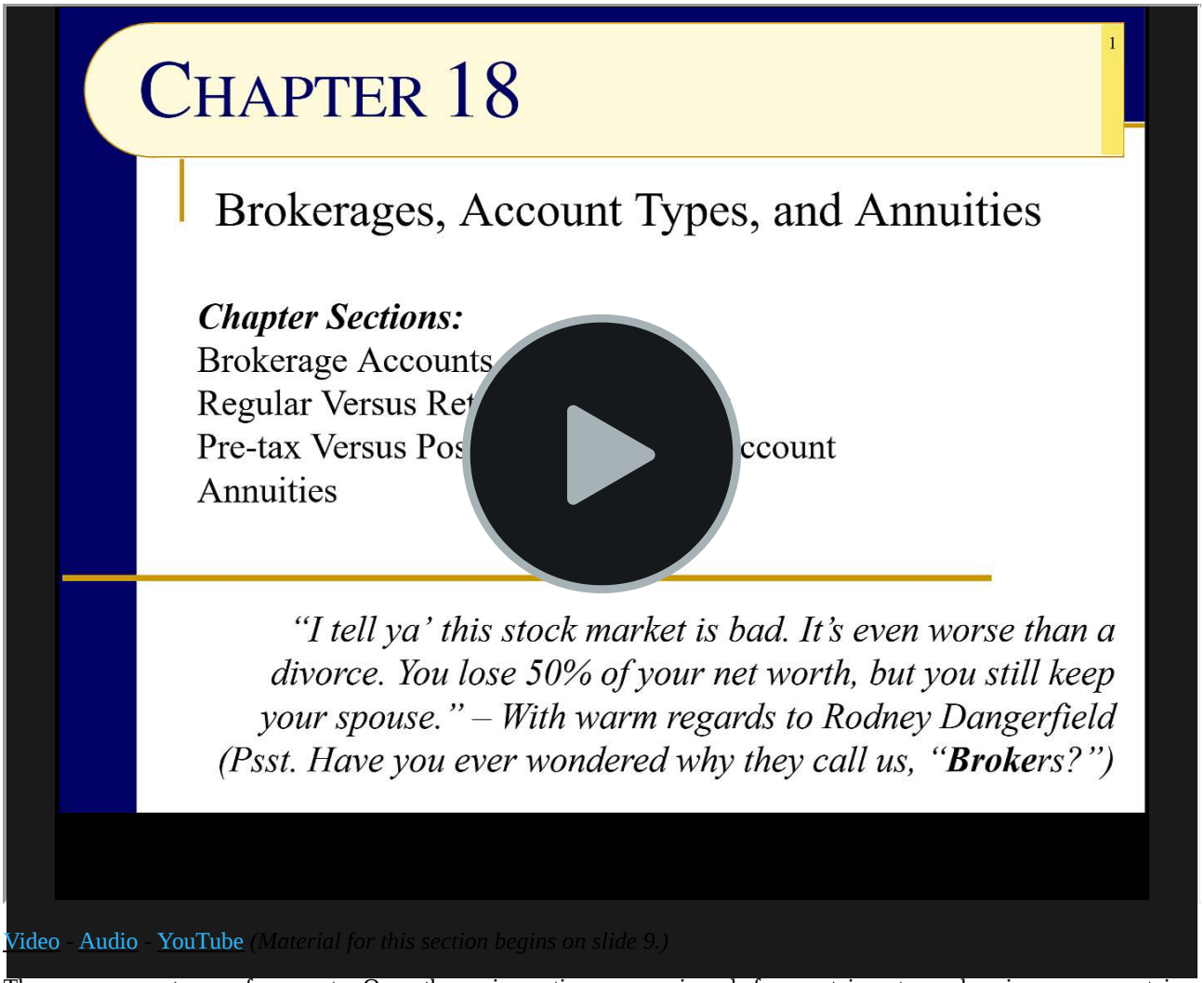
As noted in the comment at the table above, the Assets Under Management model should be far more expensive for prudent, long-term oriented investors who do not engage in excessive trading. If you want to be a speculative trader and buy and sell frequently, then an Assets Under Management model might wind up being more cost effective for you. Of course, as we have done our best to impress upon you, successful frequent buying and selling of securities is difficult, at best, and downright impossible for the vast majority of us. It's not called *The Loser's Game* for nothing, ya' know! Thank you, Charlie Ellis!

Anti-Brokerage Firms: Dividend Reinvestment Plans (DRIPs)

Fed up with your broker? How about bypassing the middleman and going straight to the companies that you want to invest in? Many of the large, well-established companies offer a way for you to invest directly in their stocks via Dividend Reinvestment Plans, usually abbreviated as DRIPs. As we learned in chapter 3, Introduction to Stocks, some are totally free or very close. However, DRIPs are not perfect. How would you like having to sift through 18 different statements? Many traditional brokerage firms also now offer DRIPs. Prudent, long-term, buy and hold investors should definitely consider the use of Dividend Reinvestment Plans. Remember: Dividends don't lie!

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18.2: Account Types



Video - Audio - YouTube *(Material for this section begins on slide 9.)*

There are many types of accounts. Once the major options are reviewed, for most investors, choosing an account is usually straightforward and easily accomplished without the need of professional assistance. However, depending upon the situation, an investor may have need of competent legal professional counsel from an attorney or professional tax advice from a Certified Public Accountant or IRS-certified Enrolled Agent. Registered representatives, commonly referred to as stockbrokers, are strictly forbidden from giving any legal or tax advice whatsoever, including about how an account should be established. If the account is for an individual with special needs or who is incapable of responsibly managing their money or if the sum is substantial, then it is imperative that an attorney should be consulted. Your particular situation also depends upon your state of residence. Go talk to the lawyers. Get a good referral!

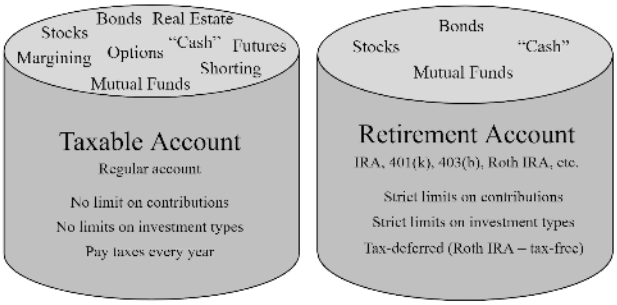
In general, for the vast majority of retail investors who won't need professional assistance in choosing an account, there are two major types of accounts that need to be reviewed. The first type consists of regular taxable accounts. They are also called regular accounts, taxable accounts, and non-qualified accounts. The second type consist of tax-qualified accounts such as retirement accounts, educational savings accounts, and health savings accounts.

Regular Taxable Accounts Versus Tax-Qualified Accounts

Unless the investor specifies otherwise, the brokerage firm will assume that the investor wants a regular taxable account. With a regular taxable account, each year an investor will receive one or more Forms 1099. The Form 1099 is used to report taxable income such as dividends, interest, or capital gains. The investors will need to include the information from the Forms 1099 on

their tax returns and pay any applicable taxes. With regular taxable accounts, there are no limitations on how much can be contributed. There are also no limits on the types of investments that can be placed in regular taxable accounts.

Tax-qualified accounts, on the other hand, are accounts that allow the investor to either defer or forgo paying taxes. Tax-qualified accounts are also referred to as tax-advantaged accounts. There are numerous types and variations of tax-qualified accounts. Examples include retirement accounts, educational savings accounts, and health savings accounts. We will concentrate on the retirement accounts. However, many of the concepts and attributes are similar in other types of tax-qualified accounts. With a tax-qualified account, there is typically a limit to how much can be contributed in any one year. There are also restrictions on what types of investments can be placed into the accountants. However, unlike a regular taxable account, a tax-qualified account investor will not receive the Form 1099 each year unless money is withdrawn. Your account is able to grow tax-deferred or in some cases, tax-exempt. (Careful! The IRS does not like the term tax-free.)



The two cylinders in the graphic above are meant to resemble bins or buckets. The taxable account bin on the left can accept all types of investments, stocks, bonds, mutual funds, short-term "cash" investments, real estate, as well as exotic vehicles such as options and futures and allow for buying on margin and selling short. Notice that with the bin on the right, the only types of investments that are accepted are stocks, bonds, mutual funds, and short-term investments. (Actually, there is a way to place real estate and some forms of precious metals into a tax-qualified account but it is not recommended. Both can result in a tax-related financial disaster if one is not careful.) Although there are many other subtle and not-so-subtle differences, the major differences are how they are taxed by the IRS, how much money you can contribute, and what you can have in the account. Let's investigate the two major forms of tax-qualified retirement accounts, pre-tax and post-tax.

Pre-tax Tax Qualified Accounts

Pre-tax qualified retirement accounts are also referred to as before-tax accounts. The contributions that go into the account reduce your income taxable and give you a tax break now. Examples include the Traditional IRA, 401(k) and 403(b) employer-sponsored plans, and the SEP-IRA, SIMPLE IRA and Keogh plans for small businesses and the self-employed. The contributions are deducted from your taxable income which reduces the taxes you pay. The investments grow tax-deferred until retirement. When the investor money is withdrawn in retirement, the investor pays the income tax.

The most popular personal retirement plan is the IRA, now referred to as the Traditional IRA to differentiate itself from the newer Roth IRA. Although everyone believes that IRA stands for Individual Retirement Account, the acronym actually stands for Individual Retirement Arrangement. Of course, if you use the correct name, Individual Retirement Arrangement, most everyone will look at you funny. Just say IRA.

Currently, anyone with earned income can contribute to a Traditional IRA. There is some confusion because of some of the provisions that will be discussed momentarily and because their counterpart, the Roth IRA, has restrictions on contributing for high-income individuals. However, as the tax code stands now, anyone with earned income, no matter how high, can contribute to a Traditional IRA.

Traditional IRA contributions are normally pre-tax deductible contributions that reduce your taxable income and thus give you a tax break now. This is where some of the confusion we mentioned above starts to emerge. If you have an employer-sponsored retirement plan at your place of employment and make over a certain amount, then your contributions are still allowable. However, your contributions may not be allowable as pre-tax contributions. They would be designated as post-tax contributions. You would not get a tax break now on the contributions. Of course, when those contributions are withdrawn, you would not have to pay taxes

again on them. This means you will need to keep tabs on how much of your balance is pre-tax and how much is post-tax. You don't want to pay your taxes twice! Save all your end-of-year statements.

In any event, whether funded with pre-tax or post-tax contributions, your investment grows tax-deferred. You pay taxes on the money as you withdraw it once you are retired. Once an investor reaches 59½ years of age, withdrawals are allowable with no penalty. Mandatory withdrawals, called Required Minimum Distributions or RMDs, now begin at age 73, up from 72 and 70½ before that. There are discussions about ultimately raising the age for Required Minimum Distributions to 75. This makes sense since as we have mentioned, people are living and working longer. The penalties for not taking the RMDs are severe, 50% of the amount that should have been withdrawn. What a way to treat old folks!

The Traditional IRA has many pre-tax siblings and cousins. There are numerous types of employer-sponsored retirement plans such as the 401(k) for corporations and other private businesses. For public organizations such as schools and hospitals, there are 403(b), 457, and 401(a) employer-sponsored retirement plans. For the self-employed and small businesses, there is the SEP IRA, the SIMPLE IRA, the Solo 401(k), and the Keogh retirement plans. You may be asking, "Where do these silly names come from?" The answer is the United States Internal Revenue Code, all 70,000 pages of code and regulations.

A pre-tax contribution lowers your taxes now. The table below shows what happens when you have $100 deducted from your paycheck and contributed into a 401(k). The tables assumes you are in the 25% Federal marginal tax bracket and 8% California marginal tax bracket.

You contribute via your paycheck:	$100
Your Federal tax withholding is lowered by:	$25
Your California tax withholding is lowered by:	$8
Total government subsidy:	$33
Your take home pay is only reduced by:	$67

Your take home pay is only reduced by $67 but the whole $100 still goes into your account. In addition, your employer might match your contribution 50% or 100%. If your employer matched your contribution at 100%, then they would contribute an additional $100 into your account. dollar for dollar. Cool! I get $100 or maybe even $200 worth of investments for only $67. Okay, so what's the catch?

You pay income tax on any amounts withdrawn in retirement. However, people in retirement are usually in a lower tax bracket. If you are not in a lower marginal tax bracket in retirement, congratulations! It is my sincerest desire that all our students and readers are afflicted with the horrible misfortune of taking considerable amounts of money from their retirement accounts in their golden years.

Of course, if you withdraw the funds before retirement, you not only have to pay the income tax, you normally will be required to pay a 10% penalty. (The IRS does not call it a penalty; they call it an additional tax. Whoopee.) With some types of accounts, there are exceptions for first time home purchases, higher education expenses, medical disability, and financial hardship. It is typically difficult to get the IRS to accept the financial hardship exception. Some 401(k) and 403(b) plans do allow an individual to borrow from their account. However, the amount must be paid back in an approved amount of time or the loan will be disqualified and ruled as a withdrawal. Plus, if you lose your job, the loan becomes due quickly, typically within 90 days. In general, whatever monies you put into your pre-tax accounts should be considered to be set aside until retirement.

Some individuals may balk at the idea of setting aside money that will not be touched for upwards of 40 years. However, the traditional pension plans that employers used to offer their employees are being replaced with so-called defined contribution plans such as the 401(k) and 403(b). In the traditional pension plans, the employers would set aside funds for their employees for many decades. Now it is up to you. The good news is if you invest consistently, prudently, with an eye toward long-term growth of capital and income, you will be able to create for yourself a pension that will far exceed what the traditional pension plans offered. On the other hand, if you don't contribute consistently, or get greedy when the markets zoom ahead and chase after the next big thing, or panic when the markets fall and sell everything, well, then your retirement won't look so rosy. But we know you won't be guilty of those terrible transgressions, right?

Post-tax Tax Qualified Accounts

Starting in 1998, a new type of tax-qualified retirement account, the Roth IRA, came onto the scene. A Roth IRA is a post-tax account, also referred to as an after-tax account. The Roth IRA does not give you a tax break now. Instead, your contributions are taxed as normal income. However, in retirement, all the contributions and compound earnings in the account can be withdrawn tax-free. (Ooops! Sorry, IRS. We meant to say, "tax-exempt.") This ability has since been added to 401(k) and 403(b) plans. Tax-free in retirement is a tremendous benefit.

Let's revisit the same $100 monthly contribution, but this time with a Roth IRA.

You contribute to a Roth IRA:	$100
Your Federal tax withholding is lowered by:	$0
Your California tax withholding is lowered by:	$0
Total government subsidy:	$0
Your disposable income is reduced by:	$100

As you are explaining the Roth IRA to a family member or friends, they exclaim, "What? No help from the government on your taxes? Why would anyone contribute to a Roth IRA?" Here's the answer you will give them, "Because a Roth IRA is so cool!" Tax-free in retirement is a golden opportunity. No other investment account option comes close. Eventually, I believe that they will probably be gotten rid of or have severe constraints put on them. From time to time, there is talk about limiting the benefits of a Roth IRA, especially for high-income investors.

Another major benefit of the Roth IRA is that you can withdraw the contributions at any time without taxes or penalties. You have already paid tax on the contributions. This makes the Roth IRA also an excellent intermediate-term investment account. You can use it for the down payment of a house or other high-ticket item. They are great for college expenses since currently the monies in a Roth IRA are not taken into account when you apply for public financial aid using the FAFSA form. (Some private universities do take Roth IRA monies into account when calculating financial aid.)

However, the Roth IRA was not meant for everyone. Unlike the Traditional IRA, there are limits on who can contribute to a Roth IRA. Only single taxpayers with an AGI of $150,000 or less in 2025 and married couples with an AGI of $236,000 or less in 2025 can fully contribute to a Roth IRA. After you earn over these amounts, the amount you can contribute is lowered until it phases out entirely. If you don't qualify, congratulations!

As is the case with our tax system, there is often a loophole. You can still contribute to a Roth IRA anyway. If you already knew you earned over the limit or if it turns out you find that you have earned over the limit, you can "recharacterize" – that's the verb that the IRS uses – the contributions into a Traditional IRA which does not have the same limitations before you file your taxes and then you convert the Traditional IRA back into the Roth IRA. It is called the Roth IRA Backdoor. I know. I know. Who voted for these bozos? Oh, yeah. We did.

Contribution Limits on Retirement Accounts

Tax-qualified accounts typically have yearly contribution limits. The limits increase with inflations. Here are the contribution limits for 2025 for the Traditional IRA and Roth IRA. Note that these limits are cumulative. You can contribute to multiple Traditional IRAs or Roth IRAs but the total contributions in all your accounts must not exceed these amounts.

Year	Under 50	Age 50 and Over
2025	7,000	8,000

For the Traditional and Roth IRA, contributions are limited to the lesser of your gross salary or the maximum yearly contribution. If you make at least $7,000 in 2025, you have until April 15th of 2026 to put the maximum into an IRA or Roth IRA for 2023. Your spouse is also eligible for contributions even if he or she does not work. The contribution limits are raised from time to time because of inflation.

The contribution limits for 401(k), 403(b), and 457 employer-sponsored plans are much more generous.

Year	Under 50	Age 50 and Over
2021	19,500	26,000
2022	20,500	27,000
2023	22,500	30,000
2024	23,000	30,500
2025	23,500	31,000

Again, contributions are limited to the lesser of your gross salary or the maximum yearly contribution. In other words, in 2025, if you make $23,500, you could put your entire income into a 401(k) or 403(b) or 457. As noted above, these amounts are now indexed to inflation and go up over time. There is a loophole in the law that allows those in the public sector to contribute $23,500 into both a 403(b) and a 457 – or $31,000 into both if you are 50 or over!

The Roth 401(k) and Roth 403(b)

Starting in 2006, employers were able to offer the Roth option for their 401(k) and 403(b) plans. Similar to a Roth IRA, Roth 401(k) and Roth 403(b) contributions can be made post-tax. However, any monies matched by your employer continue to be pre-tax contributions. This means you must keep good records of how much is pre-tax and how much is post-tax. You don't want to be taxed twice on the post-tax contributions! This is a great option for those who do not need the tax break now. However, unlike the Roth IRA, contributions are not able to be withdrawn without penalty or taxes until retirement. Unless your employer offers matching contributions, Your Humble Author prefers the Roth IRA because of its flexibility as an intermediate-term account. Of course, if your employer offers matching contributions, the Roth 401(k) or Roth 403(b) is the winner. Never turn down free money, Dear Readers!

Tax Credits for Retirement Savers

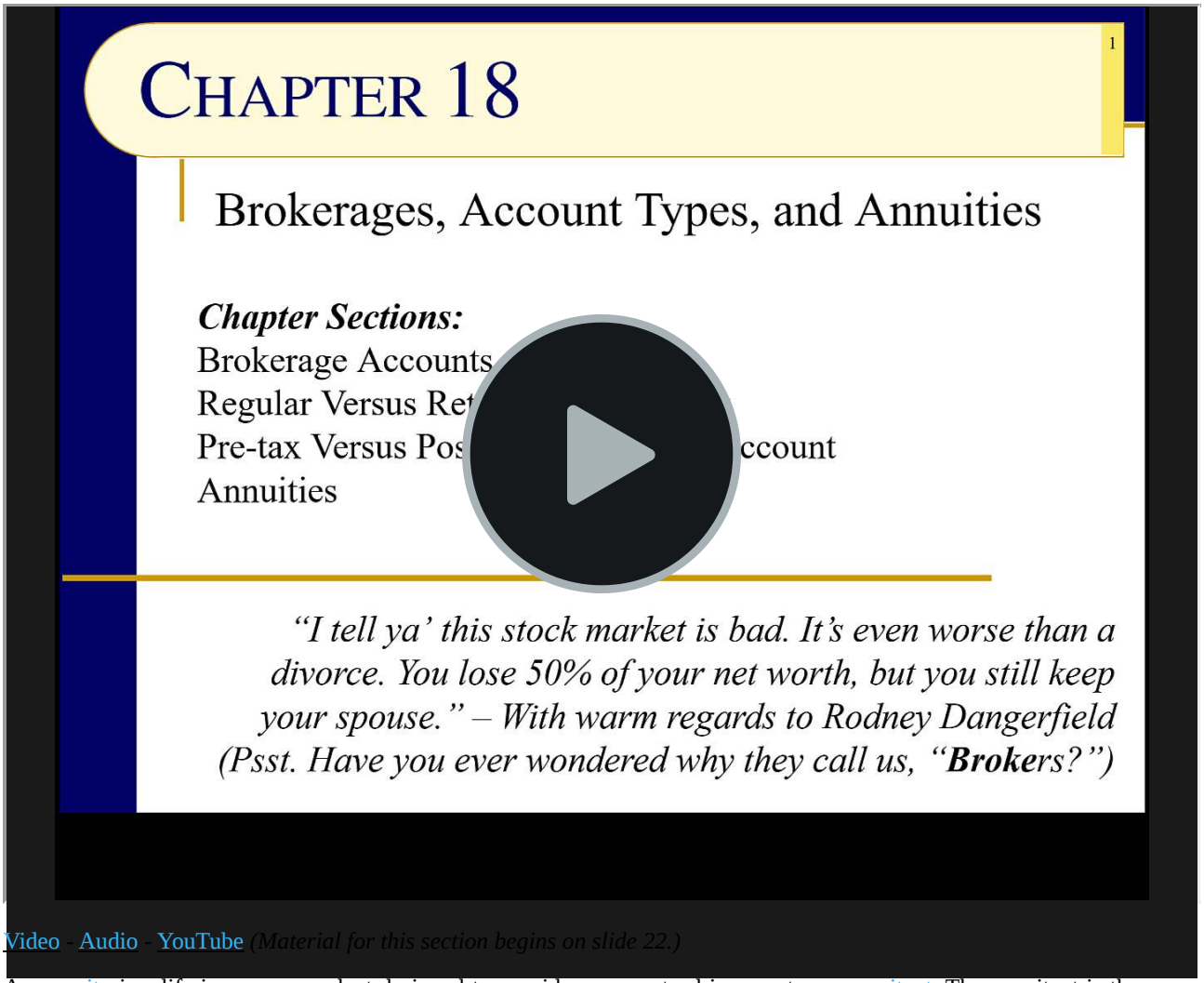
Retirement savers may be eligible for tax credits. A tax credit is a dollar-for-dollar reduction of income taxes. The tax credit amounts range from 10% up to 50% of your contributions with a maximum of $2,000 per individual. The tax credit is based upon how much you contribute and your Adjusted Gross Income (AGI). If your Adjusted Gross Income is below these amounts for 2025, you should be eligible for the tax credit:

- $39,500 or less – single filers
- $79,000 or less – married filing jointly
- $59,250 or less – head of household

There are some other restrictions. You must be at least 18 years old, not be a full-time student, and not be claimed on someone else's tax returns as a dependent. If you are eligible, then, for example, $50 per month contributed to a Roth IRA for a total of $600 per year could result in a $300 tax credit. That is a strong motivation to contribute. If you do your own taxes, do not forget this. If you have someone do them, make sure to tell them you put money away in a retirement account. Tax software programs such as TurboTax or TaxSlayer handle these well.

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18.3: Annuities



Video - Audio - YouTube *(Material for this section begins on slide 22.)*

An annuity is a life insurance product designed to provide a guaranteed income to an annuitant. The annuitant is the person who will receive the stream of income. Annuity options include income for a set number of years, or for as long as the annuitant lives, the so-called life income option, usually just referred to as the life option. The life income option can be modified so that it also will pay the annuitant for as long the annuitant lives or pay a spouse or other dependent as long as they live if they outlive the annuitant. The periodic payments depend upon the annuitant's age, which of the above options were chosen, how much was contributed, and how well the annuity's underlying investments, if applicable, have performed over time in the case of a variable annuity discussed below.

There are numerous options and variations of annuities but they generally fall into two categories, fixed annuities and variable annuities. With a fixed annuity, the annuitant knows exactly how much they will receive over time. The life insurance company typically invests the annuity contribution in bonds, fixed investments. With variable annuities, the annuitant chooses various underlying investments, most typically stock or bond mutual funds, and the periodic payments will, of course, vary depending upon the results of the underlying investments.

Once the insurance companies began to offer mutual funds as options for annuities, the Securities and Exchange Commission claimed regulatory jurisdiction. For this reason, life insurance agents who sell variable annuities must also be licensed with the SEC. The agents can choose to take the Series 7 Registered Representative (aka Stockbroker) exam but often they take a much watered-down version, the Series 6 exam. This exam goes by the unwieldy name, the Series 6 Investment Company/Variable Contracts Products Limited Representative exam. You will rarely hear anyone refer to it other than as the Series 6 exam. It was

designed solely for insurance agents who only wanted to be able to sell variable annuities and had no desire to be registered representatives, commonly referred to as stockbrokers.

An advantage of annuities is that contributing to them is very flexible. Unlike retirement accounts and other tax-qualified accounts, annuities can be funded with pre-tax dollars or after-tax dollars and there is no limit on contributions. Interest earned is then tax deferred and similar to retirement account, you pay taxes on any pre-tax annuity contributions and all tax-deferred earnings as you withdraw them in retirement. As with other retirement plans, when you retire you will likely be in a lower income tax bracket.

The Siren Call of Annuities

The life income option is typically the major selling point of annuities. “You will never outline your income!” Given that outliving their investments is always a concern to investors no matter how many resources an individual or couple have accumulated, this provision appears very attractive indeed to potential annuitants. What could be the downside to a lifetime of income?

The Reality of Annuities

It turns out that the downsides are severe. You are paying dearly for that guarantee of lifetime income. Annuities have supersized fees. Recall that fixed annuities typically invest in bonds and variable annuities typically invest in mutual funds that invest in stock or bonds or both. The fixed annuities will typically shave 1% to 2% off the interest income from the bonds they invest in. With variable annuities, they pocket typically 2% to 3% and can take as high as 4% of the yearly investment results. Where is the difference going? You guessed it! The spread is going straight into the coffers of the insurance agencies.

The spin doctors at the insurance companies will invariably craft propaganda along these lines: “Don’t gamble with your money! You may receive mediocre returns by investing in mutual funds, stocks, and bonds. Instead, choose our life income and we will guarantee a stream of income for the rest of your life.”

If the spin doctors were somehow given a truth elixir, the spiel would go something along these lines: “Don’t gamble with your money! You may receive mediocre returns by investing in mutual funds, stocks, and bonds. Instead, choose our life income and we will guarantee that you receive mediocre returns and receive a paltry stream of income for the rest of your life.” On the website is an illustration comparing the income streams from two different retirement alternatives, a fixed income annuity and a balanced mutual fund. There is a very stark difference between the two. (Remember that we are assuming that the investor *does not panic* when markets fall! The case where an individual is incapable of keeping their emotions in check is the only situation where Your Humble Author might recommend an annuity. However, a better option would be to consult a lawyer about a trust fund. What is a trust fund? Talk to the lawyers!)

Once annuitants realize their annuity is not all that their life insurance agent made it out to be, it is often too late. They are locked into the agreement for the rest of their lives. In some instances before the life income option is initiated, there may still be time for the unfortunate individual to break free of the agreement. However, the cost will be steep. Do you remember the Contingent Deferred Sales Charges of the Class B mutual fund shares that declined from 5% to 0% over the course of 5 years, for example? Annuities typically have what they call a “surrender schedule” that works similarly. Unlike the Class B mutual fund shares, the surrender schedule starts at 20% or 25% and can take as long as 20 years. Life insurance companies do not relinquish their ill-gotten gains easily.

Of course, if you are a life insurance agent, you are in love with selling annuities. The commissions are very generous indeed. Your insurance company will even send you an all-expense paid Caribbean cruise! (Ah, we are talking about the life insurance agent going on the cruise, not the annuity client.) It is important to note here, Dear Readers, that Your Humble Author is also a licensed life insurance agent in the State of California. Personally, I have never found an annuity whose results have come close to what a prudent, long-term oriented investor could produce with the education from a course such as this and the maturity to not panic when markets fall or the help of a trusted financial advisor. I could sell these abominations but I won’t. If someone wanted to buy one, I would do my best to show them alternatives that – assuming the world does not end – should do much better over the long term.

You may also have heard that you can actually invest in life insurance itself. Whole life, cash value, straight life, ordinary life, universal life, variable life, variable universal life, and permanent life policies are all examples of what the insurance industry loves to call investments. They are even worse than annuities. Why so many names? Every few years they change the names when

people get savvy to the awful deal they are getting. For a more detailed discussion, please refer to chapter 10 of our BUS-121, Principles of Money Management, class, that covers Life Insurance.

Oh, by the way, if any individuals from the world of insurance are reading this and are tempted to sue me for defamation or libel, by all means, we welcome the suit. During the initial discovery process, we will bring life insurance illustrations and mutual fund illustrations to the court with us. Many years ago, on a few occasions, when challenged about my aversion to annuities and whole life policies, I offered to enter into an agreement with the life insurance representatives. Let's compare comparable investments. If yours are better than mine, I will buy yours personally from you. If mine are better yours, you will buy mine personally from me. No one ever accepted the offer. One individual exclaimed, "But that is not a fair comparison!" My sentiments exactly. Never trust an insurance company with your investments, Dear Readers!

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18.S: Summary

Congratulations – You Have Finished Chapter 18 – Brokerages, Account Types, and Annuities

You have reached the end of chapter 18, Brokerages, Account Types, and Annuities. In this chapter, you have:

- Been introduced to various types of brokerage firms and other options for holding your securities
- Examined various types of investment accounts including regular taxable accounts and tax-qualified accounts
- Investigated the constraints and benefits of using tax-qualified accounts for long-term investing
- Examine the few advantages and the more numerous disadvantages of annuities as investments

You should now be able to:

1. Describe various types of brokerage firms and other options for holding your securities
2. Explain various types of investment accounts including regular taxable accounts and tax-qualified accounts
3. Discuss the constraints and benefits of using tax-qualified accounts for long-term investing
4. List the few advantages and the more numerous disadvantages of annuities as investments

So, where ya' gonna' put yer money, eh?

In a regular account with no restrictions? In a Roth IRA at a deep-discount broker? With your employer-sponsored 401(k) plan at work? In both? Oh, and yes, you are going to stay far, far away from annuities, right? Good! Dear Students, we are ready to tackle our very last chapter. We will briefly discuss Starting a Business: The Ultimate Investment. Ah, it is definitely not for everyone.

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CHAPTER OVERVIEW

Chapter 19: Starting a Business: The Ultimate Investment

Starting a business? It is definitely not for everyone.

Learning Objectives

In this chapter, you will

- Discuss the advantages and disadvantages of choosing to pursue the ultimate investment, starting a business
- Investigate various resources available to potential entrepreneurs

By the end of this chapter, you should be able to

- Describe the advantages and disadvantages of choosing to pursue the ultimate investment, starting a business
- List various resources available to potential entrepreneurs

Starting a business is the ultimate investment

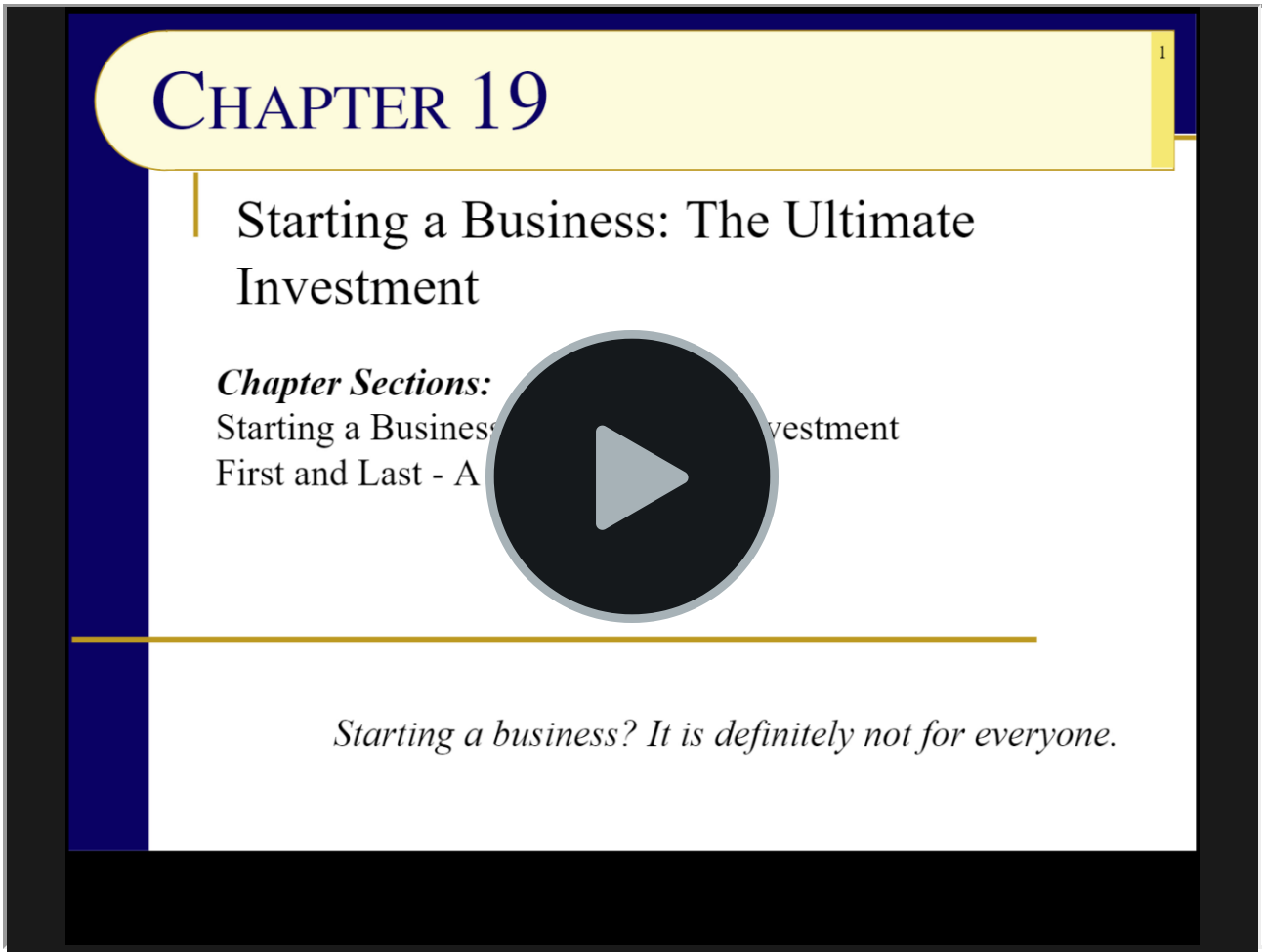
By far, the most profitable investment anyone could ever make is starting a business. It is also one of the riskiest. Do you have the desire, the motivation, the energy? Let's see. In any event, don't try to go it alone. There are tremendous resources available to help you succeed. Our society is rooting for you!

19.1: Starting a Business: The Ultimate Investment
19.S: Summary

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19.1: Starting a Business: The Ultimate Investment



Video - Audio - YouTube

Are you crazy? You want to start a business?! You've heard the statistics: "**50%** of businesses fail in the **first year**! **80%** of businesses fail in the first **5 years**! **100%** of businesses fail in the first **10,000 years**!" The truth is that no one knows the failure rate of small businesses because no one – not even the IRS – knows how many small businesses there are. Another truth is that many small business owners often will fail 2 or 3 or more times … until they succeed. It is also the case that business owners tend to run in families. If someone is a business owner, the probability is high that their parents or other members of their extended family are business owners. Is it cultural or hereditary? That is a question that we leave to the sociologists. Can one start a business if no one in their family has ever owned a business? Certainly! There are many successful business owners who come from families with no history of owning business. The key questions is: Do you have the desire, the motivation, the energy? That is far more important than if you father or mother were businessowners.

One of the best ways to increase the odds of your business succeeding in the long term is to consider franchising. Although you are unlikely to generate as much income as if you had started the business from scratch as you must share some of the revenue with the franchise, you are more likely to survive than those who do start their own businesses without the help and support of the franchising organization. Another way to help ensure success is to find a business owner who is getting ready to retire. You can begin working for that individual and learn the ropes with the idea that you will eventually purchase the business from them. In the financial world, there are tens of thousands of insurance agents and mortgage brokers and stockbrokers who are nearing or already in retirement age. You are already an Official Investment Guru. There is opportunity. Think about it!

Some Resources Available to Potential Entrepreneurs

Because small businesses are the backbone of our economy, there are tremendous resources available to small business owners. Don't try to go it alone! One of the best resources is SCORE, the Service Corps of Retired Executives. Their website is sandiego.score.org. This group has been around for decades. They sponsor great seminars and offer mentoring services for small business owners. Another resource that offers seminars, many of them free, is the South San Diego Small Business Development Center, hosted by Southwestern College at our National City campus. Their website is www.sdivsbdc.org. Two other small business-oriented groups that can help with loans for small businesses are Kiva and Accesity, formerly Acción San Diego. For those not in the San Diego area, consult the local Small Business Development Center nearest to you.

Last, don't forget Southwestern College! We have plenty of classes designed for potential and current small business owners. One of my personal favorites is BUS-145, Financial Management for Small Business. This one-unit class introduces the small business owner to the recordkeeping and other legal requirements that should help them keep their noses clean and not run afoul of any officious bureaucrats who might want to make their lives miserable. Other useful classes include BUS-120, Introduction to Business, and BUS-140, Business Law, where you will learn much about businesses and business structures and many of the legal aspects of running a business, including contracts and employee relations. Don't forget us! We want you to succeed! We want you to be AWESOME!

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19.S: Summary

Congratulations – You Have Finished Chapter 19 – Starting a Business: The Ultimate Investment

You have reached the end of chapter 19, Starting a Business: The Ultimate Investment. In this chapter, you have:

- Discussed the advantages and disadvantages of choosing to pursue the ultimate investment, starting a business
- Investigated various resources available to potential entrepreneurs

You should now be able to:

1. Describe the advantages and disadvantages of choosing to pursue the ultimate investment, starting a business
2. List various resources available to potential entrepreneurs

Dear Students, we are so proud of you! Think of how much you have learned. You are now official Investment Gurus. Go forth into the world with optimism and courage. Speak with authority and confidence about the capital markets and prudent, long-term investing. Be brave! Assuming that capitalism does not fail and the world does not end, investing in high quality businesses over the long-term should make you wealthy and, at the same time, help your fellow citizens of the world.

Do you remember the perspective from the quote from the very beginning of our time together?

> *"It is a gloomy moment in history. Never has the future seemed so dark and incalculable. The United States is beset with racial, industrial and commercial chaos, drifting we know not where. Of our troubles, no one can see the end." -- Harper's Magazine, 1847*

Let's take a look at a different perspective.

> *"It is a fortunate moment in history. Never has the future seemed so bright and promising. The United States is the most racially diverse, industrially strong, and commercially prosperous nation in the history of the world. Of our continued success, no one can see the end."*

Now who said this? When did they say it? Me! Now! Thank you so very much. All of us at Southwestern College in Chula Vista, California, wish you the best of luck and success in the future. And whatever you do in life, remember:

Don't Give Up! Never Give Up!

Dear Students, we now have a favor to ask of you. If you are happy with your experience with our class, would you also please consider posting a review on www.ratemyprofessor.com? I am proud of the reviews on this web site and work hard to live up to them. If you are not happy with your experience, please contact me directly. I value all comments! Thank you for journeying with us until the very end. All of us at Southwestern College are so very proud of you!

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Glossary

10-K and 10-Q reports | Annual and quarterly reports required to be filed by all publicly traded corporations. Available online via SEC EDGAR system.

12b-1 fees | Mutual fund fees that cover the cost of marketing, distribution, and advertising.

401(k) | Very popular employer-sponsored retirement savings accounts. Contributions come directly from employees' paychecks. Also known as defined contribution
retirement plans.

403(b) | The version of a 401(k) for non-profit organizations.

accounts receivables turnover | A measure of how efficiently a company is managing their accounts receivable. Accounts receivables are monies that are owed to the company.

accredited investor | Accredited investors meet certain financial requirements which allows them to invest in restricted investments not available to the general public. The accredited investor is supposedly better able to discern riskier investments and better able to withstand significant losses.

acid test ratio | A measure of the ability of a company to meet their short-term financial obligations even if their inventory becomes obsolete or otherwise unable to sell.

active money management | The investment strategy that entails a professional money manager actively identifying, choosing, and monitoring individual investments on behalf of their clients.

aggressive growth | The investment strategy designed to produce very high returns in a short period of time. This strategy also typically exhibits very high risk as measured by extreme volatility.

all or none | A security transaction order to buy or sell a stock that must be executed in its entirety, or not executed at all.

alpha | A measurement of the outperformance or underperformance of an investment relative to an appropriate benchmark index.

American Depository Receipt (ADR) | Dollar denominated shares of a foreign company available for purchase in the United States.

AMEX | One of the minor United States stock exchanges, offering shares of smaller, lesser-known corporations. The AMEX is now owned by the New York Stock Exchange.

annual rate of return | The rate of growth of an investment, measured on an annual basis. It is used to compare investments within an asset class and investments among different asset classes.

annuity | (1) A sum of money payable over a certain period of time. (2) A life insurance product with a deservedly horrible reputation. Stay away from these! Instead, take Introduction to Investments and learn about many other alternatives, almost all of which will give you a better return over the long-term. Of course, if you are a life insurance agent and have no ethics, the commissions from selling annuities are very enticing.

arrears | With regard to dividends from cumulative preferred stock, these are dividend payments that must be paid first before any new dividends can be paid to stockholders.

art | (1) Something that you can purchase to bring you beauty, joy, or wonder. (2) A dubious investment with less potential than a lottery ticket to make you wealthy.

ask price | The retail price of a security. This is the price that a retail investor will pay for the security when they buy. See bid price.

asset play stock | A company that is sitting on an asset that could be sold or spun off. Examples include utilities and railroad companies that own large tracts of real estate

Assets Under Management (AUM) | The value of the total investments that a brokerage or other securities firm manages on behalf of their clients. Often used to soak their clients, ooops!, we mean charge for investment services.

automatic investment plan | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as systematic investment plan and dollar cost averaging

automatic withdrawal plan | A system of withdrawing monies from an investment program monthly, quarterly, semiannually, or yearly. Also known as systematic withdrawal plan.

balance sheet | A financial summary of a firm's assets, liabilities, and shareholders' equity at a given point in time. Publicly traded corporations must publish their balance sheet every quarter.

balanced fund | A mutual funds whose objective is to generate a balanced return of both current income and long-term capital gains. A balanced fund will invest in both stocks and bonds and typically have a balanced allocation of both. The allocation can change as the investment environment changes.

banker's acceptance note | A short-term, low-risk investment vehicle arising from bank guarantees of business transactions. Typically sold in $100,000 denominations.

basis point | A silly way of denoting one-hundredth of a percent, 0.01%. One hundred basis points equal one percent. Guaranteed to make you sound as if you know what you are talking about with regard to investments. You can even tell them you took a college class.

bear | In the world of investments, a bear is someone who believes a particular market will fall.

bear market | A general decline of over 20% in a market.

bearer bond | Obsolete bonds that had no registered owner. Whoever had possession of the bond received the interest and principal payments.

beta | An imperfect assessment of the risk of an investment as measured by its volatility relative to an appropriate benchmark index.

bid price | The wholesale price of a security. This is the price that a retail investor will receive for the security when they sell. See ask price.

bid-ask spread | The difference between the bid price (wholesale price) and the ask price (retail price). The dealers and market makers earn money from the bid-ask spread.

blue chip stock | Financially strong, high-quality businesses with long and stable records of earnings and dividends.

Board of Directors | The governing body of a corporation or mutual fund, elected by the shareholders, to oversee the activities of the organization.

bond | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as fixed-income investments or debt financing.

bond rating | A letter grade that designates investment quality and are assigned to a bond issue by designated rating agencies.

book value | The amount of shareholders' equity in a firm. Equals the amount of the firm's assets minus the firm's liabilities and preferred stock.

broker | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known as registered representative or registered investment advisor

bubble | An occasional market phenomenon consisting of rapid and irrational price increases, typically followed by a subsequent crash. Also known as mania.

bull | In the world of investments, a bull is someone who believes a particular market will rise.

bull market | A market that is experiencing rising prices.

business cycle | The cycle of growth and decline of the production and consumption of goods and services.

business risk | The risk of a particular business failing.

buy and hold | The investment strategy that emphasizes the use of fundamental analysis to identify high-quality companies with good growth prospects and potential for dividends at reasonable prices and holding them for the long-term. Sometimes referred to as value investing.

buying on margin | The practice of borrowing monies from your brokerage firm to purchase securities, allowing an investor the possibility to magnify their returns but also the possibility of magnifying their losses. (Psst. Don't do it. It's dangerous. Well, maybe after many years of prudent investing and you need some money for the short-term, you can borrow from yourself for the short-term instead of having to sell your investments and then buying the investments back.)

call option contract | A security that gives the holder the right to buy a certain amount of an underlying financial asset at a specified price for a specified period of time. (Warning! Caution! Stay far away from these things. It is gambling, pure and simple.) Also known as a call option or call.

call premium | The provision that specifies whether and under what circumstances a bond issuer can retire, aka prepay, the bond prior to its maturity date.

capex | (1) Abbreviation for capital expenditure. (2) Sure-fire way to impress your friends and family members so everyone will know you are informed investor. A gig as an investment pundit might even be in your future if you use *capex* copiously.

capital | Various forms of wealth, monies, and other resources including human resources used in the production of goods and services.

capital appreciation | An investment strategy that concentrates on raising the value of an investment, typically but not limited to paying close attention to the growth of earnings.

Capital Asset Pricing Model (CAPM) | (1) A model that describes the relationship of risk and expected return. (2) A not very useful system that, when mentioned by someone during a cocktail party, will let others know that the individual in question took an investment class other than BUS-123, Introduction to Investments.

capital gain | The profit from the sale of an investment when the sales proceeds are greater than the purchase price.

capital loss | The loss from the sale of an investment when the purchase price was greater than the sales proceeds.

capitalism | An economic system based on the private ownership of the means of production and their operation for profit.

cash flow statement | A financial summary of a firm's cash flow and other events that caused changes in the company's cash position, typically quarterly and annually. Also known as statement of cash flows

Certificate of Deposit (CD) | A short-term savings instruments in which funds must remain on deposit for a specified period. There is typically a penalty for early withdrawal of the funds.

Chicago Board Options Exchange (CBOE) | The largest U.S. options exchange. CBOE offers options on over 2,200 companies, 22 stock indices, and 140 exchange-traded funds. (Psst. Stay away from options! You have been warned!)

closed-end mutual fund | A type of investment company that operates with a fixed number of shares outstanding. Shares are purchased and sold on the securities exchanges.

Collateralized Mortgage Obligation (CMO) | A type of bond that contains a pool of mortgages bundled together and sold as an investment. The mortgage interest and principal payments are passed through to the investors.

collectibles | A item of value bought, collected, and sold by individuals and dealers.

commercial paper | Short-term, unsecured promissory notes (IOUs) issued by corporations with very high credit standings, typically issued in $100,000 denominations and held by institutional investors such as mutual funds, life insurance companies, and pension funds.

commissions | An amount of money paid to an agent in a commercial transaction, typically a declared dollar amount of a set percentage of the value involved or a set dollar amount per transaction.

compounding | The increasing value of an investment due to the investment rewards of cash flows or capital gains or both. It is the opposite of discounting.

contrarian | (1) A strategy of investing in vehicles that ore out of favor with the market for some reason. (2) An investor who adheres to a contrarian strategy.

conversion privilege | With regard to convertible securities, the conversion privilege allows a hybrid security investor to convert their hybrid security into common stock shares of the corresponding company. Examples included convertible bonds and convertible preferred stock. The term is also used in the life insurance industry with regard to life insurance policies.

conversion value | Indication of what a convertible issue would trade for if it were priced to sell on the basis of its corresponding common stock market price.

convertible bond | A bond that can be exchanged for a declared number of shares of common stock of the corresponding company.

convertible preferred stock | Preferred stock shares that can be exchanged for a declared number of shares of common stock of the corresponding company.

convertible security | Any security that can be exchanged for a set number of common stock shares of the corresponding company. Examples include convertible bonds and convertible preferred stock.

corporate paper | Short-term, low-risk, unsecured promissory notes (IOUs) issued by corporations with very high credit standings. Typically sold in $100,000 denominations.

corporation | A legal structure that allows a company or group of people to act as a single entity.

correlation | The tendency of the returns of two assets to move together.

coupon rate | The feature of a bond that defines the amount of annual interest income, expressed as an interest rate. The term comes from the time when bonds had coupons attached to them. The investor sent in the coupon when the semiannual interest was due and the bond issuer would then send the investor a check. Also known as coupon yield, nominal rate, or nominal yield.

covered options | An option transaction in which the seller of the option has a position opposite their options position. They are thus protected against large losses. (Don't do it! Don't gamble with options!)

crash | A sudden and dramatic decline in prices in a particular market, often driving by panic selling and fears of the end of the world. Chances are an investor will experience at least one and probably more crashes in their lifetime. (Keep a long-term perspective and don't panic!) Also known as a market crash.

credit agency | A for-profit company that researches, compiles, and publishes credit ratings about publicly traded corporations.

credit rating | A rating assigned by a credit agency to a company designed to measure the likelihood of the company defaulting on its debt obligations.

cryptocurrency | (1) A digital currency in which transactions are maintained by a decentralized algorithm spread across multiple computer systems. (2) A great way for crooks to try to evade the law. (3) A modern-day Ponzi scheme based upon pure speculation and designed to separate suckers from their money. Also known as klepocurrency.

cumulative preferred stock | Preferred stock whose dividends, if skipped in any given year, are said to be "in arrears" and must be paid before any other dividends can be paid.

currency futures contracts | A security that is a contract between individuals that allows the exchange of one currency for another currency at a given price in the future. (Stay far, far away from futures in any form!)

currency risk | The risk associated with the change in value of a foreign asset held by an investor because of the fluctuation of the exchange rate between the foreign currency of the investment and the investor's domestic currency. Also known as exchange rate risk.

current ratio | The interest rate and amount of current income a bond provides relative to its market price. Also known as current rate.

current yield | The interest rate and amount of current income a bond provides relative to its market price. Also known as current rate.

cyclical stock | Companies whose earnings and overall market performance are closely linked to the general state of the economy. Examples include automobile and basic materials companies.

date of record | The date on which an investor must be a registered shareholder of a firm to be entitled to receive a dividend.

dealers | Traders who "make markets" by offering to buy and sell certain securities at stated prices from their own inventories. Also known as market makers.

death cross | Yet another dubious technical indicator that states when a shorter-term moving average crosses below a longer-term moving average, it's time to sell the security. (Psst. It's usually too late.) See golden cross.

debenture | Unsecured corporate bond backed only by the full faith and credit of the issuing corporation.

debt financing | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as bonds or fixed income securities.

debt-to-equity ratio | A measure of a company's financial leverage calculated by dividing long-term debt by shareholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

default risk | The risk that an entity will be unable to make their required interest and principal payments.

defensive stock | Companies that tend to hold their own, and even do well, when the economy starts to falter. Examples include consumer staples and food companies.

depression | A sustained period of depressed economic activity, resulting in severe deprivation. Unlike a recession which is defined as six months of economic decline, there is no generally accepted definition of a depression.

derivative | A security that derives its value from an underlying security or asset normally highly speculative. Example included options contracts and futures contracts. (Stay far away from derivatives! I mean it. They are weapons of mass financial destruction.)

desired rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, expected rate of return, and discount rate.

developing market | The economy of a nation that is working toward becoming more industrialized and advanced. Also known as an emerging market.

dilution | Stock dilution occurs when a company issues additional shares of stock. This reduces the proportional ownership to existing shareholders.

Director | A member of the Board of Directors, elected by the shareholders, to oversee the activities of the corporation or other type of organization such as a non-profit entity.

discount bond | A discount bond is a bond that is selling for less than its par value.

discount method | Method of earning interest on a security by purchasing it at a price below its redemption value. The difference is the interest earned and the interest "accrues" on the investment as the security gets closer to its maturity date. Examples include Treasury bills and commercial paper.

discount rate | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, expected rate of return, and desired rate of return.

discounting | The very unfortunate word we use to describe the process of computing the present value of a future stream of cash flows from an investment. It is the opposite of compounding.

distribution date | The date on which the company pays their dividend to their shareholders, normally a few weeks after the date of record.

diversification | The process of spreading your investments across a number of assets and asset classes to eliminate some, but not all, of the risks of investing.

dividend | Optional distributions of earnings to the shareholders, typically paid quarterly in the United States and other countries that were at one time associated with the British Empire.

dividend payout ratio | A measure expressed as a percentage of how much of a company's earnings are being paid out to shareholders in the form of dividends. Also known as the payout ratio.

Dividend Reinvestment Plan (DRIP) | A plan in which shareholders have cash dividends automatically reinvested into additional shares of the firm's common stock.

dividends per share | A measure that relates dividends to share price and puts stock dividends on a relative (percentage) basis rather than an absolute (dollar) basis.

dollar cost averaging | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as an automatic investment plan, and a systematic investment plan.

domestic | An investment based within in the United States.

Dow Jones Industrial Average | Stock market average made up of 30 high-quality stocks selected for total market value and broad public ownership and believed to reflect overall market activity. Also known as the Dow and DJIA.

Dow Jones U.S. Completion Total Stock Market Index | Popular stock market index meant to measure the performance of mid-cap and small-cap companies in the United States. Previously known as the Wilshire 4500. (If you can remember the same, you are a better person than I am. I still call it the Wilshire 4500.)

Dow Jones U.S. Total Stock Market Index | Stock market index designed to the track the performance of the overall United States stock market including large-cap, mid-cap, and small-cap companies. Previously known as the Wilshire 5000.

Dow Theory | A technical analysis theory that was originally proposed by Charles Dow, one of the co-founders of the *Wall Street Journal* and the Dow Jones Industry Average. If someone can explain to me, please contact me. I think it says that the market will go up and down.

downside capture ratio | A statistical measure of the past performance of a money manager when asset prices are falling. See upside capture ratio.

duration | A measure of a bond price's sensitivity to changes in interest rates and bond yields, capturing both price and reinvestment risk.

Earnings Per Share (EPS) | A company's net income divided by the number of shares outstanding. A very and popular important statistic.

educational savings account | A tax-qualified investment account that offers tax-exempt earnings for qualified educational expenses.

Efficient Market Theory | The theory that in an efficient market, securities will reflect all possible information quickly and accurately and securities prices will adjust quickly and accurately. Thoroughly debunked by Nobel Prize winner Daniel Kahneman in his book, *Thinking Fast and Slow*.

emerging market | The economy of a nation that is working toward becoming more industrialized and advanced. Also known as a developing market.

Environmental Governance and Social (ESG) | A complicated mixture of three disparate aspects of a corporation's activities and behaviors. Typically, the goal is to measure to what extent the corporation is working toward the overarching goal of planetary sustainability.

equity | An investment that represents ownership and a popular term for a stock investment.

equity income | A stock investment strategy that emphasizes dividends over capital appreciation.

ex-dividend date | The date upon which a stock will begin trading without the upcoming dividend. This is two days before the date of record.

exchange rate | The rate at which one currency will be exchanged for another.

exchange rate risk | The risk associated with the change in value of a foreign asset held by an investor because of the fluctuation of the exchange rate between the foreign currency of the investment and the investor's domestic currency. Also known as currency risk.

Exchange-Traded Fund (ETF) | An open-end mutual fund that trades as a listed security on a stock exchange similar to a closed-end mutual fund.

exercise price | The agreed upon contract price between the buyer of an option and the seller of the option. Also known as the strike price.

expected rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, desired rate of return, and the discount rate.

expiration date | The date upon which an options contract or futures contract expires.

face value | The named value of a security. With regard to bonds, the amount that will be repaid upon maturity. Also known as the par value.

Fannie Mae | The popular nickname for the Federal National Mortgage Association, a for-profit corporation sponsored by the United States government tasked with helping increase home ownership by making mortgages more affordable.

Federal agency bonds | Debt securities issued by agencies or corporations sponsored by the Federal government for the purpose of promoting a public interest.

Federal Deposit Insurance Corporation (FDIC) | Federal agency tasked with insuring savers' deposits in United States banks.

Federal Funds rate | The interest rate that banks charge each other to borrow money. This rate is set by the Federal Reserve Banking System.

Federal Reserve Banking System | The central banking system of the United States, responsible for administering monetary policy and setting short-term interest rates. Popularly called the Fed.

financial futures contracts | A security that is a contract between individuals that allows the purchase or sale of a financial asset at a given price in the future. (Warning! Danger! These are not for the typical individual retail investor! Stay away!)

financial intermediary | An institution that acts as a facilitator between individuals and organizations to facilitate trade and investment transactions. Examples include banks, credit unions, and mutual funds.

financial leverage | The use of borrowed money to enhance the returns of a financial investment. (Careful! This technique can magnify your returns but it can also magnify your losses.)

financial risk | The possibility of losing money when investing.

fiscal policy | The tools available to the United States Congress and other governments to influence and promote economic activity. See monetary policy.

fixed-income security | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as bonds and debt financing.

foreign | An investment based outside the United States. Also known as international and overseas.

forex | The global marketplace for trading currencies, both for immediate transactions (spot market) and future transactions (forward and futures contracts markets). Very dangerous! Unless you enjoy losing money at the casino, for example, stay far away from this place!

fourth market | Privately owned electronic trading networks that automatically match buy and sell orders that customers place electronically, designed to bypass the traditional securities exchanges. Examples include BATS and NYSE Arca. Also known as Electronic Communications Networks (ECNs).

Freddie Mac | The popular name for the Federal Home Loan Mortgage Corporation, a for-profit corporation sponsored by the United States government tasked with helping increase home ownership by making mortgages more affordable.

fundamental analysis | The process of examining a firm's accounting statements and other financial and economic information to assess the economic value of a company's stock.

future value | The expected value of an investment sometime in the future given an expected rate of return. It is the opposite of present value.

futures contract | A security that is a contract between individuals that allows the purchase or sale of a commodity or financial asset at a given price in the future. Also known as futures. (Do not trade futures! They are radioactive and you can lose a ton of money very quickly. To steal from Nike, just *don't* do it!)

futures price | The agreed upon price that the commodity or financial asset will be bought and sold when the futures contract matures.

General Obligation bond (GO) | A municipal bond backed by the full faith, credit, and taxing power of the issuer.

Ginnie Mae | The popular name for the Government National Mortgage Association, a government-owned corporation of the United States Federal Government within the Department of Housing and Urban Development, dedicated to helping increase home ownership.

global | An investment that is based anywhere around the world.

golden cross | Yet another dubious technical indicator that states when a shorter-term moving average crosses above a longer-term moving average, it's time to buy the security. (Psst. It's usually too late.) See death cross.

Greater Fool Theory | The belief that there exists a Greater Fool who will purchase an asset for more than I paid for it. Typically used by short-term traders who do not concern themselves with the underlying valuation of an asset. Not recommended for prudent, long-term investors such as yourself.

Gross Domestic Product (GDP) | The measure of all goods and services produced by an economy.

gross margin | The rate of profit being earned from gross profit.

growth | An investment strategy that emphasizes capital gains over dividends by typically investing in companies that are aggressively growing their earnings.

growth and income | An investment strategy that emphasizes both growth of earnings and dividends.

growth stock | A company that is experiencing a high rate of growth of operations and earnings.

head and shoulder charting pattern | The most infamous technical analysis charting pattern. They tell me that it is supposed to be bad but you will have to decide for yourself if it is good or bad.

health savings account (HSA) | A type of qualified investment account that allows an individual to accumulate tax-exempt monies that can be used for medical expenses.

hedging | The process of taking a position opposite to an existing position in an underlying security, often used in high-risk securities such as options and future contracts.

high-yield bond | A high-risk bond from a corporation or municipality that has a low credit rating but typically pays high income. Also known as a junk bond.

hybrid security | An investment designed to offer the stability of fixed-income investments such as bonds with the opportunity for capital growth of equity investments such as stocks.

hypothetical illustration | An example of the past returns of an investment with lots of disclaimers about how past returns are not guarantees of future results and other legal mumbo jumbo. Also known as an illustration.

income | Cash received from an investment. Examples include interest, dividends, and rent.

income bond | An unsecured corporate bond requiring that interest be paid only after a certain amount of income is earned.

income statement | A financial summary of the operating results of firm covering a specified period of time, typically quarterly and annually.

income stock | A stock investment with long and sustained records of paying higher-than-average dividends. Examples include utilities and banks.

indenture | The contract that sets forth the terms between the bond issuer and the bond investors. Also known as a trust indenture.

index fund | A mutual fund that buys and holds a portfolio of stocks or bonds equivalent to those in a specific market index. This strategy is called passive money management.

Individual Retirement Account (IRA) | A tax-qualified investment account designed to accumulate retirement funds for wage earners. The real name is Individual Retirement Arrangement but only the IRS uses this term.

inflation risk | The risk of an investment will fail to keep pace with inflation, thereby reducing the investor's purchasing power. Also known as purchasing power risk.

inflation-indexed | A security that promises to match or surpass the inflation rate.

Initial Public Offering (IPO) | (1) The first public sale of company's stock. (2) It's Probably Overpriced. (3) Imaginary Profits Only. (4) Insiders' Profit Opportunity. Definitions 2 through 4 courtesy of Benjamin Graham from his landmark book, *The Intelligent Investor*.

insider information | Any important information about a publicly traded company that is not yet been made public using the proper regulated procedures. Trading on insider information is illegal but is believed to be widespread. The legal term is material non-public information.

interest | Payment from a borrower to an investor in return for the use of borrowed money.

interest rate risk | The risk that changing interest rates will adversely affect fixed-income investments such as bonds. When interest rates rise, bond prices fall.

intermediate-term | In the investment industry, an intermediate-term time frame for retail investors is generally considered from two to five years.

Internal Rate of Return (IRR) | A popular method of calculating the return on an investment given its predicted series of cash outflows and inflows.

international | An investment based outside the United States. Also known as foreign and overseas.

intrinsic value | The underlying or inherent value of a stock, as determined through security analysis.

inventory turnover | A measure of how efficiently a company is managing its inventory.

investment | Any vehicle into which resources can be placed with the expectation that it will generate positive income, or that its value will be preserved or increased, or both.

investment bank | A financial institution dedicated to facilitating the process of initiating an Initial Public Offering for a company. Also involved in bringing fixed-income investments such as bonds to the public markets on behalf of corporations and governmental entities.

junk bond | A high-risk bond from a corporation or municipality that has a low credit rating but typically pays high income. Also known as high-yield bond.

Keogh | A type of qualified retirement account used by small businesses.

large-cap | A corporation whose market value is greater than US$10 billion. Lately, some in the industry have promoting the idea that a company's market value needs to be at least US$15 billion to be considered large-cap.

leverage | The use of borrowed monies to finance investments. Leverage can magnify an investor's gain but also carries the possibility of magnifying their losses.

lifestyle mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as retirement fund and target date fund.

limit order | A security transaction that will only be executed at a specific price or better. The investor runs the risk of the transaction never being executed if the specified price is never reached.

limited liability | An important aspect of corporations and other legal entities that states that losses are limited to the amount of resources invested. The shareholders are thus only liable for the investment and nothing more.

Limited Liability Corporation (LLC) | A legal business entity that limits the liability of the owners and protects their personal assets.

liquidity | An aspect of an investment that refers to its ease or difficulty of converting the investment into cash. Examples of liquid investments are stocks, bonds, and mutual funds. Examples of illiquid investments are real estate, art, and collectibles.

load fund | A mutual fund that charges a commission when shares are bought.

long position | A transaction in which investors buy securities in the hope that they will increase in value and can be sold at a later date for profit. Buy low, sell high.

long-term | In the investment industry, a long-term time frame for retail investors is generally considered five years or longer.

maintenance margin | The absolute minimum amount of margin (equity) that an investor must maintain in the margin account at all times. Cannot be less than 25% as of this writing.

mania | An occasional market phenomenon consisting of rapid and irrational price increases, typically followed by a subsequent crash. Also known as a bubble.

margin | The portion of the value of an investment that is not borrowed when using leverage to purchase securities. The amount of equity stated as a percentage in the investment.

margin account | A brokerage account in which, subject to limits, securities can be bought and sold on credit. The investor will borrow money from the brokerage firm to purchase securities. This use of borrowed money to purchase securities is called leverage and can magnify the returns to an investor but also has the possibility of magnifying the losses. Very risky!

margin call | Notification of the need to bring the equity of an account whose margin is below the maintenance level up to the initial margin level or to have enough margined holdings sold to reach this standard. "Never meet a margin call!" – Old Wall Street Saying

margin requirement | The minimum amount of equity that must be a margin investor's own funds, currently set by the Federal Reserve Board at 50%. Also known as the initial margin.

marginal tax rate | The percentage tax rate on the next dollar of income earned. Poorly understood but important statistic when analyzing and planning personal finances for tax purposes.

market order | A security transaction that seeks to fulfill the order at the best price currently available. Typically, market orders are fulfilled in microseconds.

market risk | The risk of losses arising from price movements in a particular market. (Keep a long-term perspective, Dear Readers.)

market timing | The dubious strategy of trying to predict the short-term behavior of a particular market. "Don't try to buy at the bottom and sell at the top. It can't be done except by liars." – Bernard Baruch.

Markowitz portfolio theory | Another theory about the benefits of diversification that will impress your friends and influence people when you mention it at a cocktail party. You don't really have to understand it or use it. (Just remember the important part: Diversification is a good thing.)

maturity date | The date upon which a security such as a bond matures.

mega-cap stock | Any large-cap company with a market valuation above US$100 billion. Recently, some in the industry are using US$200 billion as the threshold.

micro-cap stock | Any small-cap company with a market valuation below US$100 million. Recently, some in the industry are using US$300 million as the threshold.

mid-cap stock | Any company with a market valuation between US$2 billion and US$10 billion. Recently, some in the industry are using between US$5 or US$6 billion and US$15 billion as the criteria.

mixed lot | A stock transaction that involves a number of shares greater than 100 but not divisible by 100. See round lot and odd lot.

momentum trading | A strategy that advocates short-term trading that seeks to take advantage of the current momentum of a particular market. Typically uses the Greater Fool Theory. "Somewhere there is a Greater Fool that will buy this asset at a higher price than I paid for it."

monetary policy | The tools available to central banks such as the United States Federal Reserve Bank to influence and promote economic growth. See fiscal policy.

money market account | A short-term investment account at a bank or credit union similar to a money market mutual fund but carries the current government guarantee of protection up to US$250,000.

money market mutual fund | A short-term investment that utilizes guaranteed or very close to guaranteed short-term instruments. The possibility of loss is minuscule and typically, so are the returns. "A place to park your money."

mortgage bond | A bond that is secured by mortgages or other real estate assets. The bond typically "passes through" the interest and principal payments to the mortgage bond investor.

moving average | A dubious technical analysis indicator that calculates an average price or index level, using a fixed number of previous days' prices or levels. Popular moving average periods are 10-day, 50-day, and 200-day.

MSCI All-Country World Index | A global stock market index designed to measure the returns from companies based all around the world. Has replaced the MSCI World Index.

MSCI All-Country World Index ex-USA | An international stock market index designed to measure the returns from companies based outside the United States. Has replaced the MSCI EAFE Index.

MSCI EAFE Index | Traditionally, the international stock market index designed to measure the returns from companies based outside the United States. Has been replaced by the MSCI All-Country World Index ex-USA.

MSCI World Index | Traditionally, the global stock market index designed to measure the returns from companies based all around the world. Has been replaced by the MSCI All-Country World Index.

municipal bond | A fixed-income investment that is issued by municipalities such states, counties, cities, and other political subdivisions. The interest payments from most municipal bonds are exempt from Federal income taxes.

mutual fund | An investment company that invests its shareholders' money in a diversified portfolio of securities. Investors typically receive professional money management and instant broad diversification.

mutual fund share classes | The dizzying array of different classes of mutual funds with various methods of soaking their investors, ooops!, we mean charging for their services.

naked option | An options contract that is written on securities not owned or sold short by the writer. Also known as an uncovered option. (Don't do it! Don't gamble with options!)

NASDAQ | The second-largest stock exchange in the United States, known for its large percentage of technology stocks, formerly the National Association of Securities Dealers Automated Quotation system.

National Credit Union Administration (NCUA) | Federal agency tasked with insuring savers' deposits in United States credit unions.

Net Asset Value (NAV) | The underlying value of one share in a particular mutual fund.

net profit margin | The rate of profit being earned from earnings after expenses and taxes.

net working capital | The absolute dollar measure of liquidity, computed by subtracting the current liabilities from the current assets.

New York Stock Exchange (NYSE) | The largest stock exchange in the United States, established in 1792. Also known as the Big Board.

NFT | The current tulip bulb mania. Someone will sell you a graphic image that anyone can download from the Internet for free. Sounds like a good deal to me! The full name is Non-Fungible Token.

no-load mutual fund | A mutual fund that does not charge a commission when shares are bought.

nominal rate | The feature of a bond that defines the amount of annual interest income, expressed as an interest rate. The term coupon comes from the time when bonds had coupons attached to them. The investor sent in the coupon when the semiannual interest was due and the bond issuer would then send the investor a check. Also known as the nominal yield, coupon rate, and coupon yield.

non-qualified account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as regular account and taxable account.

noncumulative preferred stock | Preferred stock whose dividends, if skipped in any given year, are not required to be paid before any other dividends can be paid.

odd lot | A stock transaction that involves a number of shares less than 100. See round lot and mixed lot.

open interest | The number of options or futures contracts that are trading on an exchange at any given time. (I told ya' to stay away from options and future contracts, right?)

Open Market Operations | The system used by central banks such as the U.S. Federal Reserve Bank to influence short-term interest rates.

open-end investment company | A type of investment company in which investors buy shares from, and sell them back to, the mutual fund itself, with no limit on the number of shares the fund can issue.

operating profit margin | The rate of profit being earned from a company's operating income.

option contract | A security that gives the holder the right to buy or sell a certain amount of an underlying financial asset at a specified price for a specified period of time. Also referred to simply as an option. (Pure gambling and speculation! Stay far, far away from these ... unless you love going to Las Vegas and losing your hard-earned money.)

option premium | The proper term yet not popular term for the amount that one pays for or receives from an option contract is the option premium. However, most people just call it the option price.

Over-the-Counter Market (OTC) | Widely scattered telecommunications network through which transactions are made in outstanding securities and smaller IPOs. Examples include the OTC Bulletin Board and OTC Markets Group, née Pink Sheets. (Careful! These are where the scam penny stocks skulk in the shadows. Stay away!)

overseas | An investment based outside the United States. Also known as international and foreign.

P/E | The Price-to-Earnings Ratio is the most widely watched stock market statistic! Computed by dividing the market price of a stock by the earnings of the company. Also computed for a stock market or segment of a stock market as a whole. Also abbreviated as PE.

par value | The named value of a security. With regard to bonds, the amount that will be repaid upon maturity. Also known as face value.

partnership | A legal entity where two or more individuals agree to operate a business or other entity and share in the proceeds.

passive money management | An investment strategy that advocates buying and holding a portfolio of stocks or bonds equivalent to those in a specific market index.

payout ratio | A measure expressed as a percentage of how much of a company's earnings are being paid out to shareholders in the form of dividends. Also known as the dividend payout ratio.

PEG Ratio | The Price-to-Earnings Ratio-to-Growth Ratio. The relationship of the P/E ratio of a company and their earnings growth rate.

penny stock | A stock from a sham corporation based in someone's garage in Idaho or Iowa or one of those states that starts with the letter I. Typically found on the OTC Bulletin Board or the OTC Markets Group, formerly the Pink Sheets. Penny stocks should not be discussed in polite company. And don't think you can beat the scam artists at their own game. If you don't know who the patsy is as the poker table, the patsy is you

point-and-figure chart | A type of chart used in technical analysis. The use of point-and-figure charts for predicting short-term price movements has been shown to be better than howling at the full moon on hot summer nights while dancing naked around a bonfire, but not that much better.

portfolio allocation | A fancy term for how much should we have in stocks, how much in bonds, etc. Assuming you won't panic when the markets fall, keep the vast majority of your financial investments in stocks when you are younger. As you get closer to retirement, start to migrate your financial investments toward bonds and high-quality income-producing stocks. But don't give up on stocks entirely! Lord willin', you will be in retirement for a long time.

precious metals | Relatively rare metallic elements, some with high economic value. They pay no interest or dividends, don't grow any earnings, don't create new products, expand into new markets, etc. There's a whole lot not to like about precious metals. They do look cool, though.

preferred stock | Stock investments that have a prior claim ahead of common stocks on the income and assets of the issuing firm. Preferred stocks are generally purchased for the reliable stream of dividend payments they produce. There are tax advantages for corporations to own the preferred stock of other companies. Hence, preferred stock is typically not a good choice for individual retail investors.

premium bond | A premium bond is a bond that is selling for more than its par value.

present value | The current value of an investment today from the predicted cash flows of capital gains or income or both sometime in the future given an expected rate of return. It is the opposite of future value. (Please study chapter 4 thoroughly.)

Price-to-Book Value Ratio | Ratio of the current market price to the book value per share.

Price-to-Cash Flow Ratio | Ratio of the current market price to the company's current cash flow per share.

Price-to-Earnings Ratio | The Price-to-Earnings Ratio is the most widely watched stock market statistic! Computed by dividing the market price of a stock by the earnings of the company. Also computed for a stock market or segment of a stock market as a whole. Normally abbreviated as P/E/ and also abbreviated as PE.

Price-to-Sales Ratio | Ratio of the current market price to the company's current sales per share.

primary market | The market in which new issues of securities are sold to the public via Initial Public Offerings (IPOs).

principal | (1) The original sum invested. (2) The amount returned upon the maturity of security, typically a fixed-income investment such as a bond.

private placement | An investment that is sold directly to accredited or sophisticated investors and not available to the retail public.

professional money management | Investment professionals who manage the investments for others. Actively managed mutual funds hire professional money managers to identify, investigate, choose, and monitor the stocks, bonds, and other securities that populate the mutual fund.

purchasing power risk | The risk of an investment will fail to keep pace with inflation, thereby reducing the investor's purchasing power. Also known as inflation risk.

put option contract | A security that gives the holder the right to sell a certain amount of an underlying financial asset at a specified price for a specified period of time. (Warning! Caution! Stay far away from these things. It is gambling, pure and simple.) Also known as a put option or just simply as a put.

qualified account | An account that has some type of tax advantage as outlined in the Internal Revenue Code. Examples include retirement accounts, educational savings accounts, and health savings accounts. Also known as a tax-qualified account.

quick ratio | A measure of the ability of a company to meet their short-term financial obligations even if their inventory becomes obsolete or otherwise unable to sell. Also known as the acid test ratio.

Random Walk Theory | The theory that stock price movements are unpredictable in the short-term.

rate of return | The reward expressed as a percentage from the capital gains or income or the combination of capital gains and income from an investment over a specified period of time.

Real Estate Investment Trust (REIT) | A company that owns and operates income-producing real estate. Similar to a mutual fund but instead of stocks and bonds, they invest in real estate. An alternative that may be worthwhile for those who want to invest in real estate but do not want to be a landlord.

receivables turnover | A measure of how efficiently a company is managing their accounts receivable. Accounts receivables are monies that are owed to the company. Also known as accounts receivables turnover.

recession | Popularly defined as a two consecutive quarters (six months) of economic contraction.

regional fund | A mutual fund that limits its investments to securities of a particular region such as Latin America, the Far East, Eastern Europe, etc.

registered representative | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known as broker, stockbroker, and registered investment advisor.

regular account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as non-qualified account and taxable account.

reinvestment risk | The uncertainty about the future value of an investor's bond investments that result from the need to reinvest bond interest payments and redemptions at yields not known in advance.

required rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as expected rate of return, desired rate of return, and discount rate.

restricted securities | Investments that are only available to accredited and sophisticated investors. Off limits to the general public. Typically very speculative but offer tremendous returns if the venture succeeds.

retirement account | A tax-qualified account designed to accumulate monies for an individual's retirement. Examples include the Traditional IRA, Roth IRA, 401(k), 403(b).

retirement mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as lifestyle fund and target date fund

Return on Assets (ROA) | A measure of how profitable a company is relative to its total assets.

Return on Equity (ROE) | A measure of the overall profitability of a company in relation to the shareholders' equity.

Return on Invested Capital (ROIC) | A measure of the overall profitability of a company in relation to both its debt and equity. There are various versions of ROIC.

revenue bond | A municipal bond that requires payment of principal and interest only if sufficient revenue is generated by the issuing municipality.

risk | In the investment world, risk is defined as the probability that actual investment returns will differ from the expected investment returns.

risk-free rate of return | The return on guaranteed short-term investments. The quoted risk-free rate of return is typically the three-month U.S. Treasury bill.

Roth IRA | A tax-qualified retirement account that offers tax-exempt earnings in retirement. (Very cool! Open your Roth IRA now!)

round lot | A stock transaction that involves a number of shares divisible by 100. See odd lot and mixed lot.

Russell 2000 | A popular index designed to measure the performance of mid-sized and small companies in the United States.

savings account | A guaranteed demand account at a bank or credit union that normally pays little interest but will often be offered with a toaster or waffle iron which makes it all worthwhile.

secondary market | The market in which securities are traded after they have been issued to the public. The vast majority of transactions take place in the secondary market.

sector funds | A mutual fund that concentrates its holdings in a particular sector of the economy such as energy, technology, or health care. Typically defeats one of the two main advantages of investing in a mutual fund, diversification.

sector rotation | A strategy of buying stocks in hot sectors and selling those stocks in stale sectors. It is similar to market timing strategies and not recommended for prudent, long-term investors such as yourself.

Securities and Exchange Commission (SEC) | The Federal agency charged with regulating the securities industry and protect against market manipulation and other illegal activities.

Securities Industry Essential (SIE) Exam | The exam recently instituted to encourage more professionals to enter the investment industry because of the difficulty of the Series 7 Stockbroker Exam. If you pass the SIE Exam, the industry will come a' callin'. Think about it. The industry needs you!

Securities Investor Protection Corporation (SIPC) | Similar to how FDIC insures bank deposits, the SIPC is an insurance fund designed to protect investors' deposits of securities from malfeasance or other misconduct. They do not protect loss of monies from market fluctuations.

securitization | The process of transforming lending vehicles such as mortgages into marketable securities.

security | The unfortunate term for an investment that represents debt or ownership or the legal right to acquire or sell an ownership interest. A better term would be financial investment.

serial bond | A bond issue that has series of maturities instead of the typical term bond issue where all the bonds mature at the same time.

Series 7 Stockbroker Exam | The difficult licensing exam that gives an individual the ability to sell a broad range of securities. The proper name is the Series 7 General Securities Representative Exam since the legal name for stockbroker is a Registered Representative. Because the number of stockbrokers has been declining, recently, the SIE Exam was introduced as a pre-Series 7 exam. It is less expensive and rigorous and if you pass the SIE Exam, the industry will know that you will eventually pass the Series 7 Exam.

Series EE bond | Short-term obligations of the United States Treasury available at TreasuryDirect.gov.

Series I bond | Similar to Series EE bonds but with added inflation protection.

share buyback | The purchase of shares of outstanding shares of stock by the issuing corporation. The shares are taken out of circulation which reduces the number of outstanding shares. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation. Also known as a stock repurchase.

Sharpe ratio | A measure of the past risk versus reward performance of an investment.

short interest | The number of stock shares that have been sold short of a particular security or market. Can be used as a contrarian indicator for future price increases.

short position | A transaction in which investors sell borrowed securities in the hope that the price will decrease in value and the shares can then be bought later date for a profit. Sell high, buy low.

short sale | The sale of borrowed securities, their eventual repurchase by the short seller, and their return to the lender. Instead of, "Buy low, sell high," a short-term trader attempts to, "Sell high, buy low." (Don't do it. It's dangerous! Peter Lynch says, "Never short a stock," and who is going to argue with a man who racked up a 29% annual return.)

short-term | In the investment industry, a short-term time frame for retail investors is generally considered up to one year.

short-term investment | Instruments designed to preserve capital for monies that will be needed in the short-term. Often guaranteed and typically carry very low rates of return. "A place to park your money." Examples include savings accounts, money market mutual funds, and Treasury bills.

sinking fund | A fund designed to accumulate monies in anticipation of a needed payment or payments in the future. An example includes accumulating the sufficient capital to make the principal payments when a series of bonds mature.

small-cap stock | Any company with a market valuation below US$1 billion or $2 billion. Recently, some in the industry are using any company below US$5 billion or US$6 billion million as the threshold.

sophisticated investor | Sophisticated investors are similar to accredited investors but have fewer restricted investment opportunities. Like accredited investors, sophisticated investors are expected to have a high degree of knowledge and experience with risky investments and therefore are able to invest in restricted investments not available to the general public.

specialist | Specialists were the market makers/dealers that populated the floor of the New York Stock Exchange and bought and sold from their own inventories of securities to provide a continuous, fair, and orderly market. Technology has made the job of the specialist on the exchange floor obsolete.

speculation | The investment industry's euphemism for gambling. Speculation, also called trading, is not investing. (Don't do it. Don't speculate. You'll be sorry!)

speculative stock | Companies with a high degree of risk. They typically are losing money or have very low earnings relative to their valuation. Offer the possibility of substantial capital gains or, more likely, substantial capital losses.

speculator | An individual whose strategy is to profit from the short-term price movements of an asset. Not recommended for prudent, long-term investors. Also known as a trader.

spread | In the world of investments, the spread typically refers to the difference between two prices, yields, or other investment measurements. See bid-ask spread and yield spread.

Standard & Poor's | The largest of the credit rating agencies and one of the most influential investment research organizations in the world. Now called S&P Global Ratings although most investors simply refer to them as S&P.

Standard & Poor's 500 Index | One of the most popular stock market indexes. It consists of 500 of the largest United States stocks chosen for market size, liquidity, and industry group representation.

standard deviation | A measure of the risk of an investment computed using the past returns of an investment and the deviation from the average annual return. See variance.

statement of cash flows | A financial summary of a firm's cash flow and other events that caused changes in the company's cash position, typically quarterly and annually. Also known as the cash flow statement.

stock | The very unfortunate name for an investment in a for-profit business organization known as a corporation. A better term would be business.

stock dividend | Optional distribution of earnings from a corporation to the shareholders. Typically paid quarterly in the United States and all countries that were associated with the British Empire at one time. Corporations in other countries typically pay dividends semiannually or annually.

stock exchange | Traditionally, a centralized institution in which transactions were made in outstanding securities using a face-to-face "double auction" on the floor of the exchange. Technology has reduced the centralized physical locations to places for business news outlets to harvest video clips.

stock index | A benchmark standard used to measure the general behavior of securities prices of representative groups of stocks at a given point in time.

stock option | A security that gives the holder the right to buy or sell a certain amount of shares of an underlying stock at a specified price for a specified period of time. (If you enjoy gambling, you might enjoy trading stock options. Otherwise, stay far away from these odious stains on our investment industry.)

stock repurchase | The purchase of shares of outstanding shares of stock by the issuing corporation. The shares are taken out of circulation which reduces the number of outstanding shares. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation. Also known as a share buyback.

stock split | An accounting maneuver in which a company increases the number of shares outstanding by exchanging a specified number of new shares of stock for each outstanding share. There is no increased value from a stock split. The market capitalization of the company remains the same.

stockbroker | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known a broker, registered representative and registered investment advisor.

stop order | A security transaction that will be triggered when a set price point is achieved in the market. When the price point is achieved, the order becomes a market order and is executed almost instantaneously. Often used to protect against losses. Also known as a stop-loss order.

stop-limit order | Similar to a stop order, except the order becomes a limit order when the price point is achieved. This results in the possibility that the order will not be executed if the limit price is unavailable.

strike price | The agreed upon contract price between the buyer of an option and the seller of the option. Also known as the exercise price.

systematic investment plan | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as dollar cost averaging and an automatic investment plan.

target date mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as lifestyle fund and retirement fund.

tax shelter | A investment with legal tax reduction provisions. Examples include retirement accounts, municipal bonds, low-income housing projects, and oil and gas exploration projects.

tax-deferred annuity | A type of investment account that allows investors to earned tax-deferred income. Income is taxed upon withdrawal, typically in retirement. Annuities in general have bad reputations for high fees and mediocre returns. Most come with provisions for significant penalties for withdrawing funds prematurely.

tax-exempt bond | A bond that is exempt from either Federal taxes or state and local taxes or both. Examples include municipal bonds which are exempt from Federal taxes and Treasury bonds which are exempt from state and local taxes.

taxable account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as non-qualified account and regular account.

taxable-equivalent yield | The return that a tax-exempt bond is paying relative to a fully taxable bond.

technical analysis | The study of the various forces at work in the marketplace and their effect on stock prices. Typically involves reading squiggles on a computer screen and is not usually much better than practicing voodoo or interpreting the entrails of chickens for predicting the short-term behavior of securities.

term bond | The typical bond issue where all the bonds mature at the same time.

third market | An over-the-counter system used by large institutional investors to reduce transaction costs when initiating large block trades of securities.

time premium | The amount by which an options contract price exceeds the option's "in-the-money" value. If it would not be feasible to exercise the contract, the entire value of the contract is due to its time premium. (Haven't we already told you not to gamble with options?)

times interest earned (TIE) | Measures the ability of a company to meet its fixed interest payments. Specifically, the computation of how many times in a year a company has earned their required interest payments.

total asset turnover | A measure of a company's efficiency at using assets to support sales and revenue. The higher, the better.

total debt to total capitalization | A measure of the total amount of outstanding company debt as a percentage of the firm's total capitalization.

total debt-to-total assets ratio | A measure of how much of the company's total assets have been financed by debt.

total return | The return of an investment from both its capital gains and income.

trader | An individual whose strategy is to profit from the short-term price movements of an asset. Not recommended for prudent, long-term investors. Also known as a speculator.

tranche | A portion of an investment that can be sold separately, typically fixed-income instruments such as mortgage bonds.

Treasury bill | Short-term obligation of the United States Treasury with maturities less than one year, generally regarded as the safest of all investments. The current rate of Treasury bills is often used as the risk-free rate of return. Interest earned is exempt from state and local taxes. Often referred to as a T-bill.

Treasury bond | Long-term obligation of the United States Treasury with maturities between 10 and 30 years. Interest earned is exempt from state and local taxes. Often referred to as a T-bond, government bond, or simply government.

Treasury Inflation-Indexed Obligations (TIPs) | A type of Treasury security that provides protection against inflation by adjusting investor returns for the annual rate of inflation.

Treasury note | Actual name for a Treasury bond that matures between 2 and 10 years. Most investors don't know there is a difference in the name and if you use Treasury bond instead of Treasury note, as I do, no one will come down on you except maybe a person with a compulsive disorder. Interest earned is exempt from state and local taxes.

Treasury stock | Shares of stock of that have been repurchased by the corporation in a share buyback. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation.

TreasuryDirect.gov | The Federal government website where individual investors can purchase government securities at the same prices as big Wall Street firms.

Treynor ratio | A measure of the past risk versus reward performance of an investment. Guaranteed to impress individuals at a cocktail party when you mention the enviable Treynor ratio of your successful investments.

trustee | An individual or organization given authority over the administration of property or care of another and is legally required to act in their best interests.

turnaround stock | A company that has fallen on hard times. A potential investor must investigate thoroughly the potential for a rebound.

uncovered option | An option contract that is written on securities not owned or sold short by the writer. Also known as a naked option. (Don't do it! Don't gamble with options!)

undeveloped land | Land that is without any utility services such as electricity, water, or sewer and often without street access. Can provide tremendous investment returns but carries significantly more risk than developed land. Also known as raw land and unimproved land.

upside capture ratio | A statistical measure of the past performance of a money manager when asset prices are rising.

valuation | The process by which the underlying value of an investment is established on the basis of its forecasted risk and return performance.

value investing | The investment strategy that emphasizes the use of fundamental analysis to identify high-quality companies with good growth prospects and potential for dividends at reasonable prices and holding them for the long-term. Often referred to as "buy 'n' hold" investing.

variance | A measure of the risk of an investment computed using the past returns of an investment and the variance from the average annual return. See standard deviation.

volatility | The investment industry's euphemism for, "Aye! I lost a whole lotta' money!" (Keep a long-term perspective, Dear Readers.)

voting rights | The rights of shareholders to vote for various aspects of the corporation such as the members of the Board of Directors. Typically, an investor gets one vote for each share of stock owned.

warrant | A long-lived option that gives the holder the right to buy stock in a company at a price specified on the warrant.

Wilshire 4500 Index | A much easier name to remember for the Dow Jones U.S. Completion Total Stock Market Index.

Wilshire 5000 Index | A much easier name to remember for the Dow Jones U.S. Total Stock Market Index.

yield curve | A graph that represents the relationship between a bond's maturity and its yield at a given point in time, also used to make comparisons among types of bonds.

yield spreads | The differences in interest rates that exist among various sectors of the bond market.

yield to call (YTC) | The yield to call is the interest rate that an investor will receive if a premium bond is called away when the call protection period ends.

yield to maturity (YTM) | The yield to maturity is the interest rate that an investor will receive from a bond if held until maturity.

zero coupon bond | A bond that is sold a deep discount to its par value and does not offer periodic interest payments. Instead of paying interest in cash, the bonds accrue in value until maturity when the investor receives the par value.

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  - Addendum B: Internal Rate of Return and Net Present Value - *CC BY-NC-SA 4.0*
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Addendum A: Investment Clubs, BetterInvesting.org, and the Stock Selection Guide

"*Okay, now what?*" may be what you are thinking at this point. Some of you may be ready to start identifying, investigating, researching, choosing, and subsequently monitoring individual prudent, long-term stock purchases on your own. Others may have already decided long ago that they will stick with time-tested mutual funds with managers that have shown they can produce healthy returns in both good times and bad. However, many of you are torn. You want to invest but you are hesitant, confused, maybe even terrified. Ah, Dear Readers, you are not alone. And we have just the solution to your dilemma, BetterInvesting.org.

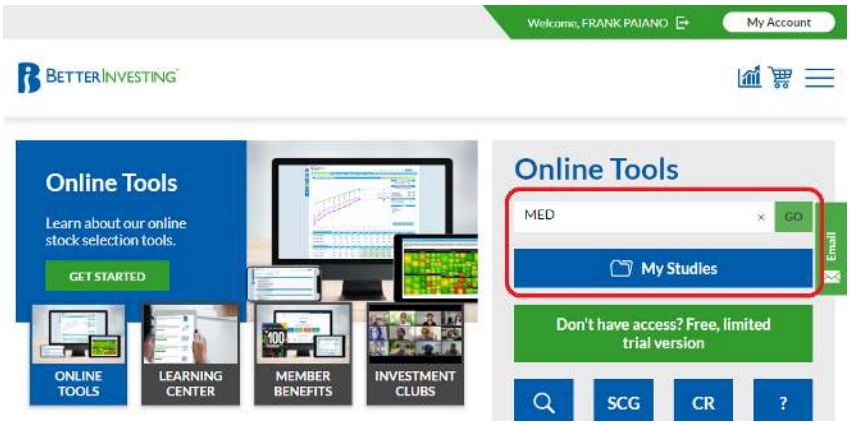
BetterInvesting.org, the new name for the National Association of Investors Corporation, has been around since 1951. For over 70 years, they have been helping individuals "learn while they earn." BetterInvesting.org sponsors investment clubs. An investment club is a group of individuals who work together to educate themselves about investing. However, the members of the investment club are also pooling together their resources and building a portfolio of investments, most commonly individual stocks. Members typically contribute anywhere from $25 to $100 each month and the resulting pool of resources is used to buy investments. You can think of the investment club as a small mutual fund. (Legally, most investment clubs are general partnerships, although some may decide to use a different legal entity. No matter what, we gotta' keep the IRS happy! Take BUS-120, Introduction to Business, or BUS-140, Business Law, at Southwestern Community College to learn more about business structures.)

If you are interested in possibly joining an investment club in your area, please go to BetterInvesting.org and look for the chapter in your area. The chapter for those of us in the San Diego area is the Golden West chapter. Our chapter covers Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Imperial Counties, as well as the greater Las Vegas area. All chapters have online Model Clubs where potential new members are invited each month to sit in on their meetings and watch and learn how an investment club works. Since the Covid pandemic, many chapters are now meeting online and inviting members from anywhere. We strongly urge you to consider joining an investment club.

Over the 70 years of BetterInvesting,org's existence, they have developed an investment model that is very robust. It is called the Stock Selection Guide, SSG for short. One of the attractive features of the SSG is that it is very visual, unlike the models that we covered in our text. Also, unlike our models, the SSG is geared toward growth stocks and dividends are a secondary concern. Oh, by the way, BetterInvesting.org suggests that we should be reaching for a 15% annual return on our investments. What do you think about that?

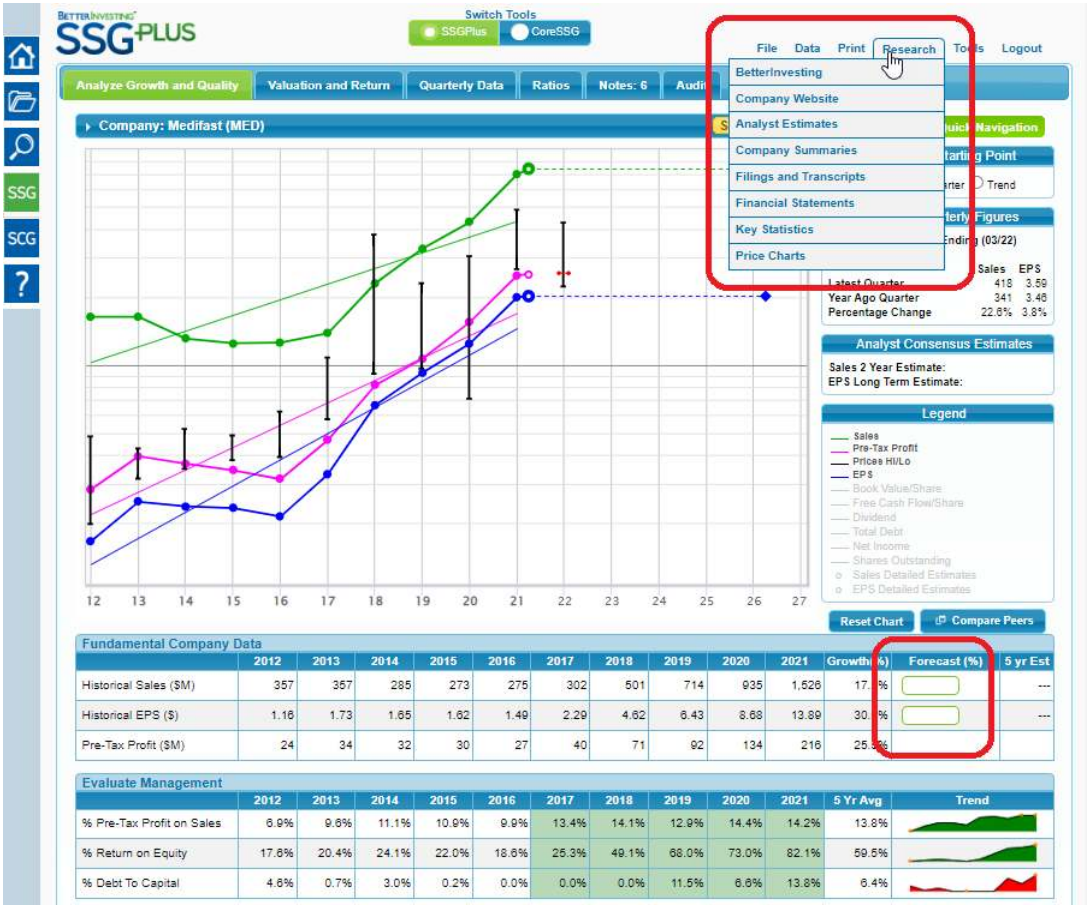
You can become a member of BetterInvesting.org if you want to experiment with the SSG without joining an investment club. BetterInvesting.org offers a ninety-day free trial membership. (Psst. Get the Individual Plus membership. It's worth the extra $18 per year because you get to use the SSGPlus described below.) More than anything else, though, BetterInvesting.org is dedicated to investor education. Whether you are a member or not, you can use their Learn About Investing web pages to continue your investment educational journey. They offer hundreds of articles and videos. Check 'em out!

In the meantime, let's take a very quick tour of the Stock Selection Guide. We are only going to look at just a small fraction of the many capabilities of this powerful tool. There are now two versions of the SSG, the SSGPlus and the CoreSSG. We will use the SSGPlus as it is a bit more powerful and easier to use. Once you have logged into BetterInvesting.org, you choose a new stock using the [Online Tools] dialog box or open one of your previous stocks using the [My Studies] option. Since the SSG is better suited to growth stocks, we will choose a fast-growing small-cap stock, Medifast, Inc., symbol MED. Similar to other online systems, you can use the ticker symbol or just type the name of the company and the system will do its best to find the correct stock for you. If you have the Individual Plus membership, the system automatically brings you to the SSGPlus screen.



Once we have chosen the stock we want to study, we are brought to the [Analyze Growth and Quality] page of the SSGPlus.

NOTE: As we were updating the book for 2025, we took a quick look at Medifast on BetterInvesting.org, expecting to see more of the same positive story. Nope! Medifast's earnings fell dramatically and so did the stock price. "Oh, darned," we thought. We need to find another stock to study using the SSG. However, very quickly, the idea emerged that this is a tremendous example of how fast the investment story can change with rapidly growing companies. After you have finished this addendum, please take a look at the current Stock Selection Guide for Medifast and then look at the stock price history over the past few years. It is not pretty. That is yet another reason why Your Humble Author loves dividend-paying stocks that have been around for decades.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Growth (%)	Forecast (%)	5 yr Est
Historical Sales ($M)	357	357	285	273	275	302	501	714	935	1,526	17.1%		---
Historical EPS ($)	1.16	1.73	1.65	1.62	1.49	2.29	4.62	6.43	8.68	13.89	30.1%		---
Pre-Tax Profit ($M)	24	34	32	30	27	40	71	92	134	216	25.5%		

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 Yr Avg	Trend
% Pre-Tax Profit on Sales	6.9%	9.6%	11.1%	10.9%	9.9%	13.4%	14.1%	12.9%	14.4%	14.2%	13.8%	
% Return on Equity	17.6%	20.4%	24.1%	22.0%	18.6%	26.3%	49.1%	68.0%	73.0%	82.1%	59.5%	
% Debt To Capital	4.6%	0.7%	3.0%	0.2%	0.0%	0.0%	0.0%	11.5%	6.6%	13.8%	6.4%	

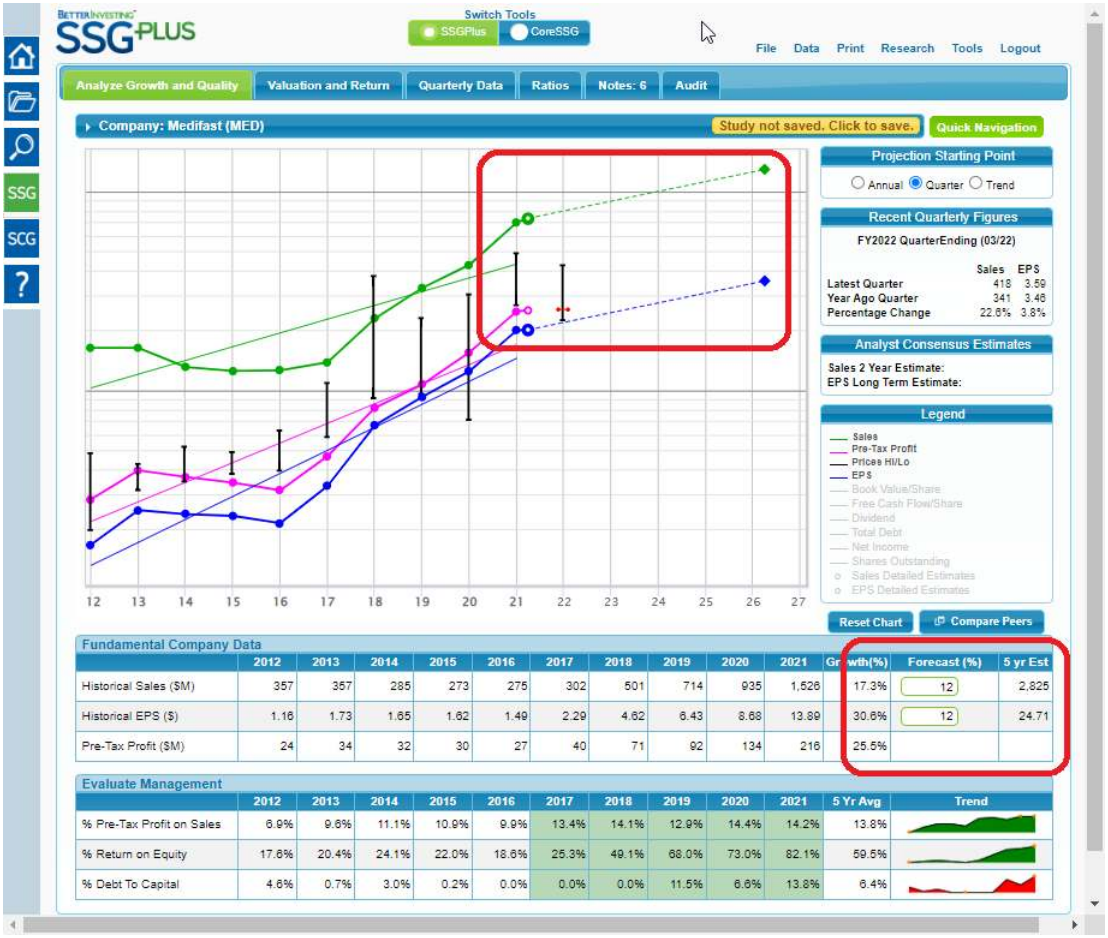
Here it is! Another sip from the financial firehose! Relax. Similar to *The Value Line*, the SSG is a rich and complex tool. You can start using just a handful of its capabilities and add more and more of its features as time goes by and you become more familiar with its tools.

The first feature we want to highlight is the [Research] tab in the upper right-hand corner. Notice that from within the SSG, you can tap into a wealth of resources and research about the company. The [Research] tab pulls data from sources such as Reuters, Yahoo Finance, Google Finance, Marketwatch.com, CNN Money, The Motley Fool, Seeking Alpha, MSN Money, Finviz, BigCharts, StockCharts, and Zack's. You also have access to the company's website and the SEC EDGAR yearly 10K and quarterly 10Q filings. In my humble opinion, one of the most valuable features is the Member Sentiment. BetterInvesting.org members and investment clubs are encouraged to give their opinion on the values of companies. Anyone who has read *Thinking Fast and Slow* (and you should be one of them!) will recognize the importance and usefulness of the guidance of a large group of people when making uncertain decisions.

The graph, however, is the most prominent and desired feature of the SSG. The three lines, from top to bottom, are the yearly sales (green), the pre-tax profit (magenta), and the earnings (blue). The BetterInvesting.org mantra is, "up, straight, and parallel." Notice that the SSG uses our old friend, the logarithmic scale. When the lines are moving upward on a logarithmic scale, this signifies that the numbers are growing exponentially. BetterInvesting.org also wants the lines to be straight. This signals that the company's growth has been study. Last, if the lines are parallel, this infers that all three, sales, pre-tax profit, and earnings, are growing steadily together. (For example, the company is not sacrificing pre-tax profit and earnings at the expense of growing their sales. Or they are not using accounting trickery to amplify their pre-tax profit and earnings while the sales are languishing.)

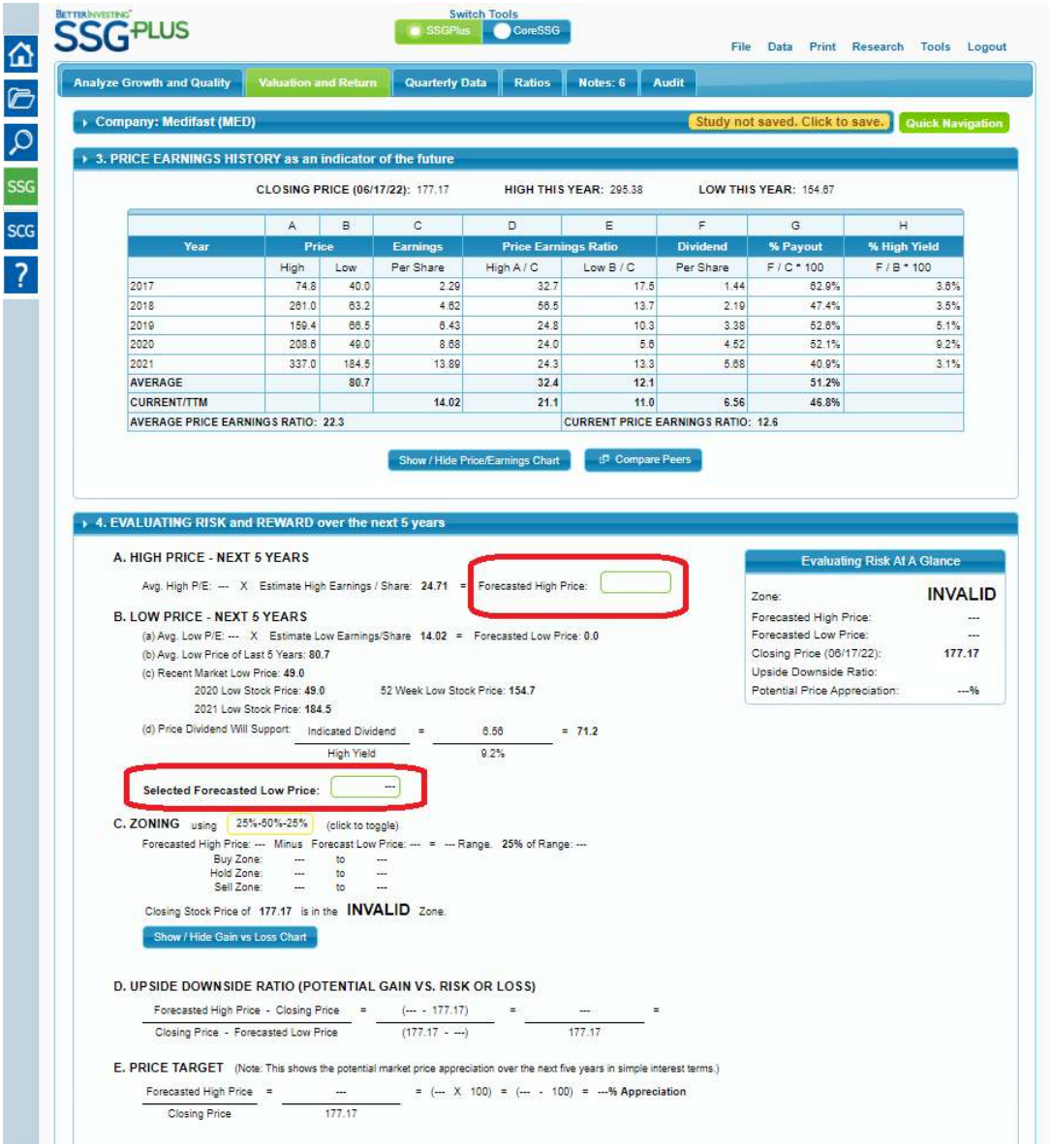
Look at the graph for Medifast. From 2013 through to 2016, the lines are trending downward. However, since 2016, all three lines are "up, straight, and parallel." This is BetterInvesting.org's Holy Grail. Hence, the SSG says that this is a stock that is worthy of our study. Time to read everything we can find about the company, download their annual and quarterly reports, and consult *The Value Line* and other resources. Calculate their financial ratios. Do a Discounted Cash Flow Model analysis. Study their competitors. You know the drill!

But wait, there are many other tricks up the SSG's sleeve. We are now going to use the SSG to forecast sales and earnings growth and predict a high and low price for the next five years. Refer to the highlighted red box in the lower-left hand corner. Notice that the SSG has calculated the historical growth rates for sales, earnings, and pre-tax profit. Our job is to use our judgment to enter the growth rates for sales and earnings going forward. There are several tools that will help us. We can do our calculations or choose the predictions from several sources such as *The Value Line*. Ignoring the analysts' optimistic predictions and erring on the side of caution, we chose 12% for both the sales growth and earnings growth. The SSG calculates the future sales and earnings based on our predictions and updates the graph.

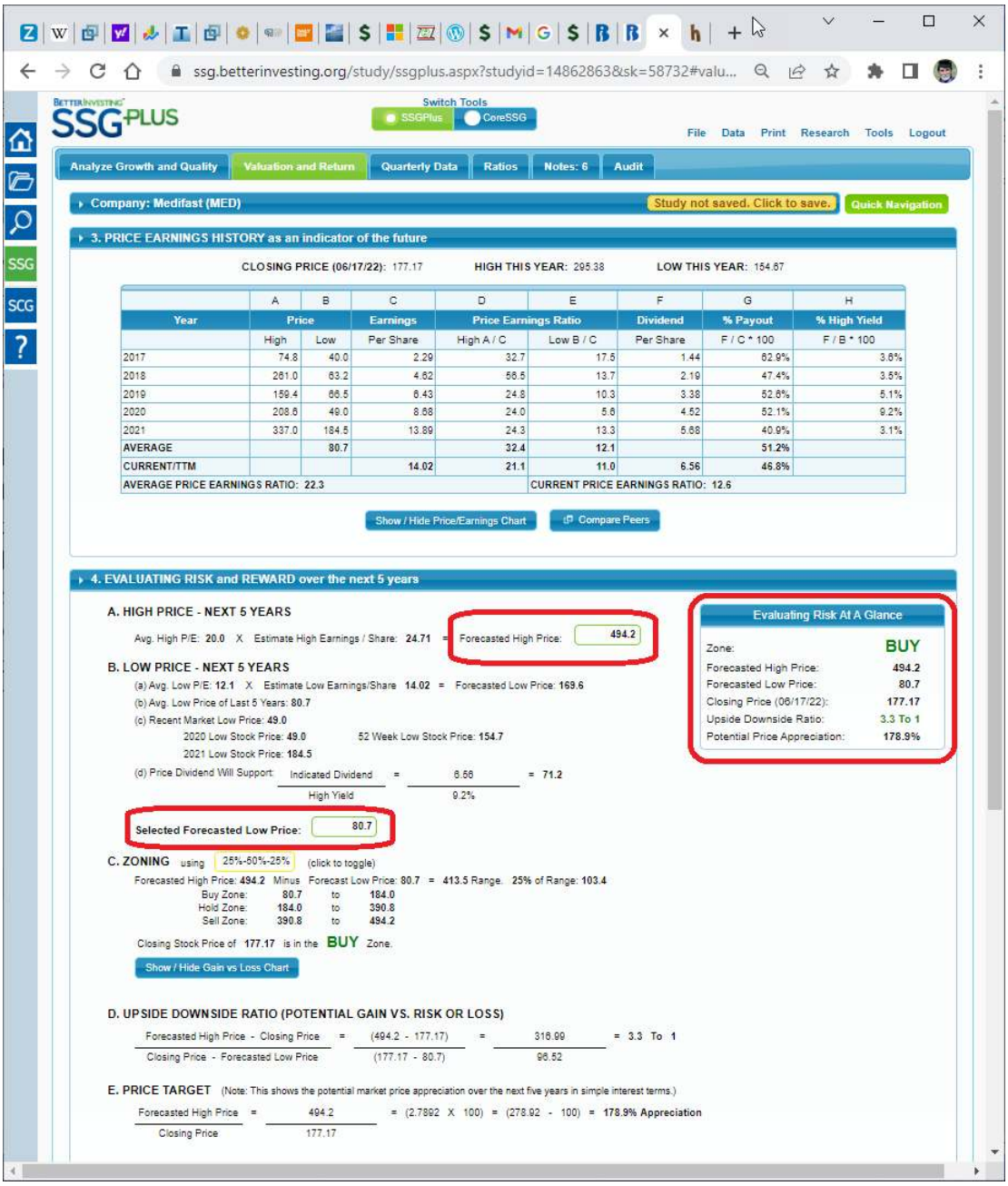


The SSG is now showing what the sales and earnings will be for the next five years if our prediction of 12% growth comes to fruition. It is less dramatic than the previous five years. And that's just fine with Your Humble Author. You may use 15% growth or more depending upon the courage of your conviction with respect to Medifast. That's why there is chocolate and vanilla … and some people like strawberry!

Now comes to best part! Using the tabs along the top of the graph, we now move from the [Analyze Growth and Quality] page to the next page, the [Valuation and Return] page.



The SSG displays “INVALID” on the right-hand side of the [Valuation and Return] page. The SSG is saying that it can’t make a recommendation yet about the stock because we have not predicted a high price and a low price over the next five years. The [Valuation and Return] page has several tools to help you predict the high price and low price over the next five years. As with any complex tool, time and practice and judgment will dictate which tools you prefer. For now, we will use some trickery to enter a high price of just above $494 and a low price of just above $80. Once we have entered the high price and the low price, the SSG gives us a Buy, Sell, or Hold recommendation. The resulting SSG [Valuation and Return] page follows.



The INVALID is gone and the [Evaluating Risk At A Glance] box gives us the SSG's recommendation. Based on our predictions, the SSG is saying that the stock is in the Buy Zone. We will skip the reasoning behind how the Buy, Hold, and Sell zones are calculated and how recommendations are made. We refer you to the vast educational resources available on the BetterInvesting.org website to learn more. As mentioned, our goal was to simply give you a sip from the Stock Selection Guide firehose and whet your appetite to join an investment club.

One common criticism of the SSG is that you can, "torture it to give you the recommendation you want." Depending upon your judgments and predictions, the SSG will tell you that the stock is a Buy, a Hold, or a Sell. No tool is perfect. Similar to the valuation tools we learned in class, once you have done all your calculations and predictions, we strongly urge you to throw them all away, ignore the SSG recommendation, and ask yourself that simple question, "Do I want to own this company for the long term?"

In any event, we hope this brief overview of BetterInvesting.org and their powerful Stock Selection Guide will motivate you to explore and possibly join their world. In my humble opinion, the absolute best benefit from BetterInvesting.org is simply

networking and fellowshipping with individuals who have the same love of researching and investing as you do.

Note: This Stock Selection Guide was done in the spring of 2022. As mentioned, it has not been updated for 2025. We leave it to the reader to see run their own SSG for 2025 and beyond. Also as mentioned, Medifast's earnings and stock prices both took nosedives. Instead of the coveted "up, straight, and parallel" pattern, in April 2025, the graph was decidedly "down, straight, and parallel." If your goal is to achieve a 15% rate of return, then this kind of unlucky behavior from your investments is to be expected. Do you want to eat well or do you want to sleep well?

Addendum B: Internal Rate of Return and Net Present Value

"*Net Present Value?! I barely understand what the baffling terms Internal Rate of Return and Present Value mean. Now you want to confuse me more? What is Net Present Value?!*" Relax. Again, the words are more bewildering than the actual concept and its usage. In this addendum, we are going to give you an idea of what you will see if you ever take an upper-division or graduate level finance class at the university. You know those types of classes? They are similar to taking a swimming class where they teach you all about swimming but you never jump in the water or a driver's education class where you learn all about cars but never get behind the wheel and venture out onto the roads. We will also see how the Internal Rate of Return is calculated by the computer and understand why we don't ever want to have to do it manually more than once in our lives.

Recall the fundamental assertion in finance that the value of an investment is based upon the Present Value of its future cash flows. In our class, we learned how to compute the Present Value of the future stream of cash flows from stocks and bonds. We started with the dividends and the predicted future stock prices from stocks. We then used interest payments and principal repayments from bonds. However, calculating the Present Value of future cash flows is not limited to just stocks and bonds. Do you remember the original formula for the Dividend Discount Models?

$$Value = \frac{CashFlow_1}{(1+Rate)} + \frac{CashFlow_2}{(1+Rate)^2} + \frac{CashFlow_3}{(1+Rate)^3} + etc.$$

We can use this formula to calculate the Present Value of *any* stream of cash flows from *any* source. The investment could be a real estate venture, or a factory, a bridge, or water project. It could even be a nuclear reactor. We can use the model for any vehicle that will produce income in the future. We saw that calculating the Present Value manually can be tedious and unwieldy. Luckily, we have electronic spreadsheets to do the job for us quickly. The spreadsheets also allow us to change our parameters and assumptions and instantly show us the new results. Very cool!

Let's revisit our Pretzels Unlimited example. We said that Pretzels Unlimited was selling for $22 per share and that we believed they would pay us $2.00 per share in dividends in 2025 and then increase their dividends to $2.20 in 2026, $2.30 in 2027, and $2.30 in 2028. We expected the price to be $27 per share at the end of 2028. Our required rate of return is 12%. We put the years in the first column and the future cash flows in the second column.

Year	Future Cash Flows	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
2025	$2.00	0.893	$1.786
2026	$2.20	0.797	$1.7534
2027	$2.30	0.712	$1.6376
2028	$2.30 + $27 = $29.30	0.636	$18.6348
		Total:	≅ $23.81

We manually found the Present Value multipliers for years 1 through 4 at 12% in the present value table. We then multiplied the future cash flows by the Present Value multipliers to compute the Present Values, also called the Discounted Cash Flows, in the last column. Last, we summed the Discounted Cash Flows in the last column to compute the Present Value for the stock. The model says that we believe that Pretzels Unlimited is worth $23.81 if we require a 12% rate of return. With a market price of only $22, the model says that this stock is possibly an attractive investment for us. (Hopefully, you were able to follow along easily. If not, contact me now! You can't leave our class without understanding and being able to use this model. It is bad for my self-esteem! Plus, what will people say when you tell them you didn't learn how to discount a future stream of income in our Introduction to Investments class? Perish the thought!)

The Present Value tells us what we believe the future stream of income is worth today given our required rate of return. The current market price is what we have to pay for that future stream of income. If the Present Value is roughly equal to or greater than the

current market price, then we predict that it is a potentially good investment and something we should investigate further. If the Present Value is below the market price, then we should either decide to look for a better investment elsewhere or maybe lower our expected return from this particular investment. Recall that the required rate of return is very important because as we change the required rate of return, the Present Value changes, sometimes greatly.

Okay, so what is Net Present Value? Net Present Value, often abbreviated NPV, takes into account all cash flows, both positive and negative. Cash inflows are what we call the money that we receive from an investment. Cash outflows are payments that we have to make to purchase or maintain an investment. If the Net Present Value is positive, then it may be a potentially good investment for us. Contrariwise, if the Net Present Value is negative, then it may not be a potentially good investment for our required rate of return. Net Present Value is much more popular when you get to upper division and graduate level finance classes at the university.

To calculate the Net Present Value for Pretzels Unlimited, we need to add a row for the initial $22 purchase of the stock. The present value multiplier is 1.000 because we are buying the stock now, in the present.

Year	All Cash Flows, Negative and Positive	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
	($22.00)	1.000	($22.00)
2025	$2.00	0.893	$1.786
2026	$2.20	0.797	$1.7534
2027	$2.30	0.712	$1.6376
2028	$2.30 + $27 = $29.30	0.636	$18.6348
		Total:	≅ $1.81

The Net Present Value is positive because the Present Value of the future cash flows is greater than the market price, our initial cash outflow. When a project has a positive Net Present Value, the model is telling us that we have a potentially good investment for our required rate of return. If the Net Present Value is negative, then the model is suggesting that we might not get the rate of return that we desire. We might decide to lower our required rate of return or discontinue our research into this particular investment. Either way, as we have emphasized repeatedly, this calculation is not the end of our research. It is only the beginning.

Are you sick and tired of calculating the Present Value using the Present Value tables? Good! That means you know how to calculate Present Value and understand what it means to discount a stream of future cash flows and I have done my job. (Hey! It is easier than using the formula with the exponents, right?) But you also know how to use an even easier way! Spreadsheets calculate Present Value for us without breaking a sweat

This brings us back to Internal Rate of Return, the very popular measure that business people and investors use when measuring the rate of return from a stream of future income. As mentioned, you will learn how to compute the Internal Rate of Return manually if you go on to an upper division or graduate level finance class at the university. Specifically, the Internal Rate of Return is the rate of return where the Net Present Value equals zero. *"Huh? What?"* Let's see if using a spreadsheet can help us understand this concept more easily.

Let's translate the table above into an electronic spreadsheet:

Net Present Value	12.00%	Required Rate of Return

Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.893	1.79	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.797	1.75	$2.20 dividend paid during 2026
2027	2.30	0.712	1.64	$2.30 dividend paid during 2027
2028	29.30	0.636	18.62	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ 1.80	**Net Present Value = sum of (all discounted cash flows)**

In this spreadsheet, we enter the Required Rate of Return at the top and then the expected future cash flows, both positive and negative in the second column. The spreadsheet does all the rest of the calculations and gives us a Net Present Value of $1.80. (The result is a penny off from our previous result because the spreadsheet is using 20 digits of accuracy for the present value multipliers where we only used 3 digits of accuracy from the present value table.)

Again, because the Net Present Value is positive, the model is saying that our investment is a potentially good one for us if we require a rate of return of 12%. But what if we required a rate of return of 16%? Let's see what the new Net Present Value would be.

Net Present Value	16.00%	Required Rate of Return

Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.862	1.72	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.743	1.63	$2.20 dividend paid during 2026
2027	2.30	0.641	1.47	$2.30 dividend paid during 2027
2028	29.30	0.552	16.18	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ (0.99)	**Net Present Value = sum of (all discounted cash flows)**

With a required rate of return of 16%, the Net Present Value has swung from a positive $1.80 to a negative 99¢. The model is telling us, given the expected future cash flows, we won't receive a rate of return of 16%. But do you also see what else happened? The Net Present Value is now closer to zero. Recall that we stated that the Internal Rate of Return is the rate of return where the Net Present Value equals zero. By choosing different required rates of return, we can converge upon the required rate of return where the Net Present Value is equal to zero. Let's try 14%.

Net Present Value	14.00%	Required Rate of Return

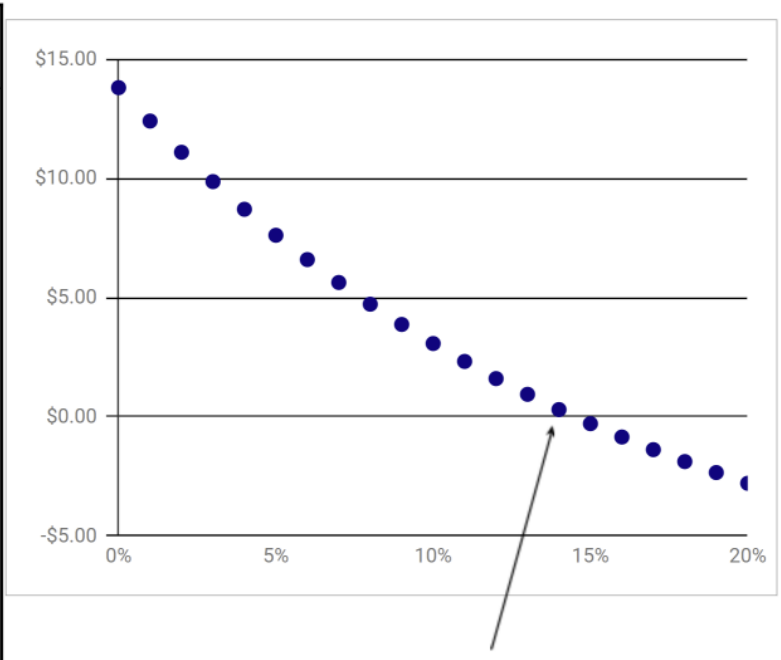
Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.877	1.75	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.769	1.69	$2.20 dividend paid during 2026
2027	2.30	0.675	1.55	$2.30 dividend paid during 2027
2028	29.30	0.592	17.35	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ 0.35	**Net Present Value = sum of (all discounted cash flows)**

Aha! We have swung back to a positive Net Present Value and this time our result is even closer to zero. We are now only 35¢ away from zero. We are converging upon the required rate of return where the Net Present Value will be equal to zero. When we finally hit that point, we will have found the Internal Rate of Return.

And now you understand why we don't ever want to have to calculate the Internal Rate of Return manually. We have to iteratively compute Net Present Values until we reach the required rate of return where the Net Present Value is zero. That is why we have computers. We let the computer do the grunt work. All we do is enter the Required Rate of Return and the future cash flows.

Another way of computing Internal Rate of Return is to create a graph from a table of Net Present Values.

Rate	Net Present Values
0%	$13.80
1%	12.40
2%	11.09
3%	9.86
4%	8.70
5%	7.61
6%	6.59
7%	5.63
8%	4.72
9%	3.87
10%	3.07
11%	2.32
12%	1.60
13%	0.94
14%	0.30
15%	(0.29)
16%	(0.85)
17%	(1.38)
18%	(1.88)
19%	(2.34)
20%	$(2.79)



(The Internal Rate of Return is the point where Net Present Value = 0.)

On the left, we have constructed a table of the Net Present Values for required rates of return from 0% to 20%. We then graphed the table on the right. Do you see where the Net Present Value is equal to zero? It appears to be at approximately 14.5%. Let's use the Internal Rate of Return spreadsheet function, =IRR, to calculate the Internal Rate of Return precisely.

Year	Cash Flows	Internal Rate of Return Spreadsheet Function
	$ (22.00)	Purchase stock for $22 at beginning of year
2025	2.00	$2.00 dividend paid during 2025
2026	2.20	$2.20 dividend paid during 2026
2027	2.30	$2.30 dividend paid during 2027
2028	$ 29.30	$2.30 dividend paid during 2028 & stock sold at end of 2028 for $27
	14.51%	Internal Rate of Return =IRR(cash_flows,guess) or =IRR(B2:B6,0.12)

The spreadsheet took our cash flows, both positive and negative, and our guess of a 12% Internal Rate of Return, and then did all the busy work to produce an Internal Rate of Return of 14.51%. Aren't you glad we have spreadsheets? I sure am!

Let's turn our attention to bonds. The following spreadsheet is showing the Internal Rate of Return for a 10-year, 8% bond selling for $1,200.

10-Year Bond – Net Present Value & Internal Rate of Return

Year	Cash Outflow / Inflow		
	$ (1,200.00)	Fixed Rate:	8.00%
		Price:	$1,200.00
2025	80.00		
2026	80.00		
2027	80.00	Interest Each Year	
2028	80.00		
2029	80.00		
2030	80.00		
2031	80.00		
2032	80.00		
2033	80.00		
2034	$ 1,080.00	Bond matures – Receive interest and $1,000 principal repayment	
	5.36%	Internal Rate of Return =IRR(cash_flows, guess) – More precise YTM	
	5.45%	Our Yield-to-Maturity Approximation Formula	
	$0.00	Net Present Value =NPV(IRR_YTM,cash_flows) – Always zero! (Why?)	

The Internal Rate of Return is 5.36%. The approximation formula that we learned in chapter 9 returns 5.45%. Pretty close, huh? But the curious feature about this spreadsheet is that no matter how we play with the parameters of the bond, the Net Present Value will always be zero. Why is that? Recall that the Internal Rate of Return is the rate of return where the Net Present Value is zero. If we use the Internal Rate of Return to compute the Net Present Value as we did here, by definition, we are going to receive zero. This is yet another confirmation that bonds are indeed boring.

Now, let's take a look at a real estate investment.

Internal Rate of Return Example - Duplex

Year	Cash Outflows / Inflows	
	(800,000)	Purchase duplex for $800,000 cash (?)
2025	48,000	
2026	50,400	Stream of rental income (growing at 5% per year)
2027	52,920	
2026	55,566	
2028	58,344	
⋮	⋮	
2052	179,206	
2053	188,166	
2054	2,197,575	Rent for 30th year and sell at end of 30 years (?)
	10.34%	Internal Rate of Return
	$33,491.11	Net Present Value @ 10%

The price of real estate in the San Diego area is insane. As of May 2025, one can find a small duplex in the suburban city of Chula Vista, just south of San Diego, for approximately $800,000. Let's assume that the two two-bedroom units will produce $2,000 each after expenses and that rents will increase at an annual rate of 5%. Although difficult to believe, this has been the reality, especially recently. Let's also assume that we are paying cash for the duplex. For our expected price of the property in 30 years, let's throw a number into the air and say that we believe it will be worth $2,000,000. If we required a 10% rate of return, the spreadsheet tells us that the Net Present Value will be over $33,000 and the investment will produce an Internal Rate of Return of $10.34%.

Do you see any problems with our assumptions? First, is it reasonable to assume that rents will increase 5% yearly for 30 years? Is it believable that a duplex house will be worth $2,000,000 in 30 years? These are dubious predictions at best. However, the most glaring problem with our assumptions is that we purchased the duplex with cash. Most real estate investors use leverage. (There's

that word again!) They borrow most of the purchase price of the real estate investment. Currently, lenders typically want at least 25% down for investment properties. That means our would-be investor will only need to put $200,000 down. Add about $15,000 for miscellaneous closing costs and we need $215,000 to make the purchase. We will then have $600,000 mortgage which at about 6% will cost us around $3,600 per month. Let's update the spreadsheet.

Internal Rate of Return Example - Duplex

Year	Cash Outflows / Inflows	
	(215,000)	Purchase duplex with $215,000, $600,000 mortgage
2025	4,800	
2026	5,040	Stream of rental income (growing at 5% per year)
2027	5,292	
2026	5,557	
2028	5,834	
⋮	⋮	
2052	17,921	
2053	18,817	
2054	2,019,757	Rent for 30th year and sell at end of 30 years (?)
	9.34%	Internal Rate of Return
	($25,600.53)	Net Present Value @ 10%

Ooops! Our Internal Rate of Return fell to 9.34% and our Net Present Value is now negative. What happened? We are sharing our investment returns with the bank! The 30-year mortgage reduced our net income substantially from $48,000 to $4,800 in the first year alone. Also, if we are to be realistic, we must come to the conclusion that real estate prices in the San Diego area are simply out of control and we are most likely in yet another real estate bubble. We have been here before and we will be here again. As interest rates rise and a possible recession comes, we can expect prices to fall and in some areas, they will fall hard. Of course, as Sir John Maynard Keynes is reported to have said, "The market can stay irrational longer than you can stay solvent." We do know that bubbles eventually pop and that is when the opportunities are plenty. Stay tuned!

Note: Recently, many private equity firms such as The Blackstone Group, with hundreds of billions of dollars backing them have been buying local residential real estate properties nationwide. They pay for the properties with cash and have been crowding out the local buyers. Many local advocates have been sounding the alarm about this nationwide trend and are arguing that these private equity firms are putting profits over people. Where does a capitalist society draw the line regarding the welfare of a community and the quest for profits? Again, stay tuned!

Let's now take a look at investments with a whole lot more zeros at the end of the numbers. Say a local government wants to build a bridge that would increase economic activity dramatically. The city believes that commuters and businesses alike would be more than willing to pay to use the bridge. Let's say that the bridge will cost $250,000,000 to build. It is initially projected to bring in revenues of $25,000,000 per year and that revenue will increase by 1% each year. However, the projected lifespan of the bridge is only 40 years. It will need be to be dismantled. That is projected to cost $100,000,000 in 40 years. We need to include that cash outflow at the very end of the project's life. Here is the spreadsheet:

Toll Bridge -- Initial Outflow, Cash Inflows, Final Dismantling Cost (Outflow)

Year	Cash Outflow / Inflow	Rate: 10%
	$ (250,000,000)	Initial outflow to build bridge
2025	$ 25,000,000	
2026	$ 25,500,000	
2027	$ 26,010,000	Cash inflows from tolls increasing 1% per year
2028	$ 26,530,200	
2029	$ 27,060,804	
2030	$ 27,602,020	
⋮	⋮	
2061	$ 52,017,127	
2062	$ 53,057,470	
2063	$ 54,118,619	
2064	$ (100,000,000)	Bridge must be decommissioned and dismantled
	11.69%	Internal Rate of Return =IRR(cash_flows, guess)
	$ 41,132,360	Net Present Value =NPV(required_rate_of_return,cash_flows)

With a required rate of return of 10%, the Net Present Value is positive at over $41 million and the Internal Rate of Return is over 11%. Assuming the bridge is as popular as expected, the bridge will not only be boon to the city's economy, it will also be economically prosperous for the bridge authority or private company that owns the bridge. This same analysis can be done for water project, factories, airports, nuclear reactors, or any large-scale endeavor that needs significant funding to be built.

Hmmm. Something might have been nagging at you as you worked through this example. Where did the initial $250,000,000 come from to build the bridge? Give yourself a gold star if that is what was nagging at you. Did they hold bake sales at the local schools and churches? No, they sold bonds. We need to include the interest and principal payments for the bonds in our analysis. Also, the bridge authority is going to have to build up funds for the dismantling of the bridge after the 40 years. Do these types of investments pique your interest? If so, there is a future for you in corporate and municipal finance, Dear Students!

Last, we must address an issue with the Internal Rate of Return that is very important. Sometimes, the results from our calculations simply don't make sense. Sometimes, there is no result. Other times, there is more than one result. When this happens, there are a couple of ways to tackle the problem. At times, we can use our common sense to determine which is the correct result. Other times, we can create a table and graph as we did with our first example. And sometimes, we are just left with no result. Oh, well. This is why the Internal Rate of Return spreadsheet function sometimes comes back with an error message saying it could not find an Internal Rate of Return.

Here is a great example of a common-sense result and an absurd result from the Internal Rate of Return calculations:

But IRR can sometimes give you bizarre results …

	Investment #1	Investment #2
2025	$ (10,000)	$ 10,000
2026	$ 15,000	$ (15,000)
	50%	50%

Which investment would you rather have?

With Investment #1, you pay $10,000 this year and receive $15,000 next year. Pretty darned good, eh? Investment #2 pays you $10,000 this year but you are required to pay back $15,000 next year. Ah, no thanks, you say. However, the calculations for Internal Rate of Return for the two investments both produce an Internal Rate of Return of 50%. The moral of the story is to always check our Internal Rate of Return calculations for common sense results. If in doubt, create a table and graph.

So, what's the bottom line on Present Value, Net Present Value, and Internal Rate of Return? How does having a spreadsheet change the way we do our calculations? The quick answer is, "Not much!" But spreadsheets make calculating Present Value or Net Present Value, whichever you prefer, and Internal Rate of Return much, much easier and faster. And it gives you an extremely precise result when calculating your rate of return from a stream of future income, which is exactly what we do not want you to rely on!

"*Uh, why not?*" you ask. Because unless you are calculating the return from a very predictable source (example: bonds), precision is your enemy! Never forget that you are predicting the future and as the old saying goes, "Prediction is difficult, especially about the future!" (You really were not expecting us to end without warning you yet again to never put too much faith in our predictions, right?)

Bibliography: Books to Read

Bibliography: Books to Read (ah, eventually...)

There are dozens and dozens of books about investing. However, only a few stand the test of time. If you are going to read any book or books before beginning your investing journey, the first three books are the best choices, in my humble opinion. The rest are books that either are dedicated to investing or financial planning and literacy, except for the last book. The last book is something very special and unusual. You can get all these books at your local library. You can even download them to your mobile device. Do it. Read! (Psst. It will give you an unfair advantage over your fellow students.)

One Up On Wall Street, Peter Lynch
We discuss Mr. Peter Lynch in the text and in the class. He was the portfolio manager of the Fidelity Magellan Fund from 1977 to 1990. During those 13 years, he posted average annual returns of 29% – unbelievable! When his first book was released the critics were ready to pounce on it as a self-idolizing piece of fluff. Nothing could be further from the truth! In this easy-to-read and thoroughly enjoyable book, Mr. Lynch makes a strong case for owning stocks and "buying what you know." He has a delicious sense of self-deprecating humor that puts the reader at ease. Everyone should read this book!

A Random Walk Down Wall Street, Burton Malkiel
Professor Burton Malkiel was one of the pioneers in the academic research that produced the Efficient Market and Random Walk theories of investing. He eventually served on the board of Vanguard Funds and was involved in the creation of the famous Vanguard 500 index fund in the mid-1970's. Like Mr. Lynch, Professor Malkiel has a wonderful sense of humor and takes no prisoners! He skewers the Fundamental Analysis theory of investing, the Technical Analysis theory of investing, and even his own Efficient Market and Random Walk theories. Everyone is fair game! If you don't want to read *One Up On Wall Street* as your first book, this is the next best choice.

The Intelligent Investor, Benjamin Graham with commentary by Jason Zweig
Eventually, every prudent, long-term investor must read *The Intelligent Investor* by Mr. Benjamin Graham. However, don't make this your first book to read. I am warning you! Mr. Graham's prose is very difficult to penetrate at times. That is why starting with the most recent editions, after every chapter, the very capable finance and investment writer, Mr. Jason Zweig, offers a commentary on Mr. Graham's concepts and recommendations. We will quote from this book often. Mr. Graham was Mr. Warren Buffett's teacher and mentor. We will see that Mr. Buffett has taken the teachings to heart and used them to become one of the best investors the world has ever seen.

Security Analysis, Benjamin Graham and David Dodd
Mr. Graham and Mr. Dodd wrote *Security Analysis* before Mr. Graham wrote *The Intelligent Investor*. It is often credited with creating the concept of "value investing." Indeed, Mr. Graham is often called the "Father of Value Investing." Once you have digested *The Intelligent Investor*, you can dig into this scholarly tome.

Wall Street People, Charles D. Ellis with James R. Vertin
Who doesn't like a good story?! Although this book is a bit outdated, it contains a treasure trove of stories about the men and women – mostly men but we are changing this situation, right, Ladies? – that populate the investment world. Some are heroes, some are villains, some are just regular folks trying to do the best they can in a high stress world, all are interesting. In addition, please note that anything that "Charley" writes is worth reading. Mr. Ellis is also noted for his coining of the term "The Loser's Game" for short-term speculation and trading of securities.

Beating the Street, Peter Lynch
Mr. Lynch's second book is not as groundbreaking as his first. However, it still is chock full of good stories and tips and techniques from the master and worthy of your attention.

Learn to Earn: A Beginner's Guide to Investing and Business, Peter Lynch
We may have the story wrong but my understanding is that the folks at BetterInvesting.org asked Mr. Lynch to create a "how-to manual" using his concepts and techniques that he introduced in his first two books. BetterInvesting.org is the organization that sponsors investment clubs.

Any Book Written By, Michael Lewis

Michael Lewis is an awesome writer. Anything he has written is worth your time and attention. I am especially fond of *Flash Boys* as it shows you just how outgunned we retail investors are against the vast resources of the big boys and girls on Wall Street. His most famous books are *The Big Short* and *Moneyball*, both of which have been turned into movies. Again, read anything this man has written. John Williams of the New York Times Book Review wrote, "I would read an 800-page history of the stapler if he wrote it."

Thinking Fast and Slow, by Daniel Kahneman

For several decades, economists and academicians believed that investors and markets were rational and the investors always behaved in their best financial interests. It took a pair of psychologists to show them just how wrong they were. Daniel Kahneman and his long-time associate, Amos Tversky, turned the field of economics on its head by showing that markets and investors were anything but rational. Dr. Kahneman won the Nobel Memorial Prize in Economics Science in 2002. (Sadly, Dr. Tversky died six years before and the Nobel Prize is not awarded posthumously.)

How to Make Money in Wall Street, Louis Rukeyser

Before CNBC and TheStreet.com and Marketwatch.com, and Yahoo Finance, the only widely broadcast show about investing was *Wall Street Week with Louis Rukeyser*. For over 30 years, it aired on that Socialist, Communist, Pinko, *LIBERAL* network known as PBS. This book may be hard to find but it is tremendous fun to read. Not only does Mr. Rukeyser discuss important investing concepts with great clarity, you also get a history lesson of what it was like to invest before the Internet.

Extraordinary Popular Delusions and the Madness of Crowds, Charles McKay

This classic opus was published in the 1840's. However, *Extraordinary Popular Delusions and the Madness of Crowds* is still as shocking now as it was almost 200 years ago. Mr. McKay discusses some of the financial improprieties of the previous centuries along with some of the other insane misadventures of humanity such as witchcraft and the Crusades. As one student put it, "It is easier to fool a million people than it is to fool one." QAnon, anyone?

The Wealthy Barber, David Chilton

The next two books are more about personal financial planning and literacy although they have a bit about investing. *The Wealthy Barber* is still the easiest to read and most enjoyable personal financial planning book Your Humble Author has ever come across. The numbers are all out of date but the concepts are timeless. Most importantly, Mr. Chilton's jokes are even worse than mine. Who could ask for more?

The Millionaire Next Door, Thomas Stanley & William Danko

When this book was first published in the mid-1990's, it shattered many of the myths about millionaires. It also spawned a whole host of copy-cat books, none of which have the clarity and weight of *The Millionaire Next Door*. Learn about how millionaires really build their wealth. Those of you starting young and following the concepts, techniques, and skills in our class will be joining their ranks eventually … unless the world ends. (If that happens, oh, well! Meet you at the beach. I'll bring the vodka. You bring the marshmallows.)

The Hero with a Thousand Faces, Joseph Campbell

If there is one book you should read in your lifetime, it is this one. Mr. Campbell has created a "how-to" manual for humans. In *The Hero with a Thousand Faces*, we learn that we are all heroes on an adventure. That adventure is what we call life. We see how the world's major religions are calling to us from thousands of years ago. They hope we learn how not to waste this precious gift that we have been given. And if that does not pique your interest, it is also the book that George Lucas used to create *Star Wars*. Mr. Campbell was on the sets of the first three *Star Wars* movies as a consultant. Oh, by the way, although they won't acknowledge it publicly, Disney has stolen from Mr. Campbell many times, the most egregious being *The Lion King*.

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Glossary

10-K and 10-Q reports | Annual and quarterly reports required to be filed by all publicly traded corporations. Available online via SEC EDGAR system.

12b-1 fees | Mutual fund fees that cover the cost of marketing, distribution, and advertising.

401(k) | Very popular employer-sponsored retirement savings accounts. Contributions come directly from employees' paychecks. Also known as defined contribution
retirement plans.

403(b) | The version of a 401(k) for non-profit organizations.

accounts receivables turnover | A measure of how efficiently a company is managing their accounts receivable. Accounts receivables are monies that are owed to the company.

accredited investor | Accredited investors meet certain financial requirements which allows them to invest in restricted investments not available to the general public. The accredited investor is supposedly better able to discern riskier investments and better able to withstand significant losses.

acid test ratio | A measure of the ability of a company to meet their short-term financial obligations even if their inventory becomes obsolete or otherwise unable to sell.

active money management | The investment strategy that entails a professional money manager actively identifying, choosing, and monitoring individual investments on behalf of their clients.

aggressive growth | The investment strategy designed to produce very high returns in a short period of time. This strategy also typically exhibits very high risk as measured by extreme volatility.

all or none | A security transaction order to buy or sell a stock that must be executed in its entirety, or not executed at all.

alpha | A measurement of the outperformance or underperformance of an investment relative to an appropriate benchmark index.

American Depository Receipt (ADR) | Dollar denominated shares of a foreign company available for purchase in the United States.

AMEX | One of the minor United States stock exchanges, offering shares of smaller, lesser-known corporations. The AMEX is now owned by the New York Stock Exchange.

annual rate of return | The rate of growth of an investment, measured on an annual basis. It is used to compare investments within an asset class and investments among different asset classes.

annuity | (1) A sum of money payable over a certain period of time. (2) A life insurance product with a deservedly horrible reputation. Stay away from these! Instead, take Introduction to Investments and learn about many other alternatives, almost all of which will give you a better return over the long-term. Of course, if you are a life insurance agent and have no ethics, the commissions from selling annuities are very enticing.

arrears | With regard to dividends from cumulative preferred stock, these are dividend payments that must be paid first before any new dividends can be paid to stockholders.

art | (1) Something that you can purchase to bring you beauty, joy, or wonder. (2) A dubious investment with less potential than a lottery ticket to make you wealthy.

ask price | The retail price of a security. This is the price that a retail investor will pay for the security when they buy. See bid price.

asset play stock | A company that is sitting on an asset that could be sold or spun off. Examples include utilities and railroad companies that own large tracts of real estate

Assets Under Management (AUM) | The value of the total investments that a brokerage or other securities firm manages on behalf of their clients. Often used to soak their clients, ooops!, we mean charge for investment services.

automatic investment plan | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as systematic investment plan and dollar cost averaging

automatic withdrawal plan | A system of withdrawing monies from an investment program monthly, quarterly, semiannually, or yearly. Also known as systematic withdrawal plan.

balance sheet | A financial summary of a firm's assets, liabilities, and shareholders' equity at a given point in time. Publicly traded corporations must publish their balance sheet every quarter.

balanced fund | A mutual funds whose objective is to generate a balanced return of both current income and long-term capital gains. A balanced fund will invest in both stocks and bonds and typically have a balanced allocation of both. The allocation can change as the investment environment changes.

banker's acceptance note | A short-term, low-risk investment vehicle arising from bank guarantees of business transactions. Typically sold in $100,000 denominations.

basis point | A silly way of denoting one-hundredth of a percent, 0.01%. One hundred basis points equal one percent. Guaranteed to make you sound as if you know what you are talking about with regard to investments. You can even tell them you took a college class.

bear | In the world of investments, a bear is someone who believes a particular market will fall.

bear market | A general decline of over 20% in a market.

bearer bond | Obsolete bonds that had no registered owner. Whoever had possession of the bond received the interest and principal payments.

beta | An imperfect assessment of the risk of an investment as measured by its volatility relative to an appropriate benchmark index.

bid price | The wholesale price of a security. This is the price that a retail investor will receive for the security when they sell. See ask price.

bid-ask spread | The difference between the bid price (wholesale price) and the ask price (retail price). The dealers and market makers earn money from the bid-ask spread.

blue chip stock | Financially strong, high-quality businesses with long and stable records of earnings and dividends.

Board of Directors | The governing body of a corporation or mutual fund, elected by the shareholders, to oversee the activities of the organization.

bond | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as fixed-income investments or debt financing.

bond rating | A letter grade that designates investment quality and are assigned to a bond issue by designated rating agencies.

book value | The amount of shareholders' equity in a firm. Equals the amount of the firm's assets minus the firm's liabilities and preferred stock.

broker | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known as registered representative or registered investment advisor

bubble | An occasional market phenomenon consisting of rapid and irrational price increases, typically followed by a subsequent crash. Also known as mania.

bull | In the world of investments, a bull is someone who believes a particular market will rise.

bull market | A market that is experiencing rising prices.

business cycle | The cycle of growth and decline of the production and consumption of goods and services.

business risk | The risk of a particular business failing.

buy and hold | The investment strategy that emphasizes the use of fundamental analysis to identify high-quality companies with good growth prospects and potential for dividends at reasonable prices and holding them for the long-term. Sometimes referred to as value investing.

buying on margin | The practice of borrowing monies from your brokerage firm to purchase securities, allowing an investor the possibility to magnify their returns but also the possibility of magnifying their losses. (Psst. Don't do it. It's dangerous. Well, maybe after many years of prudent investing and you need some money for the short-term, you can borrow from yourself for the short-term instead of having to sell your investments and then buying the investments back.)

call option contract | A security that gives the holder the right to buy a certain amount of an underlying financial asset at a specified price for a specified period of time. (Warning! Caution! Stay far away from these things. It is gambling, pure and simple.) Also known as a call option or call.

call premium | The provision that specifies whether and under what circumstances a bond issuer can retire, aka prepay, the bond prior to its maturity date.

capex | (1) Abbreviation for capital expenditure. (2) Sure-fire way to impress your friends and family members so everyone will know you are informed investor. A gig as an investment pundit might even be in your future if you use *capex* copiously.

capital | Various forms of wealth, monies, and other resources including human resources used in the production of goods and services.

capital appreciation | An investment strategy that concentrates on raising the value of an investment, typically but not limited to paying close attention to the growth of earnings.

Capital Asset Pricing Model (CAPM) | (1) A model that describes the relationship of risk and expected return. (2) A not very useful system that, when mentioned by someone during a cocktail party, will let others know that the individual in question took an investment class other than BUS-123, Introduction to Investments.

capital gain | The profit from the sale of an investment when the sales proceeds are greater than the purchase price.

capital loss | The loss from the sale of an investment when the purchase price was greater than the sales proceeds.

capitalism | An economic system based on the private ownership of the means of production and their operation for profit.

cash flow statement | A financial summary of a firm's cash flow and other events that caused changes in the company's cash position, typically quarterly and annually. Also known as statement of cash flows

Certificate of Deposit (CD) | A short-term savings instruments in which funds must remain on deposit for a specified period. There is typically a penalty for early withdrawal of the funds.

Chicago Board Options Exchange (CBOE) | The largest U.S. options exchange. CBOE offers options on over 2,200 companies, 22 stock indices, and 140 exchange-traded funds. (Psst. Stay away from options! You have been warned!)

closed-end mutual fund | A type of investment company that operates with a fixed number of shares outstanding. Shares are purchased and sold on the securities exchanges.

Collateralized Mortgage Obligation (CMO) | A type of bond that contains a pool of mortgages bundled together and sold as an investment. The mortgage interest and principal payments are passed through to the investors.

collectibles | A item of value bought, collected, and sold by individuals and dealers.

commercial paper | Short-term, unsecured promissory notes (IOUs) issued by corporations with very high credit standings, typically issued in $100,000 denominations and held by institutional investors such as mutual funds, life insurance companies, and pension funds.

commissions | An amount of money paid to an agent in a commercial transaction, typically a declared dollar amount of a set percentage of the value involved or a set dollar amount per transaction.

compounding | The increasing value of an investment due to the investment rewards of cash flows or capital gains or both. It is the opposite of discounting.

contrarian | (1) A strategy of investing in vehicles that ore out of favor with the market for some reason. (2) An investor who adheres to a contrarian strategy.

conversion privilege | With regard to convertible securities, the conversion privilege allows a hybrid security investor to convert their hybrid security into common stock shares of the corresponding company. Examples included convertible bonds and convertible preferred stock. The term is also used in the life insurance industry with regard to life insurance policies.

conversion value | Indication of what a convertible issue would trade for if it were priced to sell on the basis of its corresponding common stock market price.

convertible bond | A bond that can be exchanged for a declared number of shares of common stock of the corresponding company.

convertible preferred stock | Preferred stock shares that can be exchanged for a declared number of shares of common stock of the corresponding company.

convertible security | Any security that can be exchanged for a set number of common stock shares of the corresponding company. Examples include convertible bonds and convertible preferred stock.

corporate paper | Short-term, low-risk, unsecured promissory notes (IOUs) issued by corporations with very high credit standings. Typically sold in $100,000 denominations.

corporation | A legal structure that allows a company or group of people to act as a single entity.

correlation | The tendency of the returns of two assets to move together.

coupon rate | The feature of a bond that defines the amount of annual interest income, expressed as an interest rate. The term comes from the time when bonds had coupons attached to them. The investor sent in the coupon when the semiannual interest was due and the bond issuer would then send the investor a check. Also known as coupon yield, nominal rate, or nominal yield.

covered options | An option transaction in which the seller of the option has a position opposite their options position. They are thus protected against large losses. (Don't do it! Don't gamble with options!)

crash | A sudden and dramatic decline in prices in a particular market, often driving by panic selling and fears of the end of the world. Chances are an investor will experience at least one and probably more crashes in their lifetime. (Keep a long-term perspective and don't panic!) Also known as a market crash.

credit agency | A for-profit company that researches, compiles, and publishes credit ratings about publicly traded corporations.

credit rating | A rating assigned by a credit agency to a company designed to measure the likelihood of the company defaulting on its debt obligations.

cryptocurrency | (1) A digital currency in which transactions are maintained by a decentralized algorithm spread across multiple computer systems. (2) A great way for crooks to try to evade the law. (3) A modern-day Ponzi scheme based upon pure speculation and designed to separate suckers from their money. Also known as klepocurrency.

cumulative preferred stock | Preferred stock whose dividends, if skipped in any given year, are said to be "in arrears" and must be paid before any other dividends can be paid.

currency futures contracts | A security that is a contract between individuals that allows the exchange of one currency for another currency at a given price in the future. (Stay far, far away from futures in any form!)

currency risk | The risk associated with the change in value of a foreign asset held by an investor because of the fluctuation of the exchange rate between the foreign currency of the investment and the investor's domestic currency. Also known as exchange rate risk.

current ratio | The interest rate and amount of current income a bond provides relative to its market price. Also known as current rate.

current yield | The interest rate and amount of current income a bond provides relative to its market price. Also known as current rate.

cyclical stock | Companies whose earnings and overall market performance are closely linked to the general state of the economy. Examples include automobile and basic materials companies.

date of record | The date on which an investor must be a registered shareholder of a firm to be entitled to receive a dividend.

dealers | Traders who "make markets" by offering to buy and sell certain securities at stated prices from their own inventories. Also known as market makers.

death cross | Yet another dubious technical indicator that states when a shorter-term moving average crosses below a longer-term moving average, it's time to sell the security. (Psst. It's usually too late.) See golden cross.

debenture | Unsecured corporate bond backed only by the full faith and credit of the issuing corporation.

debt financing | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as bonds or fixed income securities.

debt-to-equity ratio | A measure of a company's financial leverage calculated by dividing long-term debt by shareholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

default risk | The risk that an entity will be unable to make their required interest and principal payments.

defensive stock | Companies that tend to hold their own, and even do well, when the economy starts to falter. Examples include consumer staples and food companies.

depression | A sustained period of depressed economic activity, resulting in severe deprivation. Unlike a recession which is defined as six months of economic decline, there is no generally accepted definition of a depression.

derivative | A security that derives its value from an underlying security or asset normally highly speculative. Example included options contracts and futures contracts. (Stay far away from derivatives! I mean it. They are weapons of mass financial destruction.)

desired rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, expected rate of return, and discount rate.

developing market | The economy of a nation that is working toward becoming more industrialized and advanced. Also known as an emerging market.

dilution | Stock dilution occurs when a company issues additional shares of stock. This reduces the proportional ownership to existing shareholders.

Director | A member of the Board of Directors, elected by the shareholders, to oversee the activities of the corporation or other type of organization such as a non-profit entity.

discount bond | A discount bond is a bond that is selling for less than its par value.

discount method | Method of earning interest on a security by purchasing it at a price below its redemption value. The difference is the interest earned and the interest "accrues" on the investment as the security gets closer to its maturity date. Examples include Treasury bills and commercial paper.

discount rate | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, expected rate of return, and desired rate of return.

discounting | The very unfortunate word we use to describe the process of computing the present value of a future stream of cash flows from an investment. It is the opposite of compounding.

distribution date | The date on which the company pays their dividend to their shareholders, normally a few weeks after the date of record.

diversification | The process of spreading your investments across a number of assets and asset classes to eliminate some, but not all, of the risks of investing.

dividend | Optional distributions of earnings to the shareholders, typically paid quarterly in the United States and other countries that were at one time associated with the British Empire.

dividend payout ratio | A measure expressed as a percentage of how much of a company's earnings are being paid out to shareholders in the form of dividends. Also known as the payout ratio.

Dividend Reinvestment Plan (DRIP) | A plan in which shareholders have cash dividends automatically reinvested into additional shares of the firm's common stock.

dividends per share | A measure that relates dividends to share price and puts stock dividends on a relative (percentage) basis rather than an absolute (dollar) basis.

dollar cost averaging | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as an automatic investment plan, and a systematic investment plan.

domestic | An investment based within in the United States.

Dow Jones Industrial Average | Stock market average made up of 30 high-quality stocks selected for total market value and broad public ownership and believed to reflect overall market activity. Also known as the Dow and DJIA.

Dow Jones U.S. Completion Total Stock Market Index | Popular stock market index meant to measure the performance of mid-cap and small-cap companies in the United States. Previously known as the Wilshire 4500. (If you can remember the same, you are a better person than I am. I still call it the Wilshire 4500.)

Dow Jones U.S. Total Stock Market Index | Stock market index designed to the track the performance of the overall United States stock market including large-cap, mid-cap, and small-cap companies. Previously known as the Wilshire 5000.

Dow Theory | A technical analysis theory that was originally proposed by Charles Dow, one of the co-founders of the *Wall Street Journal* and the Dow Jones Industry Average. If someone can explain to me, please contact me. I think it says that the market will go up and down.

downside capture ratio | A statistical measure of the past performance of a money manager when asset prices are falling. See upside capture ratio.

duration | A measure of a bond price's sensitivity to changes in interest rates and bond yields, capturing both price and reinvestment risk.

Earnings Per Share (EPS) | A company's net income divided by the number of shares outstanding. A very and popular important statistic.

educational savings account | A tax-qualified investment account that offers tax-exempt earnings for qualified educational expenses.

Efficient Market Theory | The theory that in an efficient market, securities will reflect all possible information quickly and accurately and securities prices will adjust quickly and accurately. Thoroughly debunked by Nobel Prize winner Daniel Kahneman in his book, *Thinking Fast and Slow*.

emerging market | The economy of a nation that is working toward becoming more industrialized and advanced. Also known as a developing market.

Environmental Governance and Social (ESG) | A complicated mixture of three disparate aspects of a corporation's activities and behaviors. Typically, the goal is to measure to what extent the corporation is working toward the overarching goal of planetary sustainability.

equity | An investment that represents ownership and a popular term for a stock investment.

equity income | A stock investment strategy that emphasizes dividends over capital appreciation.

ex-dividend date | The date upon which a stock will begin trading without the upcoming dividend. This is two days before the date of record.

exchange rate | The rate at which one currency will be exchanged for another.

exchange rate risk | The risk associated with the change in value of a foreign asset held by an investor because of the fluctuation of the exchange rate between the foreign currency of the investment and the investor's domestic currency. Also known as currency risk.

Exchange-Traded Fund (ETF) | An open-end mutual fund that trades as a listed security on a stock exchange similar to a closed-end mutual fund.

exercise price | The agreed upon contract price between the buyer of an option and the seller of the option. Also known as the strike price.

expected rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as the required rate of return, desired rate of return, and the discount rate.

expiration date | The date upon which an options contract or futures contract expires.

face value | The named value of a security. With regard to bonds, the amount that will be repaid upon maturity. Also known as the par value.

Fannie Mae | The popular nickname for the Federal National Mortgage Association, a for-profit corporation sponsored by the United States government tasked with helping increase home ownership by making mortgages more affordable.

Federal agency bonds | Debt securities issued by agencies or corporations sponsored by the Federal government for the purpose of promoting a public interest.

Federal Deposit Insurance Corporation (FDIC) | Federal agency tasked with insuring savers' deposits in United States banks.

Federal Funds rate | The interest rate that banks charge each other to borrow money. This rate is set by the Federal Reserve Banking System.

Federal Reserve Banking System | The central banking system of the United States, responsible for administering monetary policy and setting short-term interest rates. Popularly called the Fed.

financial futures contracts | A security that is a contract between individuals that allows the purchase or sale of a financial asset at a given price in the future. (Warning! Danger! These are not for the typical individual retail investor! Stay away!)

financial intermediary | An institution that acts as a facilitator between individuals and organizations to facilitate trade and investment transactions. Examples include banks, credit unions, and mutual funds.

financial leverage | The use of borrowed money to enhance the returns of a financial investment. (Careful! This technique can magnify your returns but it can also magnify your losses.)

financial risk | The possibility of losing money when investing.

fiscal policy | The tools available to the United States Congress and other governments to influence and promote economic activity. See monetary policy.

fixed-income security | Negotiable, publicly traded long-term debt securities, whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Also known as bonds and debt financing.

foreign | An investment based outside the United States. Also known as international and overseas.

forex | The global marketplace for trading currencies, both for immediate transactions (spot market) and future transactions (forward and futures contracts markets). Very dangerous! Unless you enjoy losing money at the casino, for example, stay far away from this place!

fourth market | Privately owned electronic trading networks that automatically match buy and sell orders that customers place electronically, designed to bypass the traditional securities exchanges. Examples include BATS and NYSE Arca. Also known as Electronic Communications Networks (ECNs).

Freddie Mac | The popular name for the Federal Home Loan Mortgage Corporation, a for-profit corporation sponsored by the United States government tasked with helping increase home ownership by making mortgages more affordable.

fundamental analysis | The process of examining a firm's accounting statements and other financial and economic information to assess the economic value of a company's stock.

future value | The expected value of an investment sometime in the future given an expected rate of return. It is the opposite of present value.

futures contract | A security that is a contract between individuals that allows the purchase or sale of a commodity or financial asset at a given price in the future. Also known as futures. (Do not trade futures! They are radioactive and you can lose a ton of money very quickly. To steal from Nike, just *don't* do it!)

futures price | The agreed upon price that the commodity or financial asset will be bought and sold when the futures contract matures.

General Obligation bond (GO) | A municipal bond backed by the full faith, credit, and taxing power of the issuer.

Ginnie Mae | The popular name for the Government National Mortgage Association, a government-owned corporation of the United States Federal Government within the Department of Housing and Urban Development, dedicated to helping increase home ownership.

global | An investment that is based anywhere around the world.

golden cross | Yet another dubious technical indicator that states when a shorter-term moving average crosses above a longer-term moving average, it's time to buy the security. (Psst. It's usually too late.) See death cross.

Greater Fool Theory | The belief that there exists a Greater Fool who will purchase an asset for more than I paid for it. Typically used by short-term traders who do not concern themselves with the underlying valuation of an asset. Not recommended for prudent, long-term investors such as yourself.

Gross Domestic Product (GDP) | The measure of all goods and services produced by an economy.

gross margin | The rate of profit being earned from gross profit.

growth | An investment strategy that emphasizes capital gains over dividends by typically investing in companies that are aggressively growing their earnings.

growth and income | An investment strategy that emphasizes both growth of earnings and dividends.

growth stock | A company that is experiencing a high rate of growth of operations and earnings.

head and shoulder charting pattern | The most infamous technical analysis charting pattern. They tell me that it is supposed to be bad but you will have to decide for yourself if it is good or bad.

health savings account (HSA) | A type of qualified investment account that allows an individual to accumulate tax-exempt monies that can be used for medical expenses.

hedging | The process of taking a position opposite to an existing position in an underlying security, often used in high-risk securities such as options and future contracts.

high-yield bond | A high-risk bond from a corporation or municipality that has a low credit rating but typically pays high income. Also known as a junk bond.

hybrid security | An investment designed to offer the stability of fixed-income investments such as bonds with the opportunity for capital growth of equity investments such as stocks.

hypothetical illustration | An example of the past returns of an investment with lots of disclaimers about how past returns are not guarantees of future results and other legal mumbo jumbo. Also known as an illustration.

income | Cash received from an investment. Examples include interest, dividends, and rent.

income bond | An unsecured corporate bond requiring that interest be paid only after a certain amount of income is earned.

income statement | A financial summary of the operating results of firm covering a specified period of time, typically quarterly and annually.

income stock | A stock investment with long and sustained records of paying higher-than-average dividends. Examples include utilities and banks.

indenture | The contract that sets forth the terms between the bond issuer and the bond investors. Also known as a trust indenture.

index fund | A mutual fund that buys and holds a portfolio of stocks or bonds equivalent to those in a specific market index. This strategy is called passive money management.

Individual Retirement Account (IRA) | A tax-qualified investment account designed to accumulate retirement funds for wage earners. The real name is Individual Retirement Arrangement but only the IRS uses this term.

inflation risk | The risk of an investment will fail to keep pace with inflation, thereby reducing the investor's purchasing power. Also known as purchasing power risk.

inflation-indexed | A security that promises to match or surpass the inflation rate.

Initial Public Offering (IPO) | (1) The first public sale of company's stock. (2) It's Probably Overpriced. (3) Imaginary Profits Only. (4) Insiders' Profit Opportunity. Definitions 2 through 4 courtesy of Benjamin Graham from his landmark book, *The Intelligent Investor*.

insider information | Any important information about a publicly traded company that is not yet been made public using the proper regulated procedures. Trading on insider information is illegal but is believed to be widespread. The legal term is material non-public information.

interest | Payment from a borrower to an investor in return for the use of borrowed money.

interest rate risk | The risk that changing interest rates will adversely affect fixed-income investments such as bonds. When interest rates rise, bond prices fall.

intermediate-term | In the investment industry, an intermediate-term time frame for retail investors is generally considered from two to five years.

Internal Rate of Return (IRR) | A popular method of calculating the return on an investment given its predicted series of cash outflows and inflows.

international | An investment based outside the United States. Also known as foreign and overseas.

intrinsic value | The underlying or inherent value of a stock, as determined through security analysis.

inventory turnover | A measure of how efficiently a company is managing its inventory.

investment | Any vehicle into which resources can be placed with the expectation that it will generate positive income, or that its value will be preserved or increased, or both.

investment bank | A financial institution dedicated to facilitating the process of initiating an Initial Public Offering for a company. Also involved in bringing fixed-income investments such as bonds to the public markets on behalf of corporations and governmental entities.

junk bond | A high-risk bond from a corporation or municipality that has a low credit rating but typically pays high income. Also known as high-yield bond.

Keogh | A type of qualified retirement account used by small businesses.

large-cap | A corporation whose market value is greater than US$10 billion. Lately, some in the industry have promoting the idea that a company's market value needs to be at least US$15 billion to be considered large-cap.

leverage | The use of borrowed monies to finance investments. Leverage can magnify an investor's gain but also carries the possibility of magnifying their losses.

lifestyle mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as retirement fund and target date fund.

limit order | A security transaction that will only be executed at a specific price or better. The investor runs the risk of the transaction never being executed if the specified price is never reached.

limited liability | An important aspect of corporations and other legal entities that states that losses are limited to the amount of resources invested. The shareholders are thus only liable for the investment and nothing more.

Limited Liability Corporation (LLC) | A legal business entity that limits the liability of the owners and protects their personal assets.

liquidity | An aspect of an investment that refers to its ease or difficulty of converting the investment into cash. Examples of liquid investments are stocks, bonds, and mutual funds. Examples of illiquid investments are real estate, art, and collectibles.

load fund | A mutual fund that charges a commission when shares are bought.

long position | A transaction in which investors buy securities in the hope that they will increase in value and can be sold at a later date for profit. Buy low, sell high.

long-term | In the investment industry, a long-term time frame for retail investors is generally considered five years or longer.

maintenance margin | The absolute minimum amount of margin (equity) that an investor must maintain in the margin account at all times. Cannot be less than 25% as of this writing.

mania | An occasional market phenomenon consisting of rapid and irrational price increases, typically followed by a subsequent crash. Also known as a bubble.

margin | The portion of the value of an investment that is not borrowed when using leverage to purchase securities. The amount of equity stated as a percentage in the investment.

margin account | A brokerage account in which, subject to limits, securities can be bought and sold on credit. The investor will borrow money from the brokerage firm to purchase securities. This use of borrowed money to purchase securities is called leverage and can magnify the returns to an investor but also has the possibility of magnifying the losses. Very risky!

margin call | Notification of the need to bring the equity of an account whose margin is below the maintenance level up to the initial margin level or to have enough margined holdings sold to reach this standard. "Never meet a margin call!" – Old Wall Street Saying

margin requirement | The minimum amount of equity that must be a margin investor's own funds, currently set by the Federal Reserve Board at 50%. Also known as the initial margin.

marginal tax rate | The percentage tax rate on the next dollar of income earned. Poorly understood but important statistic when analyzing and planning personal finances for tax purposes.

market order | A security transaction that seeks to fulfill the order at the best price currently available. Typically, market orders are fulfilled in microseconds.

market risk | The risk of losses arising from price movements in a particular market. (Keep a long-term perspective, Dear Readers.)

market timing | The dubious strategy of trying to predict the short-term behavior of a particular market. "Don't try to buy at the bottom and sell at the top. It can't be done except by liars." – Bernard Baruch.

Markowitz portfolio theory | Another theory about the benefits of diversification that will impress your friends and influence people when you mention it at a cocktail party. You don't really have to understand it or use it. (Just remember the important part: Diversification is a good thing.)

maturity date | The date upon which a security such as a bond matures.

mega-cap stock | Any large-cap company with a market valuation above US$100 billion. Recently, some in the industry are using US$200 billion as the threshold.

micro-cap stock | Any small-cap company with a market valuation below US$100 million. Recently, some in the industry are using US$300 million as the threshold.

mid-cap stock | Any company with a market valuation between US$2 billion and US$10 billion. Recently, some in the industry are using between US$5 or US$6 billion and US$15 billion as the criteria.

mixed lot | A stock transaction that involves a number of shares greater than 100 but not divisible by 100. See round lot and odd lot.

momentum trading | A strategy that advocates short-term trading that seeks to take advantage of the current momentum of a particular market. Typically uses the Greater Fool Theory. "Somewhere there is a Greater Fool that will buy this asset at a higher price than I paid for it."

monetary policy | The tools available to central banks such as the United States Federal Reserve Bank to influence and promote economic growth. See fiscal policy.

money market account | A short-term investment account at a bank or credit union similar to a money market mutual fund but carries the current government guarantee of protection up to US$250,000.

money market mutual fund | A short-term investment that utilizes guaranteed or very close to guaranteed short-term instruments. The possibility of loss is minuscule and typically, so are the returns. "A place to park your money."

mortgage bond | A bond that is secured by mortgages or other real estate assets. The bond typically "passes through" the interest and principal payments to the mortgage bond investor.

moving average | A dubious technical analysis indicator that calculates an average price or index level, using a fixed number of previous days' prices or levels. Popular moving average periods are 10-day, 50-day, and 200-day.

MSCI All-Country World Index | A global stock market index designed to measure the returns from companies based all around the world. Has replaced the MSCI World Index.

MSCI All-Country World Index ex-USA | An international stock market index designed to measure the returns from companies based outside the United States. Has replaced the MSCI EAFE Index.

MSCI EAFE Index | Traditionally, the international stock market index designed to measure the returns from companies based outside the United States. Has been replaced by the MSCI All-Country World Index ex-USA.

MSCI World Index | Traditionally, the global stock market index designed to measure the returns from companies based all around the world. Has been replaced by the MSCI All-Country World Index.

municipal bond | A fixed-income investment that is issued by municipalities such states, counties, cities, and other political subdivisions. The interest payments from most municipal bonds are exempt from Federal income taxes.

mutual fund | An investment company that invests its shareholders' money in a diversified portfolio of securities. Investors typically receive professional money management and instant broad diversification.

mutual fund share classes | The dizzying array of different classes of mutual funds with various methods of soaking their investors, ooops!, we mean charging for their services.

naked option | An options contract that is written on securities not owned or sold short by the writer. Also known as an uncovered option. (Don't do it! Don't gamble with options!)

NASDAQ | The second-largest stock exchange in the United States, known for its large percentage of technology stocks, formerly the National Association of Securities Dealers Automated Quotation system.

National Credit Union Administration (NCUA) | Federal agency tasked with insuring savers' deposits in United States credit unions.

Net Asset Value (NAV) | The underlying value of one share in a particular mutual fund.

net profit margin | The rate of profit being earned from earnings after expenses and taxes.

net working capital | The absolute dollar measure of liquidity, computed by subtracting the current liabilities from the current assets.

New York Stock Exchange (NYSE) | The largest stock exchange in the United States, established in 1792. Also known as the Big Board.

NFT | The current tulip bulb mania. Someone will sell you a graphic image that anyone can download from the Internet for free. Sounds like a good deal to me! The full name is Non-Fungible Token.

no-load mutual fund | A mutual fund that does not charge a commission when shares are bought.

nominal rate | The feature of a bond that defines the amount of annual interest income, expressed as an interest rate. The term coupon comes from the time when bonds had coupons attached to them. The investor sent in the coupon when the semiannual interest was due and the bond issuer would then send the investor a check. Also known as the nominal yield, coupon rate, and coupon yield.

non-qualified account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as regular account and taxable account.

noncumulative preferred stock | Preferred stock whose dividends, if skipped in any given year, are not required to be paid before any other dividends can be paid.

odd lot | A stock transaction that involves a number of shares less than 100. See round lot and mixed lot.

open interest | The number of options or futures contracts that are trading on an exchange at any given time. (I told ya' to stay away from options and future contracts, right?)

Open Market Operations | The system used by central banks such as the U.S. Federal Reserve Bank to influence short-term interest rates.

open-end investment company | A type of investment company in which investors buy shares from, and sell them back to, the mutual fund itself, with no limit on the number of shares the fund can issue.

operating profit margin | The rate of profit being earned from a company's operating income.

option contract | A security that gives the holder the right to buy or sell a certain amount of an underlying financial asset at a specified price for a specified period of time. Also referred to simply as an option. (Pure gambling and speculation! Stay far, far away from these ... unless you love going to Las Vegas and losing your hard-earned money.)

option premium | The proper term yet not popular term for the amount that one pays for or receives from an option contract is the option premium. However, most people just call it the option price.

Over-the-Counter Market (OTC) | Widely scattered telecommunications network through which transactions are made in outstanding securities and smaller IPOs. Examples include the OTC Bulletin Board and OTC Markets Group, née Pink Sheets. (Careful! These are where the scam penny stocks skulk in the shadows. Stay away!)

overseas | An investment based outside the United States. Also known as international and foreign.

P/E | The Price-to-Earnings Ratio is the most widely watched stock market statistic! Computed by dividing the market price of a stock by the earnings of the company. Also computed for a stock market or segment of a stock market as a whole. Also abbreviated as PE.

par value | The named value of a security. With regard to bonds, the amount that will be repaid upon maturity. Also known as face value.

partnership | A legal entity where two or more individuals agree to operate a business or other entity and share in the proceeds.

passive money management | An investment strategy that advocates buying and holding a portfolio of stocks or bonds equivalent to those in a specific market index.

payout ratio | A measure expressed as a percentage of how much of a company's earnings are being paid out to shareholders in the form of dividends. Also known as the dividend payout ratio.

PEG Ratio | The Price-to-Earnings Ratio-to-Growth Ratio. The relationship of the P/E ratio of a company and their earnings growth rate.

penny stock | A stock from a sham corporation based in someone's garage in Idaho or Iowa or one of those states that starts with the letter I. Typically found on the OTC Bulletin Board or the OTC Markets Group, formerly the Pink Sheets. Penny stocks should not be discussed in polite company. And don't think you can beat the scam artists at their own game. If you don't know who the patsy is as the poker table, the patsy is you

point-and-figure chart | A type of chart used in technical analysis. The use of point-and-figure charts for predicting short-term price movements has been shown to be better than howling at the full moon on hot summer nights while dancing naked around a bonfire, but not that much better.

portfolio allocation | A fancy term for how much should we have in stocks, how much in bonds, etc. Assuming you won't panic when the markets fall, keep the vast majority of your financial investments in stocks when you are younger. As you get closer to retirement, start to migrate your financial investments toward bonds and high-quality income-producing stocks. But don't give up on stocks entirely! Lord willin', you will be in retirement for a long time.

precious metals | Relatively rare metallic elements, some with high economic value. They pay no interest or dividends, don't grow any earnings, don't create new products, expand into new markets, etc. There's a whole lot not to like about precious metals. They do look cool, though.

preferred stock | Stock investments that have a prior claim ahead of common stocks on the income and assets of the issuing firm. Preferred stocks are generally purchased for the reliable stream of dividend payments they produce. There are tax advantages for corporations to own the preferred stock of other companies. Hence, preferred stock is typically not a good choice for individual retail investors.

premium bond | A premium bond is a bond that is selling for more than its par value.

present value | The current value of an investment today from the predicted cash flows of capital gains or income or both sometime in the future given an expected rate of return. It is the opposite of future value. (Please study chapter 4 thoroughly.)

Price-to-Book Value Ratio | Ratio of the current market price to the book value per share.

Price-to-Cash Flow Ratio | Ratio of the current market price to the company's current cash flow per share.

Price-to-Earnings Ratio | The Price-to-Earnings Ratio is the most widely watched stock market statistic! Computed by dividing the market price of a stock by the earnings of the company. Also computed for a stock market or segment of a stock market as a whole. Normally abbreviated as P/E/ and also abbreviated as PE.

Price-to-Sales Ratio | Ratio of the current market price to the company's current sales per share.

primary market | The market in which new issues of securities are sold to the public via Initial Public Offerings (IPOs).

principal | (1) The original sum invested. (2) The amount returned upon the maturity of security, typically a fixed-income investment such as a bond.

private placement | An investment that is sold directly to accredited or sophisticated investors and not available to the retail public.

professional money management | Investment professionals who manage the investments for others. Actively managed mutual funds hire professional money managers to identify, investigate, choose, and monitor the stocks, bonds, and other securities that populate the mutual fund.

purchasing power risk | The risk of an investment will fail to keep pace with inflation, thereby reducing the investor's purchasing power. Also known as inflation risk.

put option contract | A security that gives the holder the right to sell a certain amount of an underlying financial asset at a specified price for a specified period of time. (Warning! Caution! Stay far away from these things. It is gambling, pure and simple.) Also known as a put option or just simply as a put.

qualified account | An account that has some type of tax advantage as outlined in the Internal Revenue Code. Examples include retirement accounts, educational savings accounts, and health savings accounts. Also known as a tax-qualified account.

quick ratio | A measure of the ability of a company to meet their short-term financial obligations even if their inventory becomes obsolete or otherwise unable to sell. Also known as the acid test ratio.

Random Walk Theory | The theory that stock price movements are unpredictable in the short-term.

rate of return | The reward expressed as a percentage from the capital gains or income or the combination of capital gains and income from an investment over a specified period of time.

Real Estate Investment Trust (REIT) | A company that owns and operates income-producing real estate. Similar to a mutual fund but instead of stocks and bonds, they invest in real estate. An alternative that may be worthwhile for those who want to invest in real estate but do not want to be a landlord.

receivables turnover | A measure of how efficiently a company is managing their accounts receivable. Accounts receivables are monies that are owed to the company. Also known as accounts receivables turnover.

recession | Popularly defined as a two consecutive quarters (six months) of economic contraction.

regional fund | A mutual fund that limits its investments to securities of a particular region such as Latin America, the Far East, Eastern Europe, etc.

registered representative | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known as broker, stockbroker, and registered investment advisor.

regular account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as non-qualified account and taxable account.

reinvestment risk | The uncertainty about the future value of an investor's bond investments that result from the need to reinvest bond interest payments and redemptions at yields not known in advance.

required rate of return | The rate of return used to compute the present value of a future stream of cash flows. (Ah, study chapter 4 thoroughly. You can't leave our class without knowing how to do this. It ain't that hard once you have done it a few times. All you need is a 99¢ calculator and the present value table from chapter 4!) Also known as expected rate of return, desired rate of return, and discount rate.

restricted securities | Investments that are only available to accredited and sophisticated investors. Off limits to the general public. Typically very speculative but offer tremendous returns if the venture succeeds.

retirement account | A tax-qualified account designed to accumulate monies for an individual's retirement. Examples include the Traditional IRA, Roth IRA, 401(k), 403(b).

retirement mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as lifestyle fund and target date fund

Return on Assets (ROA) | A measure of how profitable a company is relative to its total assets.

Return on Equity (ROE) | A measure of the overall profitability of a company in relation to the shareholders' equity.

Return on Invested Capital (ROIC) | A measure of the overall profitability of a company in relation to both its debt and equity. There are various versions of ROIC.

revenue bond | A municipal bond that requires payment of principal and interest only if sufficient revenue is generated by the issuing municipality.

risk | In the investment world, risk is defined as the probability that actual investment returns will differ from the expected investment returns.

risk-free rate of return | The return on guaranteed short-term investments. The quoted risk-free rate of return is typically the three-month U.S. Treasury bill.

Roth IRA | A tax-qualified retirement account that offers tax-exempt earnings in retirement. (Very cool! Open your Roth IRA now!)

round lot | A stock transaction that involves a number of shares divisible by 100. See odd lot and mixed lot.

Russell 2000 | A popular index designed to measure the performance of mid-sized and small companies in the United States.

savings account | A guaranteed demand account at a bank or credit union that normally pays little interest but will often be offered with a toaster or waffle iron which makes it all worthwhile.

secondary market | The market in which securities are traded after they have been issued to the public. The vast majority of transactions take place in the secondary market.

sector funds | A mutual fund that concentrates its holdings in a particular sector of the economy such as energy, technology, or health care. Typically defeats one of the two main advantages of investing in a mutual fund, diversification.

sector rotation | A strategy of buying stocks in hot sectors and selling those stocks in stale sectors. It is similar to market timing strategies and not recommended for prudent, long-term investors such as yourself.

Securities and Exchange Commission (SEC) | The Federal agency charged with regulating the securities industry and protect against market manipulation and other illegal activities.

Securities Industry Essential (SIE) Exam | The exam recently instituted to encourage more professionals to enter the investment industry because of the difficulty of the Series 7 Stockbroker Exam. If you pass the SIE Exam, the industry will come a' callin'. Think about it. The industry needs you!

Securities Investor Protection Corporation (SIPC) | Similar to how FDIC insures bank deposits, the SIPC is an insurance fund designed to protect investors' deposits of securities from malfeasance or other misconduct. They do not protect loss of monies from market fluctuations.

securitization | The process of transforming lending vehicles such as mortgages into marketable securities.

security | The unfortunate term for an investment that represents debt or ownership or the legal right to acquire or sell an ownership interest. A better term would be financial investment.

serial bond | A bond issue that has series of maturities instead of the typical term bond issue where all the bonds mature at the same time.

Series 7 Stockbroker Exam | The difficult licensing exam that gives an individual the ability to sell a broad range of securities. The proper name is the Series 7 General Securities Representative Exam since the legal name for stockbroker is a Registered Representative. Because the number of stockbrokers has been declining, recently, the SIE Exam was introduced as a pre-Series 7 exam. It is less expensive and rigorous and if you pass the SIE Exam, the industry will know that you will eventually pass the Series 7 Exam.

Series EE bond | Short-term obligations of the United States Treasury available at TreasuryDirect.gov.

Series I bond | Similar to Series EE bonds but with added inflation protection.

share buyback | The purchase of shares of outstanding shares of stock by the issuing corporation. The shares are taken out of circulation which reduces the number of outstanding shares. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation. Also known as a stock repurchase.

Sharpe ratio | A measure of the past risk versus reward performance of an investment.

short interest | The number of stock shares that have been sold short of a particular security or market. Can be used as a contrarian indicator for future price increases.

short position | A transaction in which investors sell borrowed securities in the hope that the price will decrease in value and the shares can then be bought later date for a profit. Sell high, buy low.

short sale | The sale of borrowed securities, their eventual repurchase by the short seller, and their return to the lender. Instead of, "Buy low, sell high," a short-term trader attempts to, "Sell high, buy low." (Don't do it. It's dangerous! Peter Lynch says, "Never short a stock," and who is going to argue with a man who racked up a 29% annual return.)

short-term | In the investment industry, a short-term time frame for retail investors is generally considered up to one year.

short-term investment | Instruments designed to preserve capital for monies that will be needed in the short-term. Often guaranteed and typically carry very low rates of return. "A place to park your money." Examples include savings accounts, money market mutual funds, and Treasury bills.

sinking fund | A fund designed to accumulate monies in anticipation of a needed payment or payments in the future. An example includes accumulating the sufficient capital to make the principal payments when a series of bonds mature.

small-cap stock | Any company with a market valuation below US$1 billion or $2 billion. Recently, some in the industry are using any company below US$5 billion or US$6 billion million as the threshold.

sophisticated investor | Sophisticated investors are similar to accredited investors but have fewer restricted investment opportunities. Like accredited investors, sophisticated investors are expected to have a high degree of knowledge and experience with risky investments and therefore are able to invest in restricted investments not available to the general public.

specialist | Specialists were the market makers/dealers that populated the floor of the New York Stock Exchange and bought and sold from their own inventories of securities to provide a continuous, fair, and orderly market. Technology has made the job of the specialist on the exchange floor obsolete.

speculation | The investment industry's euphemism for gambling. Speculation, also called trading, is not investing. (Don't do it. Don't speculate. You'll be sorry!)

speculative stock | Companies with a high degree of risk. They typically are losing money or have very low earnings relative to their valuation. Offer the possibility of substantial capital gains or, more likely, substantial capital losses.

speculator | An individual whose strategy is to profit from the short-term price movements of an asset. Not recommended for prudent, long-term investors. Also known as a trader.

spread | In the world of investments, the spread typically refers to the difference between two prices, yields, or other investment measurements. See bid-ask spread and yield spread.

Standard & Poor's | The largest of the credit rating agencies and one of the most influential investment research organizations in the world. Now called S&P Global Ratings although most investors simply refer to them as S&P.

Standard & Poor's 500 Index | One of the most popular stock market indexes. It consists of 500 of the largest United States stocks chosen for market size, liquidity, and industry group representation.

standard deviation | A measure of the risk of an investment computed using the past returns of an investment and the deviation from the average annual return. See variance.

statement of cash flows | A financial summary of a firm's cash flow and other events that caused changes in the company's cash position, typically quarterly and annually. Also known as the cash flow statement.

stock | The very unfortunate name for an investment in a for-profit business organization known as a corporation. A better term would be business.

stock dividend | Optional distribution of earnings from a corporation to the shareholders. Typically paid quarterly in the United States and all countries that were associated with the British Empire at one time. Corporations in other countries typically pay dividends semiannually or annually.

stock exchange | Traditionally, a centralized institution in which transactions were made in outstanding securities using a face-to-face "double auction" on the floor of the exchange. Technology has reduced the centralized physical locations to places for business news outlets to harvest video clips.

stock index | A benchmark standard used to measure the general behavior of securities prices of representative groups of stocks at a given point in time.

stock option | A security that gives the holder the right to buy or sell a certain amount of shares of an underlying stock at a specified price for a specified period of time. (If you enjoy gambling, you might enjoy trading stock options. Otherwise, stay far away from these odious stains on our investment industry.)

stock repurchase | The purchase of shares of outstanding shares of stock by the issuing corporation. The shares are taken out of circulation which reduces the number of outstanding shares. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation. Also known as a share buyback.

stock split | An accounting maneuver in which a company increases the number of shares outstanding by exchanging a specified number of new shares of stock for each outstanding share. There is no increased value from a stock split. The market capitalization of the company remains the same.

stockbroker | Licensed professional that advises clients on securities investments and may manage their investment portfolios. Also known a broker, registered representative and registered investment advisor.

stop order | A security transaction that will be triggered when a set price point is achieved in the market. When the price point is achieved, the order becomes a market order and is executed almost instantaneously. Often used to protect against losses. Also known as a stop-loss order.

stop-limit order | Similar to a stop order, except the order becomes a limit order when the price point is achieved. This results in the possibility that the order will not be executed if the limit price is unavailable.

strike price | The agreed upon contract price between the buyer of an option and the seller of the option. Also known as the exercise price.

systematic investment plan | A system of buying an investment at regular intervals with a fixed dollar amount. Also known as dollar cost averaging and an automatic investment plan.

target date mutual fund | A mutual fund designed to allocate automatically the proper mixture of investments, given an individual's expected year of retirement. As the year of retirement approaches, the mutual fund will become more conservative. Also known as lifestyle fund and retirement fund.

tax shelter | A investment with legal tax reduction provisions. Examples include retirement accounts, municipal bonds, low-income housing projects, and oil and gas exploration projects.

tax-deferred annuity | A type of investment account that allows investors to earned tax-deferred income. Income is taxed upon withdrawal, typically in retirement. Annuities in general have bad reputations for high fees and mediocre returns. Most come with provisions for significant penalties for withdrawing funds prematurely.

tax-exempt bond | A bond that is exempt from either Federal taxes or state and local taxes or both. Examples include municipal bonds which are exempt from Federal taxes and Treasury bonds which are exempt from state and local taxes.

taxable account | A type of investment account that for which all capital gains and income are taxable in the year the proceeds from the capital gains or income are received. Also known as non-qualified account and regular account.

taxable-equivalent yield | The return that a tax-exempt bond is paying relative to a fully taxable bond.

technical analysis | The study of the various forces at work in the marketplace and their effect on stock prices. Typically involves reading squiggles on a computer screen and is not usually much better than practicing voodoo or interpreting the entrails of chickens for predicting the short-term behavior of securities.

term bond | The typical bond issue where all the bonds mature at the same time.

third market | An over-the-counter system used by large institutional investors to reduce transaction costs when initiating large block trades of securities.

time premium | The amount by which an options contract price exceeds the option's "in-the-money" value. If it would not be feasible to exercise the contract, the entire value of the contract is due to its time premium. (Haven't we already told you not to gamble with options?)

times interest earned (TIE) | Measures the ability of a company to meet its fixed interest payments. Specifically, the computation of how many times in a year a company has earned their required interest payments.

total asset turnover | A measure of a company's efficiency at using assets to support sales and revenue. The higher, the better.

total debt to total capitalization | A measure of the total amount of outstanding company debt as a percentage of the firm's total capitalization.

total debt-to-total assets ratio | A measure of how much of the company's total assets have been financed by debt.

total return | The return of an investment from both its capital gains and income.

trader | An individual whose strategy is to profit from the short-term price movements of an asset. Not recommended for prudent, long-term investors. Also known as a speculator.

tranche | A portion of an investment that can be sold separately, typically fixed-income instruments such as mortgage bonds.

Treasury bill | Short-term obligation of the United States Treasury with maturities less than one year, generally regarded as the safest of all investments. The current rate of Treasury bills is often used as the risk-free rate of return. Interest earned is exempt from state and local taxes. Often referred to as a T-bill.

Treasury bond | Long-term obligation of the United States Treasury with maturities between 10 and 30 years. Interest earned is exempt from state and local taxes. Often referred to as a T-bond, government bond, or simply government.

Treasury Inflation-Indexed Obligations (TIPs) | A type of Treasury security that provides protection against inflation by adjusting investor returns for the annual rate of inflation.

Treasury note | Actual name for a Treasury bond that matures between 2 and 10 years. Most investors don't know there is a difference in the name and if you use Treasury bond instead of Treasury note, as I do, no one will come down on you except maybe a person with a compulsive disorder. Interest earned is exempt from state and local taxes.

Treasury stock | Shares of stock of that have been repurchased by the corporation in a share buyback. There is subsequently less supply of outstanding stock and existing shareholders have a larger percentage ownership of the corporation.

TreasuryDirect.gov | The Federal government website where individual investors can purchase government securities at the same prices as big Wall Street firms.

Treynor ratio | A measure of the past risk versus reward performance of an investment. Guaranteed to impress individuals at a cocktail party when you mention the enviable Treynor ratio of your successful investments.

trustee | An individual or organization given authority over the administration of property or care of another and is legally required to act in their best interests.

turnaround stock | A company that has fallen on hard times. A potential investor must investigate thoroughly the potential for a rebound.

uncovered option | An option contract that is written on securities not owned or sold short by the writer. Also known as a naked option. (Don't do it! Don't gamble with options!)

undeveloped land | Land that is without any utility services such as electricity, water, or sewer and often without street access. Can provide tremendous investment returns but carries significantly more risk than developed land. Also known as raw land and unimproved land.

upside capture ratio | A statistical measure of the past performance of a money manager when asset prices are rising.

valuation | The process by which the underlying value of an investment is established on the basis of its forecasted risk and return performance.

value investing | The investment strategy that emphasizes the use of fundamental analysis to identify high-quality companies with good growth prospects and potential for dividends at reasonable prices and holding them for the long-term. Often referred to as "buy 'n' hold" investing.

variance | A measure of the risk of an investment computed using the past returns of an investment and the variance from the average annual return. See standard deviation.

volatility | The investment industry's euphemism for, "Aye! I lost a whole lotta' money!" (Keep a long-term perspective, Dear Readers.)

voting rights | The rights of shareholders to vote for various aspects of the corporation such as the members of the Board of Directors. Typically, an investor gets one vote for each share of stock owned.

warrant | A long-lived option that gives the holder the right to buy stock in a company at a price specified on the warrant.

Wilshire 4500 Index | A much easier name to remember for the Dow Jones U.S. Completion Total Stock Market Index.

Wilshire 5000 Index | A much easier name to remember for the Dow Jones U.S. Total Stock Market Index.

yield curve | A graph that represents the relationship between a bond's maturity and its yield at a given point in time, also used to make comparisons among types of bonds.

yield spreads | The differences in interest rates that exist among various sectors of the bond market.

yield to call (YTC) | The yield to call is the interest rate that an investor will receive if a premium bond is called away when the call protection period ends.

yield to maturity (YTM) | The yield to maturity is the interest rate that an investor will receive from a bond if held until maturity.

zero coupon bond | A bond that is sold a deep discount to its par value and does not offer periodic interest payments. Instead of paying interest in cash, the bonds accrue in value until maturity when the investor receives the par value.

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Addendum A: Investment Clubs, BetterInvesting.org, and the Stock Selection Guide

"*Okay, now what?*" may be what you are thinking at this point. Some of you may be ready to start identifying, investigating, researching, choosing, and subsequently monitoring individual prudent, long-term stock purchases on your own. Others may have already decided long ago that they will stick with time-tested mutual funds with managers that have shown they can produce healthy returns in both good times and bad. However, many of you are torn. You want to invest but you are hesitant, confused, maybe even terrified. Ah, Dear Readers, you are not alone. And we have just the solution to your dilemma, BetterInvesting.org.

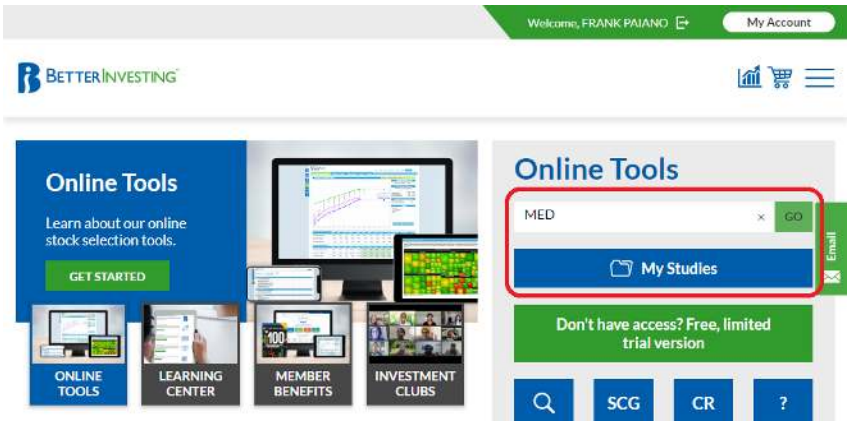
BetterInvesting.org, the new name for the National Association of Investors Corporation, has been around since 1951. For over 70 years, they have been helping individuals "learn while they earn." BetterInvesting.org sponsors investment clubs. An investment club is a group of individuals who work together to educate themselves about investing. However, the members of the investment club are also pooling together their resources and building a portfolio of investments, most commonly individual stocks. Members typically contribute anywhere from $25 to $100 each month and the resulting pool of resources is used to buy investments. You can think of the investment club as a small mutual fund. (Legally, most investment clubs are general partnerships, although some may decide to use a different legal entity. No matter what, we gotta' keep the IRS happy! Take BUS-120, Introduction to Business, or BUS-140, Business Law, at Southwestern Community College to learn more about business structures.)

If you are interested in possibly joining an investment club in your area, please go to BetterInvesting.org and look for the chapter in your area. The chapter for those of us in the San Diego area is the Golden West chapter. Our chapter covers Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Imperial Counties, as well as the greater Las Vegas area. All chapters have online Model Clubs where potential new members are invited each month to sit in on their meetings and watch and learn how an investment club works. Since the Covid pandemic, many chapters are now meeting online and inviting members from anywhere. We strongly urge you to consider joining an investment club.

Over the 70 years of BetterInvesting,org's existence, they have developed an investment model that is very robust. It is called the Stock Selection Guide, SSG for short. One of the attractive features of the SSG is that it is very visual, unlike the models that we covered in our text. Also, unlike our models, the SSG is geared toward growth stocks and dividends are a secondary concern. Oh, by the way, BetterInvesting.org suggests that we should be reaching for a 15% annual return on our investments. What do you think about that?

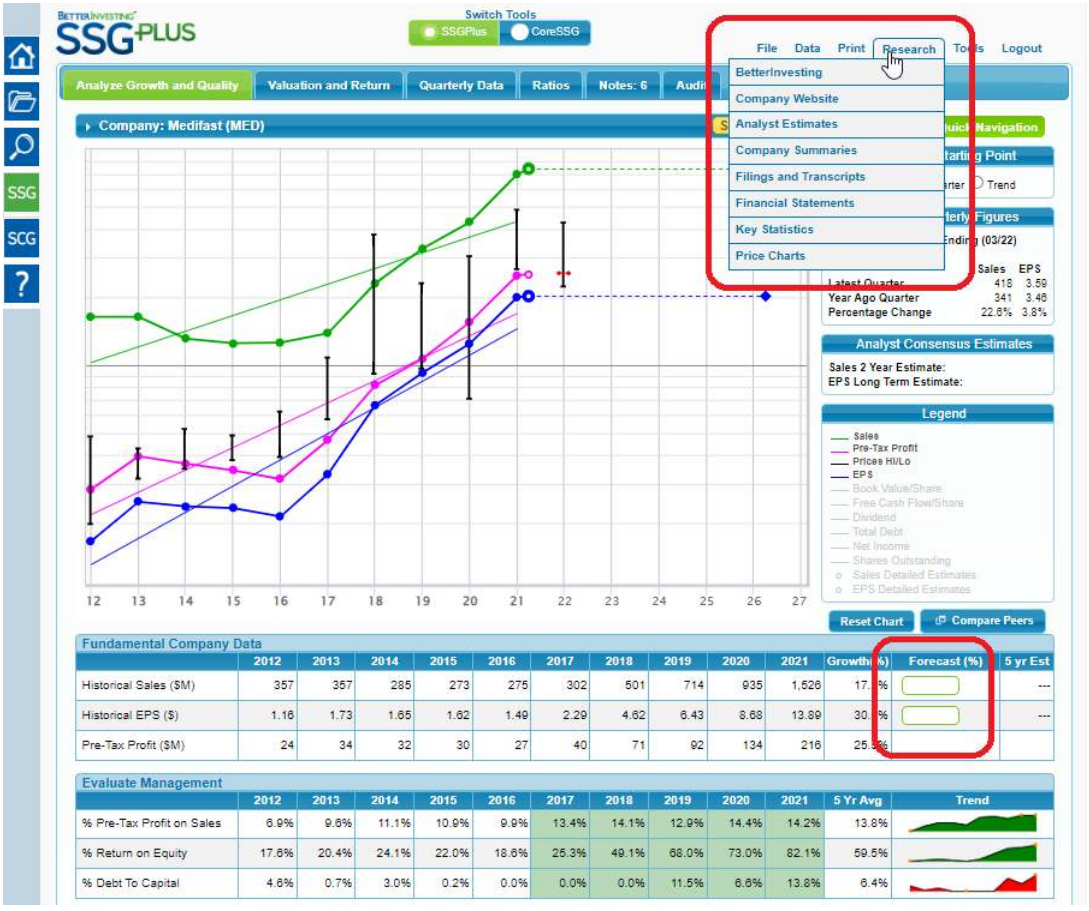
You can become a member of BetterInvesting.org if you want to experiment with the SSG without joining an investment club. BetterInvesting.org offers a ninety-day free trial membership. (Psst. Get the Individual Plus membership. It's worth the extra $18 per year because you get to use the SSGPlus described below.) More than anything else, though, BetterInvesting.org is dedicated to investor education. Whether you are a member or not, you can use their Learn About Investing web pages to continue your investment educational journey. They offer hundreds of articles and videos. Check 'em out!

In the meantime, let's take a very quick tour of the Stock Selection Guide. We are only going to look at just a small fraction of the many capabilities of this powerful tool. There are now two versions of the SSG, the SSGPlus and the CoreSSG. We will use the SSGPlus as it is a bit more powerful and easier to use. Once you have logged into BetterInvesting.org, you choose a new stock using the [Online Tools] dialog box or open one of your previous stocks using the [My Studies] option. Since the SSG is better suited to growth stocks, we will choose a fast-growing small-cap stock, Medifast, Inc., symbol MED. Similar to other online systems, you can use the ticker symbol or just type the name of the company and the system will do its best to find the correct stock for you. If you have the Individual Plus membership, the system automatically brings you to the SSGPlus screen.



Once we have chosen the stock we want to study, we are brought to the [Analyze Growth and Quality] page of the SSGPlus.

NOTE: As we were updating the book for 2025, we took a quick look at Medifast on BetterInvesting.org, expecting to see more of the same positive story. Nope! Medifast's earnings fell dramatically and so did the stock price. "Oh, darned," we thought. We need to find another stock to study using the SSG. However, very quickly, the idea emerged that this is a tremendous example of how fast the investment story can change with rapidly growing companies. After you have finished this addendum, please take a look at the current Stock Selection Guide for Medifast and then look at the stock price history over the past few years. It is not pretty. That is yet another reason why Your Humble Author loves dividend-paying stocks that have been around for decades.



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Growth (%)	Forecast (%)	5 yr Est
Historical Sales ($M)	357	357	285	273	275	302	501	714	935	1,526	17.1%		---
Historical EPS ($)	1.16	1.73	1.65	1.62	1.49	2.29	4.62	6.43	8.68	13.89	30.1%		---
Pre-Tax Profit ($M)	24	34	32	30	27	40	71	92	134	216	25.5%		

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	5 Yr Avg	Trend
% Pre-Tax Profit on Sales	6.9%	9.6%	11.1%	10.9%	9.9%	13.4%	14.1%	12.9%	14.4%	14.2%	13.8%	
% Return on Equity	17.6%	20.4%	24.1%	22.0%	18.6%	26.3%	49.1%	68.0%	73.0%	82.1%	59.5%	
% Debt To Capital	4.6%	0.7%	3.0%	0.2%	0.0%	0.0%	0.0%	11.5%	6.6%	13.8%	6.4%	

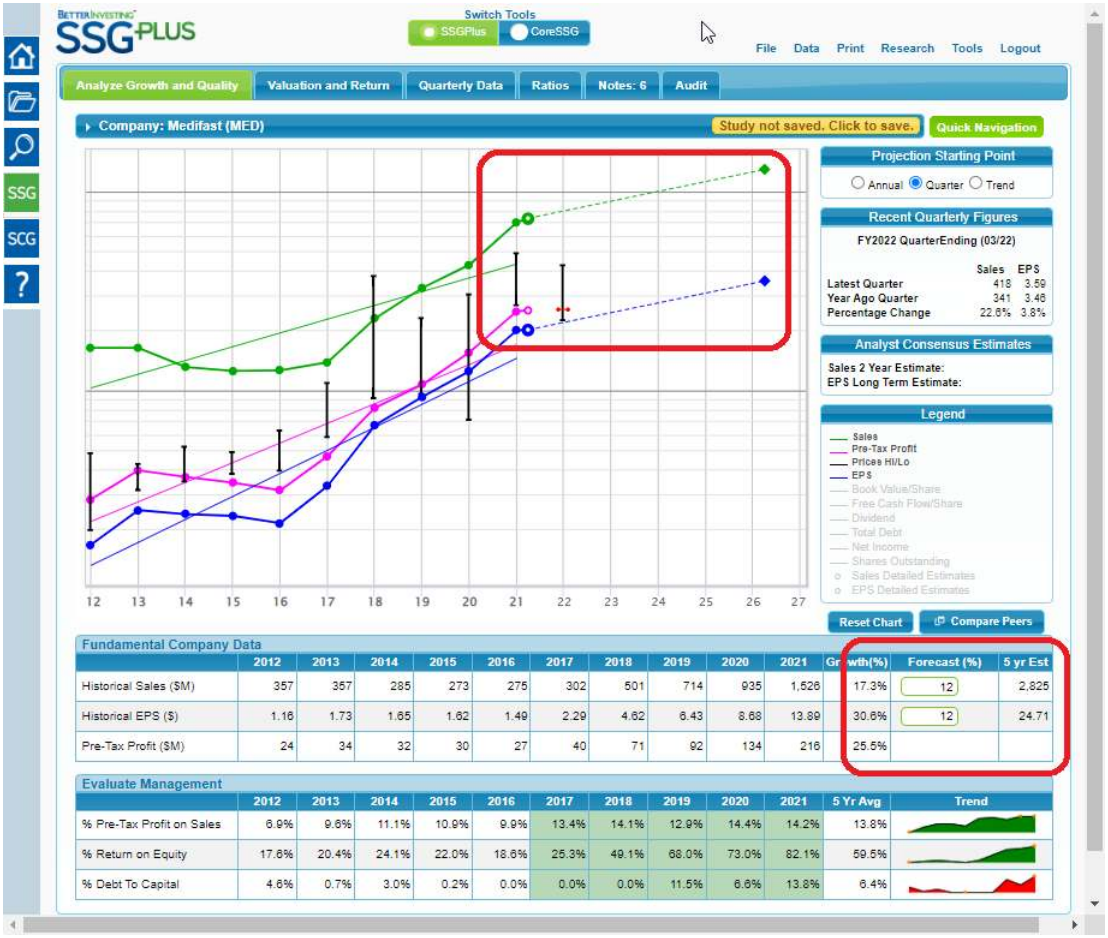
Here it is! Another sip from the financial firehose! Relax. Similar to *The Value Line*, the SSG is a rich and complex tool. You can start using just a handful of its capabilities and add more and more of its features as time goes by and you become more familiar with its tools.

The first feature we want to highlight is the [Research] tab in the upper right-hand corner. Notice that from within the SSG, you can tap into a wealth of resources and research about the company. The [Research] tab pulls data from sources such as Reuters, Yahoo Finance, Google Finance, Marketwatch.com, CNN Money, The Motley Fool, Seeking Alpha, MSN Money, Finviz, BigCharts, StockCharts, and Zack's. You also have access to the company's website and the SEC EDGAR yearly 10K and quarterly 10Q filings. In my humble opinion, one of the most valuable features is the Member Sentiment. BetterInvesting.org members and investment clubs are encouraged to give their opinion on the values of companies. Anyone who has read *Thinking Fast and Slow* (and you should be one of them!) will recognize the importance and usefulness of the guidance of a large group of people when making uncertain decisions.

The graph, however, is the most prominent and desired feature of the SSG. The three lines, from top to bottom, are the yearly sales (green), the pre-tax profit (magenta), and the earnings (blue). The BetterInvesting.org mantra is, "up, straight, and parallel." Notice that the SSG uses our old friend, the logarithmic scale. When the lines are moving upward on a logarithmic scale, this signifies that the numbers are growing exponentially. BetterInvesting.org also wants the lines to be straight. This signals that the company's growth has been study. Last, if the lines are parallel, this infers that all three, sales, pre-tax profit, and earnings, are growing steadily together. (For example, the company is not sacrificing pre-tax profit and earnings at the expense of growing their sales. Or they are not using accounting trickery to amplify their pre-tax profit and earnings while the sales are languishing.)

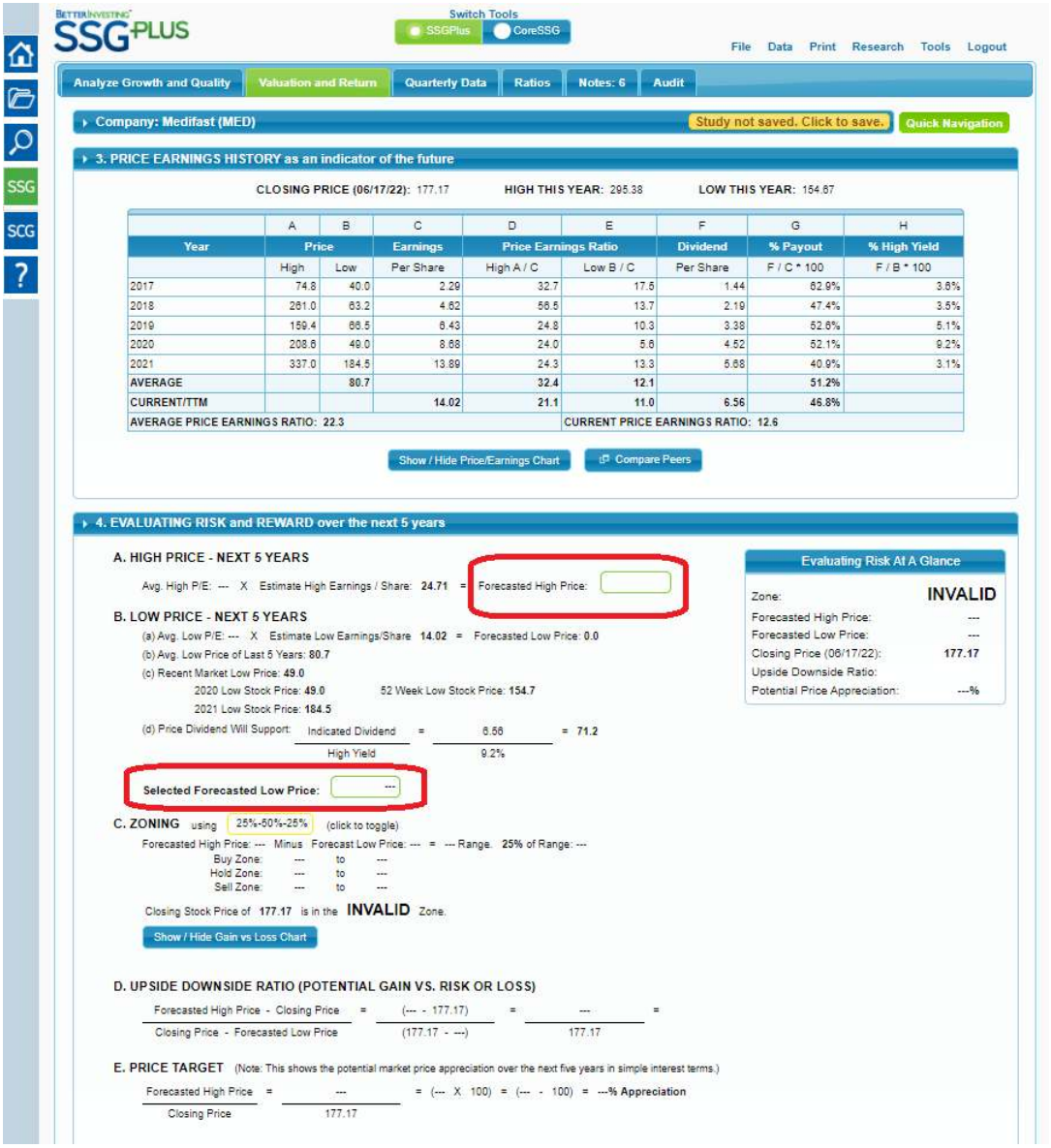
Look at the graph for Medifast. From 2013 through to 2016, the lines are trending downward. However, since 2016, all three lines are "up, straight, and parallel." This is BetterInvesting.org's Holy Grail. Hence, the SSG says that this is a stock that is worthy of our study. Time to read everything we can find about the company, download their annual and quarterly reports, and consult *The Value Line* and other resources. Calculate their financial ratios. Do a Discounted Cash Flow Model analysis. Study their competitors. You know the drill!

But wait, there are many other tricks up the SSG's sleeve. We are now going to use the SSG to forecast sales and earnings growth and predict a high and low price for the next five years. Refer to the highlighted red box in the lower-left hand corner. Notice that the SSG has calculated the historical growth rates for sales, earnings, and pre-tax profit. Our job is to use our judgment to enter the growth rates for sales and earnings going forward. There are several tools that will help us. We can do our calculations or choose the predictions from several sources such as *The Value Line*. Ignoring the analysts' optimistic predictions and erring on the side of caution, we chose 12% for both the sales growth and earnings growth. The SSG calculates the future sales and earnings based on our predictions and updates the graph.

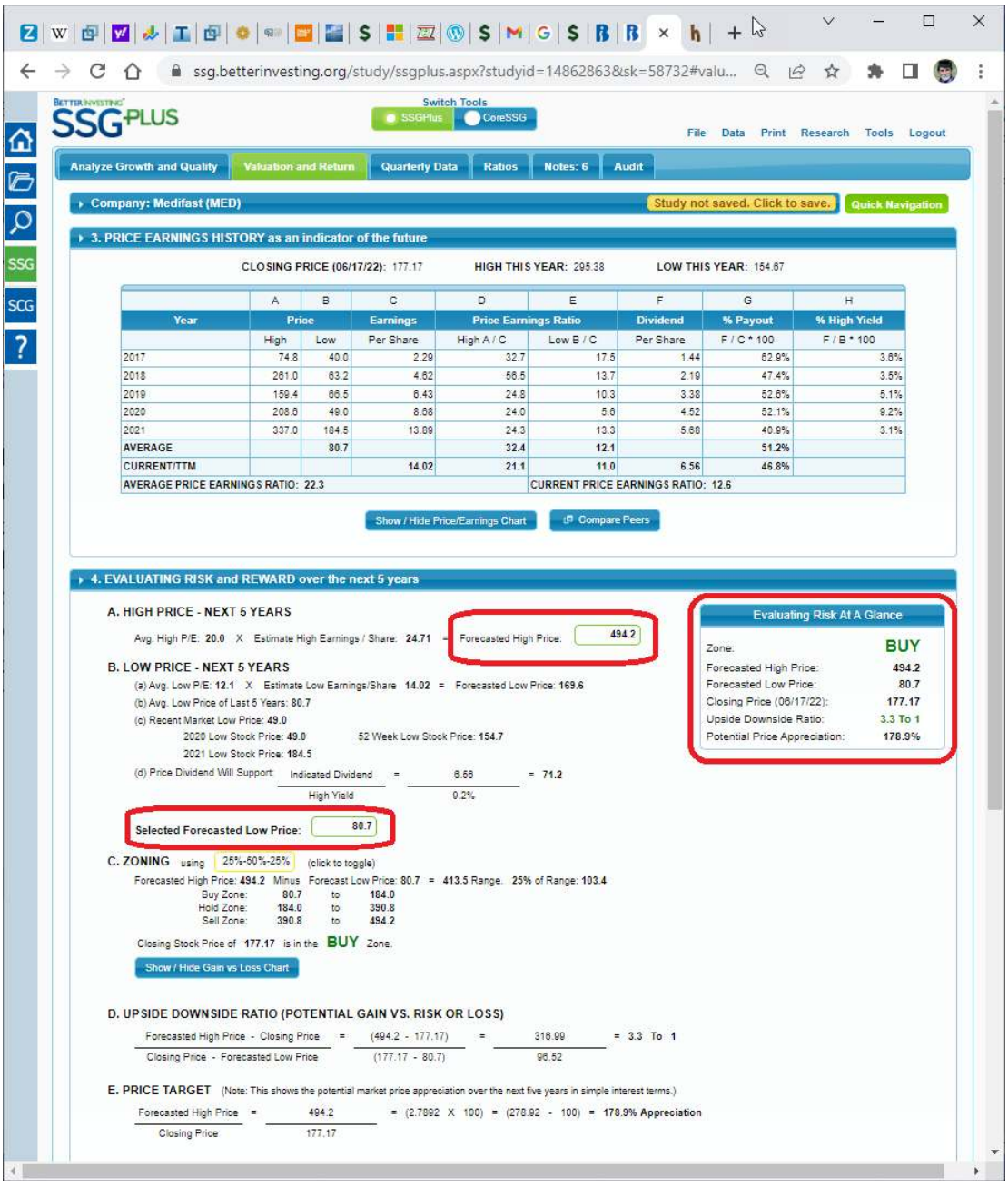


The SSG is now showing what the sales and earnings will be for the next five years if our prediction of 12% growth comes to fruition. It is less dramatic than the previous five years. And that's just fine with Your Humble Author. You may use 15% growth or more depending upon the courage of your conviction with respect to Medifast. That's why there is chocolate and vanilla … and some people like strawberry!

Now comes to best part! Using the tabs along the top of the graph, we now move from the [Analyze Growth and Quality] page to the next page, the [Valuation and Return] page.



The SSG displays “INVALID” on the right-hand side of the [Valuation and Return] page. The SSG is saying that it can’t make a recommendation yet about the stock because we have not predicted a high price and a low price over the next five years. The [Valuation and Return] page has several tools to help you predict the high price and low price over the next five years. As with any complex tool, time and practice and judgment will dictate which tools you prefer. For now, we will use some trickery to enter a high price of just above $494 and a low price of just above $80. Once we have entered the high price and the low price, the SSG gives us a Buy, Sell, or Hold recommendation. The resulting SSG [Valuation and Return] page follows.



The INVALID is gone and the [Evaluating Risk At A Glance] box gives us the SSG's recommendation. Based on our predictions, the SSG is saying that the stock is in the Buy Zone. We will skip the reasoning behind how the Buy, Hold, and Sell zones are calculated and how recommendations are made. We refer you to the vast educational resources available on the BetterInvesting.org website to learn more. As mentioned, our goal was to simply give you a sip from the Stock Selection Guide firehose and whet your appetite to join an investment club.

One common criticism of the SSG is that you can, "torture it to give you the recommendation you want." Depending upon your judgments and predictions, the SSG will tell you that the stock is a Buy, a Hold, or a Sell. No tool is perfect. Similar to the valuation tools we learned in class, once you have done all your calculations and predictions, we strongly urge you to throw them all away, ignore the SSG recommendation, and ask yourself that simple question, "Do I want to own this company for the long term?"

In any event, we hope this brief overview of BetterInvesting.org and their powerful Stock Selection Guide will motivate you to explore and possibly join their world. In my humble opinion, the absolute best benefit from BetterInvesting.org is simply

networking and fellowshipping with individuals who have the same love of researching and investing as you do.

Note: This Stock Selection Guide was done in the spring of 2022. As mentioned, it has not been updated for 2025. We leave it to the reader to see run their own SSG for 2025 and beyond. Also as mentioned, Medifast's earnings and stock prices both took nosedives. Instead of the coveted "up, straight, and parallel" pattern, in April 2025, the graph was decidedly "down, straight, and parallel." If your goal is to achieve a 15% rate of return, then this kind of unlucky behavior from your investments is to be expected. Do you want to eat well or do you want to sleep well?

Addendum B: Internal Rate of Return and Net Present Value

"*Net Present Value?! I barely understand what the baffling terms Internal Rate of Return and Present Value mean. Now you want to confuse me more? What is Net Present Value?!*" Relax. Again, the words are more bewildering than the actual concept and its usage. In this addendum, we are going to give you an idea of what you will see if you ever take an upper-division or graduate level finance class at the university. You know those types of classes? They are similar to taking a swimming class where they teach you all about swimming but you never jump in the water or a driver's education class where you learn all about cars but never get behind the wheel and venture out onto the roads. We will also see how the Internal Rate of Return is calculated by the computer and understand why we don't ever want to have to do it manually more than once in our lives.

Recall the fundamental assertion in finance that the value of an investment is based upon the Present Value of its future cash flows. In our class, we learned how to compute the Present Value of the future stream of cash flows from stocks and bonds. We started with the dividends and the predicted future stock prices from stocks. We then used interest payments and principal repayments from bonds. However, calculating the Present Value of future cash flows is not limited to just stocks and bonds. Do you remember the original formula for the Dividend Discount Models?

$$Value = \frac{CashFlow_1}{(1+Rate)} + \frac{CashFlow_2}{(1+Rate)^2} + \frac{CashFlow_3}{(1+Rate)^3} + etc.$$

We can use this formula to calculate the Present Value of *any* stream of cash flows from *any* source. The investment could be a real estate venture, or a factory, a bridge, or water project. It could even be a nuclear reactor. We can use the model for any vehicle that will produce income in the future. We saw that calculating the Present Value manually can be tedious and unwieldy. Luckily, we have electronic spreadsheets to do the job for us quickly. The spreadsheets also allow us to change our parameters and assumptions and instantly show us the new results. Very cool!

Let's revisit our Pretzels Unlimited example. We said that Pretzels Unlimited was selling for $22 per share and that we believed they would pay us $2.00 per share in dividends in 2025 and then increase their dividends to $2.20 in 2026, $2.30 in 2027, and $2.30 in 2028. We expected the price to be $27 per share at the end of 2028. Our required rate of return is 12%. We put the years in the first column and the future cash flows in the second column.

Year	Future Cash Flows	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
2025	$2.00	0.893	$1.786
2026	$2.20	0.797	$1.7534
2027	$2.30	0.712	$1.6376
2028	$2.30 + $27 = $29.30	0.636	$18.6348
		Total:	≅ $23.81

We manually found the Present Value multipliers for years 1 through 4 at 12% in the present value table. We then multiplied the future cash flows by the Present Value multipliers to compute the Present Values, also called the Discounted Cash Flows, in the last column. Last, we summed the Discounted Cash Flows in the last column to compute the Present Value for the stock. The model says that we believe that Pretzels Unlimited is worth $23.81 if we require a 12% rate of return. With a market price of only $22, the model says that this stock is possibly an attractive investment for us. (Hopefully, you were able to follow along easily. If not, contact me now! You can't leave our class without understanding and being able to use this model. It is bad for my self-esteem! Plus, what will people say when you tell them you didn't learn how to discount a future stream of income in our Introduction to Investments class? Perish the thought!)

The Present Value tells us what we believe the future stream of income is worth today given our required rate of return. The current market price is what we have to pay for that future stream of income. If the Present Value is roughly equal to or greater than the

current market price, then we predict that it is a potentially good investment and something we should investigate further. If the Present Value is below the market price, then we should either decide to look for a better investment elsewhere or maybe lower our expected return from this particular investment. Recall that the required rate of return is very important because as we change the required rate of return, the Present Value changes, sometimes greatly.

Okay, so what is Net Present Value? Net Present Value, often abbreviated NPV, takes into account all cash flows, both positive and negative. Cash inflows are what we call the money that we receive from an investment. Cash outflows are payments that we have to make to purchase or maintain an investment. If the Net Present Value is positive, then it may be a potentially good investment for us. Contrariwise, if the Net Present Value is negative, then it may not be a potentially good investment for our required rate of return. Net Present Value is much more popular when you get to upper division and graduate level finance classes at the university.

To calculate the Net Present Value for Pretzels Unlimited, we need to add a row for the initial $22 purchase of the stock. The present value multiplier is 1.000 because we are buying the stock now, in the present.

Year	All Cash Flows, Negative and Positive	Present Value Multipliers$_{12\%}$	Discounted Cash Flows
	($22.00)	1.000	($22.00)
2025	$2.00	0.893	$1.786
2026	$2.20	0.797	$1.7534
2027	$2.30	0.712	$1.6376
2028	$2.30 + $27 = $29.30	0.636	$18.6348
		Total:	≅ $1.81

The Net Present Value is positive because the Present Value of the future cash flows is greater than the market price, our initial cash outflow. When a project has a positive Net Present Value, the model is telling us that we have a potentially good investment for our required rate of return. If the Net Present Value is negative, then the model is suggesting that we might not get the rate of return that we desire. We might decide to lower our required rate of return or discontinue our research into this particular investment. Either way, as we have emphasized repeatedly, this calculation is not the end of our research. It is only the beginning.

Are you sick and tired of calculating the Present Value using the Present Value tables? Good! That means you know how to calculate Present Value and understand what it means to discount a stream of future cash flows and I have done my job. (Hey! It is easier than using the formula with the exponents, right?) But you also know how to use an even easier way! Spreadsheets calculate Present Value for us without breaking a sweat

This brings us back to Internal Rate of Return, the very popular measure that business people and investors use when measuring the rate of return from a stream of future income. As mentioned, you will learn how to compute the Internal Rate of Return manually if you go on to an upper division or graduate level finance class at the university. Specifically, the Internal Rate of Return is the rate of return where the Net Present Value equals zero. *"Huh? What?"* Let's see if using a spreadsheet can help us understand this concept more easily.

Let's translate the table above into an electronic spreadsheet:

Net Present Value	12.00%	Required Rate of Return

Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.893	1.79	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.797	1.75	$2.20 dividend paid during 2026
2027	2.30	0.712	1.64	$2.30 dividend paid during 2027
2028	29.30	0.636	18.62	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ 1.80	**Net Present Value = sum of (all discounted cash flows)**

In this spreadsheet, we enter the Required Rate of Return at the top and then the expected future cash flows, both positive and negative in the second column. The spreadsheet does all the rest of the calculations and gives us a Net Present Value of $1.80. (The result is a penny off from our previous result because the spreadsheet is using 20 digits of accuracy for the present value multipliers where we only used 3 digits of accuracy from the present value table.)

Again, because the Net Present Value is positive, the model is saying that our investment is a potentially good one for us if we require a rate of return of 12%. But what if we required a rate of return of 16%? Let's see what the new Net Present Value would be.

Net Present Value	16.00%	Required Rate of Return

Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.862	1.72	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.743	1.63	$2.20 dividend paid during 2026
2027	2.30	0.641	1.47	$2.30 dividend paid during 2027
2028	29.30	0.552	16.18	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ (0.99)	**Net Present Value = sum of (all discounted cash flows)**

With a required rate of return of 16%, the Net Present Value has swung from a positive $1.80 to a negative 99¢. The model is telling us, given the expected future cash flows, we won't receive a rate of return of 16%. But do you also see what else happened? The Net Present Value is now closer to zero. Recall that we stated that the Internal Rate of Return is the rate of return where the Net Present Value equals zero. By choosing different required rates of return, we can converge upon the required rate of return where the Net Present Value is equal to zero. Let's try 14%.

Net Present Value	14.00%	Required Rate of Return

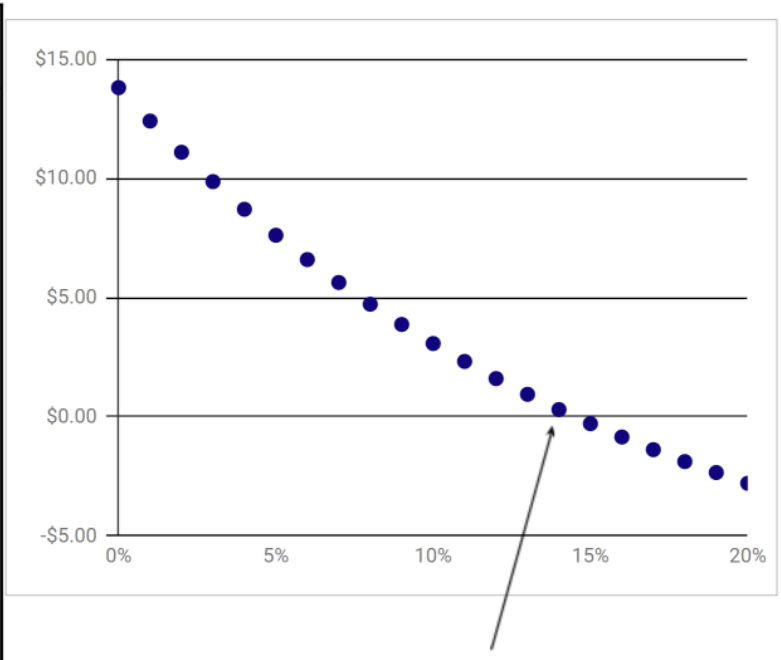
Year	Cash Flows	PVM	Discounted Cash Flows	Market Price of Stock = $22
	$ (22.00)	1.000	$ (22.00)	$22.00 initial purchase of stock (cash outflow)
2025	2.00	0.877	1.75	$2.00 dividend paid during 2025 (cash inflows)
2026	2.20	0.769	1.69	$2.20 dividend paid during 2026
2027	2.30	0.675	1.55	$2.30 dividend paid during 2027
2028	29.30	0.592	17.35	$2.30 dividend paid in 2028 & $27 Value of Stock
			$ 0.35	**Net Present Value = sum of (all discounted cash flows)**

Aha! We have swung back to a positive Net Present Value and this time our result is even closer to zero. We are now only 35¢ away from zero. We are converging upon the required rate of return where the Net Present Value will be equal to zero. When we finally hit that point, we will have found the Internal Rate of Return.

And now you understand why we don't ever want to have to calculate the Internal Rate of Return manually. We have to iteratively compute Net Present Values until we reach the required rate of return where the Net Present Value is zero. That is why we have computers. We let the computer do the grunt work. All we do is enter the Required Rate of Return and the future cash flows.

Another way of computing Internal Rate of Return is to create a graph from a table of Net Present Values.

Rate	Net Present Values
0%	$13.80
1%	12.40
2%	11.09
3%	9.86
4%	8.70
5%	7.61
6%	6.59
7%	5.63
8%	4.72
9%	3.87
10%	3.07
11%	2.32
12%	1.60
13%	0.94
14%	0.30
15%	(0.29)
16%	(0.85)
17%	(1.38)
18%	(1.88)
19%	(2.34)
20%	$(2.79)



(The Internal Rate of Return is the point where Net Present Value = 0.)

On the left, we have constructed a table of the Net Present Values for required rates of return from 0% to 20%. We then graphed the table on the right. Do you see where the Net Present Value is equal to zero? It appears to be at approximately 14.5%. Let's use the Internal Rate of Return spreadsheet function, =IRR, to calculate the Internal Rate of Return precisely.

Year	Cash Flows	Internal Rate of Return Spreadsheet Function
	$ (22.00)	Purchase stock for $22 at beginning of year
2025	2.00	$2.00 dividend paid during 2025
2026	2.20	$2.20 dividend paid during 2026
2027	2.30	$2.30 dividend paid during 2027
2028	$ 29.30	$2.30 dividend paid during 2028 & stock sold at end of 2028 for $27
	14.51%	Internal Rate of Return =IRR(cash_flows,guess) or =IRR(B2:B6,0.12)

The spreadsheet took our cash flows, both positive and negative, and our guess of a 12% Internal Rate of Return, and then did all the busy work to produce an Internal Rate of Return of 14.51%. Aren't you glad we have spreadsheets? I sure am!

Let's turn our attention to bonds. The following spreadsheet is showing the Internal Rate of Return for a 10-year, 8% bond selling for $1,200.

10-Year Bond – Net Present Value & Internal Rate of Return

Year	Cash Outflow / Inflow		
	$ (1,200.00)	Fixed Rate:	8.00%
		Price:	$1,200.00
2025	80.00		
2026	80.00		
2027	80.00	Interest Each Year	
2028	80.00		
2029	80.00		
2030	80.00		
2031	80.00		
2032	80.00		
2033	80.00		
2034	$ 1,080.00	Bond matures – Receive interest and $1,000 principal repayment	
	5.36%	Internal Rate of Return =IRR(cash_flows, guess) – More precise YTM	
	5.45%	Our Yield-to-Maturity Approximation Formula	
	$0.00	Net Present Value =NPV(IRR_YTM,cash_flows) – Always zero! (Why?)	

The Internal Rate of Return is 5.36%. The approximation formula that we learned in chapter 9 returns 5.45%. Pretty close, huh? But the curious feature about this spreadsheet is that no matter how we play with the parameters of the bond, the Net Present Value will always be zero. Why is that? Recall that the Internal Rate of Return is the rate of return where the Net Present Value is zero. If we use the Internal Rate of Return to compute the Net Present Value as we did here, by definition, we are going to receive zero. This is yet another confirmation that bonds are indeed boring.

Now, let's take a look at a real estate investment.

Internal Rate of Return Example - Duplex

Year	Cash Outflows / Inflows	
	(800,000)	Purchase duplex for $800,000 cash (?)
2025	48,000	
2026	50,400	Stream of rental income (growing at 5% per year)
2027	52,920	
2026	55,566	
2028	58,344	
⋮	⋮	
2052	179,206	
2053	188,166	
2054	2,197,575	Rent for 30th year and sell at end of 30 years (?)
	10.34%	Internal Rate of Return
	$33,491.11	Net Present Value @ 10%

The price of real estate in the San Diego area is insane. As of May 2025, one can find a small duplex in the suburban city of Chula Vista, just south of San Diego, for approximately $800,000. Let's assume that the two two-bedroom units will produce $2,000 each after expenses and that rents will increase at an annual rate of 5%. Although difficult to believe, this has been the reality, especially recently. Let's also assume that we are paying cash for the duplex. For our expected price of the property in 30 years, let's throw a number into the air and say that we believe it will be worth $2,000,000. If we required a 10% rate of return, the spreadsheet tells us that the Net Present Value will be over $33,000 and the investment will produce an Internal Rate of Return of $10.34%.

Do you see any problems with our assumptions? First, is it reasonable to assume that rents will increase 5% yearly for 30 years? Is it believable that a duplex house will be worth $2,000,000 in 30 years? These are dubious predictions at best. However, the most glaring problem with our assumptions is that we purchased the duplex with cash. Most real estate investors use leverage. (There's

that word again!) They borrow most of the purchase price of the real estate investment. Currently, lenders typically want at least 25% down for investment properties. That means our would-be investor will only need to put $200,000 down. Add about $15,000 for miscellaneous closing costs and we need $215,000 to make the purchase. We will then have $600,000 mortgage which at about 6% will cost us around $3,600 per month. Let's update the spreadsheet.

Internal Rate of Return Example - Duplex

Year	Cash Outflows / Inflows	
	(215,000)	Purchase duplex with $215,000, $600,000 mortgage
2025	4,800	
2026	5,040	Stream of rental income (growing at 5% per year)
2027	5,292	
2026	5,557	
2028	5,834	
⋮	⋮	
2052	17,921	
2053	18,817	
2054	2,019,757	Rent for 30th year and sell at end of 30 years (?)
	9.34%	Internal Rate of Return
	($25,600.53)	Net Present Value @ 10%

Ooops! Our Internal Rate of Return fell to 9.34% and our Net Present Value is now negative. What happened? We are sharing our investment returns with the bank! The 30-year mortgage reduced our net income substantially from $48,000 to $4,800 in the first year alone. Also, if we are to be realistic, we must come to the conclusion that real estate prices in the San Diego area are simply out of control and we are most likely in yet another real estate bubble. We have been here before and we will be here again. As interest rates rise and a possible recession comes, we can expect prices to fall and in some areas, they will fall hard. Of course, as Sir John Maynard Keynes is reported to have said, "The market can stay irrational longer than you can stay solvent." We do know that bubbles eventually pop and that is when the opportunities are plenty. Stay tuned!

Note: Recently, many private equity firms such as The Blackstone Group, with hundreds of billions of dollars backing them have been buying local residential real estate properties nationwide. They pay for the properties with cash and have been crowding out the local buyers. Many local advocates have been sounding the alarm about this nationwide trend and are arguing that these private equity firms are putting profits over people. Where does a capitalist society draw the line regarding the welfare of a community and the quest for profits? Again, stay tuned!

Let's now take a look at investments with a whole lot more zeros at the end of the numbers. Say a local government wants to build a bridge that would increase economic activity dramatically. The city believes that commuters and businesses alike would be more than willing to pay to use the bridge. Let's say that the bridge will cost $250,000,000 to build. It is initially projected to bring in revenues of $25,000,000 per year and that revenue will increase by 1% each year. However, the projected lifespan of the bridge is only 40 years. It will need be to be dismantled. That is projected to cost $100,000,000 in 40 years. We need to include that cash outflow at the very end of the project's life. Here is the spreadsheet:

Toll Bridge -- Initial Outflow, Cash Inflows, Final Dismantling Cost (Outflow)

Year	Cash Outflow / Inflow	Rate: 10%
	$ (250,000,000)	Initial outflow to build bridge
2025	$ 25,000,000	
2026	$ 25,500,000	
2027	$ 26,010,000	Cash inflows from tolls increasing 1% per year
2028	$ 26,530,200	
2029	$ 27,060,804	
2030	$ 27,602,020	
⋮	⋮	
2061	$ 52,017,127	
2062	$ 53,057,470	
2063	$ 54,118,619	
2064	$ (100,000,000)	Bridge must be decommissioned and dismantled
	11.69%	Internal Rate of Return =IRR(cash_flows, guess)
	$ 41,132,360	Net Present Value =NPV(required_rate_of_return,cash_flows)

With a required rate of return of 10%, the Net Present Value is positive at over $41 million and the Internal Rate of Return is over 11%. Assuming the bridge is as popular as expected, the bridge will not only be boon to the city's economy, it will also be economically prosperous for the bridge authority or private company that owns the bridge. This same analysis can be done for water project, factories, airports, nuclear reactors, or any large-scale endeavor that needs significant funding to be built.

Hmmm. Something might have been nagging at you as you worked through this example. Where did the initial $250,000,000 come from to build the bridge? Give yourself a gold star if that is what was nagging at you. Did they hold bake sales at the local schools and churches? No, they sold bonds. We need to include the interest and principal payments for the bonds in our analysis. Also, the bridge authority is going to have to build up funds for the dismantling of the bridge after the 40 years. Do these types of investments pique your interest? If so, there is a future for you in corporate and municipal finance, Dear Students!

Last, we must address an issue with the Internal Rate of Return that is very important. Sometimes, the results from our calculations simply don't make sense. Sometimes, there is no result. Other times, there is more than one result. When this happens, there are a couple of ways to tackle the problem. At times, we can use our common sense to determine which is the correct result. Other times, we can create a table and graph as we did with our first example. And sometimes, we are just left with no result. Oh, well. This is why the Internal Rate of Return spreadsheet function sometimes comes back with an error message saying it could not find an Internal Rate of Return.

Here is a great example of a common-sense result and an absurd result from the Internal Rate of Return calculations:

But IRR can sometimes give you bizarre results …

	Investment #1	Investment #2
2025	$ (10,000)	$ 10,000
2026	$ 15,000	$ (15,000)
	50%	50%

Which investment would you rather have?

With Investment #1, you pay $10,000 this year and receive $15,000 next year. Pretty darned good, eh? Investment #2 pays you $10,000 this year but you are required to pay back $15,000 next year. Ah, no thanks, you say. However, the calculations for Internal Rate of Return for the two investments both produce an Internal Rate of Return of 50%. The moral of the story is to always check our Internal Rate of Return calculations for common sense results. If in doubt, create a table and graph.

So, what's the bottom line on Present Value, Net Present Value, and Internal Rate of Return? How does having a spreadsheet change the way we do our calculations? The quick answer is, "Not much!" But spreadsheets make calculating Present Value or Net Present Value, whichever you prefer, and Internal Rate of Return much, much easier and faster. And it gives you an extremely precise result when calculating your rate of return from a stream of future income, which is exactly what we do not want you to rely on!

"*Uh, why not?*" you ask. Because unless you are calculating the return from a very predictable source (example: bonds), precision is your enemy! Never forget that you are predicting the future and as the old saying goes, "Prediction is difficult, especially about the future!" (You really were not expecting us to end without warning you yet again to never put too much faith in our predictions, right?)

Bibliography: Books to Read

Bibliography: Books to Read (ah, eventually...)

There are dozens and dozens of books about investing. However, only a few stand the test of time. If you are going to read any book or books before beginning your investing journey, the first three books are the best choices, in my humble opinion. The rest are books that either are dedicated to investing or financial planning and literacy, except for the last book. The last book is something very special and unusual. You can get all these books at your local library. You can even download them to your mobile device. Do it. Read! (Psst. It will give you an unfair advantage over your fellow students.)

One Up On Wall Street, Peter Lynch
We discuss Mr. Peter Lynch in the text and in the class. He was the portfolio manager of the Fidelity Magellan Fund from 1977 to 1990. During those 13 years, he posted average annual returns of 29% – unbelievable! When his first book was released the critics were ready to pounce on it as a self-idolizing piece of fluff. Nothing could be further from the truth! In this easy-to-read and thoroughly enjoyable book, Mr. Lynch makes a strong case for owning stocks and "buying what you know." He has a delicious sense of self-deprecating humor that puts the reader at ease. Everyone should read this book!

A Random Walk Down Wall Street, Burton Malkiel
Professor Burton Malkiel was one of the pioneers in the academic research that produced the Efficient Market and Random Walk theories of investing. He eventually served on the board of Vanguard Funds and was involved in the creation of the famous Vanguard 500 index fund in the mid-1970's. Like Mr. Lynch, Professor Malkiel has a wonderful sense of humor and takes no prisoners! He skewers the Fundamental Analysis theory of investing, the Technical Analysis theory of investing, and even his own Efficient Market and Random Walk theories. Everyone is fair game! If you don't want to read *One Up On Wall Street* as your first book, this is the next best choice.

The Intelligent Investor, Benjamin Graham with commentary by Jason Zweig
Eventually, every prudent, long-term investor must read *The Intelligent Investor* by Mr. Benjamin Graham. However, don't make this your first book to read. I am warning you! Mr. Graham's prose is very difficult to penetrate at times. That is why starting with the most recent editions, after every chapter, the very capable finance and investment writer, Mr. Jason Zweig, offers a commentary on Mr. Graham's concepts and recommendations. We will quote from this book often. Mr. Graham was Mr. Warren Buffett's teacher and mentor. We will see that Mr. Buffett has taken the teachings to heart and used them to become one of the best investors the world has ever seen.

Security Analysis, Benjamin Graham and David Dodd
Mr. Graham and Mr. Dodd wrote *Security Analysis* before Mr. Graham wrote *The Intelligent Investor*. It is often credited with creating the concept of "value investing." Indeed, Mr. Graham is often called the "Father of Value Investing." Once you have digested *The Intelligent Investor*, you can dig into this scholarly tome.

Wall Street People, Charles D. Ellis with James R. Vertin
Who doesn't like a good story?! Although this book is a bit outdated, it contains a treasure trove of stories about the men and women – mostly men but we are changing this situation, right, Ladies? – that populate the investment world. Some are heroes, some are villains, some are just regular folks trying to do the best they can in a high stress world, all are interesting. In addition, please note that anything that "Charley" writes is worth reading. Mr. Ellis is also noted for his coining of the term "The Loser's Game" for short-term speculation and trading of securities.

Beating the Street, Peter Lynch
Mr. Lynch's second book is not as groundbreaking as his first. However, it still is chock full of good stories and tips and techniques from the master and worthy of your attention.

Learn to Earn: A Beginner's Guide to Investing and Business, Peter Lynch
We may have the story wrong but my understanding is that the folks at BetterInvesting.org asked Mr. Lynch to create a "how-to manual" using his concepts and techniques that he introduced in his first two books. BetterInvesting.org is the organization that sponsors investment clubs.

Any Book Written By, Michael Lewis

Michael Lewis is an awesome writer. Anything he has written is worth your time and attention. I am especially fond of *Flash Boys* as it shows you just how outgunned we retail investors are against the vast resources of the big boys and girls on Wall Street. His most famous books are *The Big Short* and *Moneyball*, both of which have been turned into movies. Again, read anything this man has written. John Williams of the New York Times Book Review wrote, "I would read an 800-page history of the stapler if he wrote it."

Thinking Fast and Slow, by Daniel Kahneman

For several decades, economists and academicians believed that investors and markets were rational and the investors always behaved in their best financial interests. It took a pair of psychologists to show them just how wrong they were. Daniel Kahneman and his long-time associate, Amos Tversky, turned the field of economics on its head by showing that markets and investors were anything but rational. Dr. Kahneman won the Nobel Memorial Prize in Economics Science in 2002. (Sadly, Dr. Tversky died six years before and the Nobel Prize is not awarded posthumously.)

How to Make Money in Wall Street, Louis Rukeyser

Before CNBC and TheStreet.com and Marketwatch.com, and Yahoo Finance, the only widely broadcast show about investing was *Wall Street Week with Louis Rukeyser*. For over 30 years, it aired on that Socialist, Communist, Pinko, *LIBERAL* network known as PBS. This book may be hard to find but it is tremendous fun to read. Not only does Mr. Rukeyser discuss important investing concepts with great clarity, you also get a history lesson of what it was like to invest before the Internet.

Extraordinary Popular Delusions and the Madness of Crowds, Charles McKay

This classic opus was published in the 1840's. However, *Extraordinary Popular Delusions and the Madness of Crowds* is still as shocking now as it was almost 200 years ago. Mr. McKay discusses some of the financial improprieties of the previous centuries along with some of the other insane misadventures of humanity such as witchcraft and the Crusades. As one student put it, "It is easier to fool a million people than it is to fool one." QAnon, anyone?

The Wealthy Barber, David Chilton

The next two books are more about personal financial planning and literacy although they have a bit about investing. *The Wealthy Barber* is still the easiest to read and most enjoyable personal financial planning book Your Humble Author has ever come across. The numbers are all out of date but the concepts are timeless. Most importantly, Mr. Chilton's jokes are even worse than mine. Who could ask for more?

The Millionaire Next Door, Thomas Stanley & William Danko

When this book was first published in the mid-1990's, it shattered many of the myths about millionaires. It also spawned a whole host of copy-cat books, none of which have the clarity and weight of *The Millionaire Next Door*. Learn about how millionaires really build their wealth. Those of you starting young and following the concepts, techniques, and skills in our class will be joining their ranks eventually … unless the world ends. (If that happens, oh, well! Meet you at the beach. I'll bring the vodka. You bring the marshmallows.)

The Hero with a Thousand Faces, Joseph Campbell

If there is one book you should read in your lifetime, it is this one. Mr. Campbell has created a "how-to" manual for humans. In *The Hero with a Thousand Faces*, we learn that we are all heroes on an adventure. That adventure is what we call life. We see how the world's major religions are calling to us from thousands of years ago. They hope we learn how not to waste this precious gift that we have been given. And if that does not pique your interest, it is also the book that George Lucas used to create *Star Wars*. Mr. Campbell was on the sets of the first three *Star Wars* movies as a consultant. Oh, by the way, although they won't acknowledge it publicly, Disney has stolen from Mr. Campbell many times, the most egregious being *The Lion King*.