Morningstar Investing Classroom

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Introduction

We all have financial goals in life: to pay for college for our children, to be able to retire by a reasonable age, to buy the things we want. Unfortunately, spending less than we earn is typically not enough for us to reach our goals. We have to do more; we have to invest our savings and put our money to work. Stocks are quite simply one of the best ways to make your investment dollars work the hardest.

Investing in stocks is not rocket science. The only real characteristics shared among successful stock investors are basic math skills, a critical eye, patience, and discipline. Combine these with an understanding of how money flows and how businesses compete with one another, along with a dash of accounting knowledge, and you have all the mental tools needed to get started. We will teach you all these in this workbook series.

Although you don't need an advanced college degree to invest in stocks, selecting stocks is nevertheless an intellectual exercise. It requires effort, but it can bear many fruits. After all, investing in stocks not only leads to potentially higher returns on your investment dollars, it also leads to a greater understanding of how the world works.

What Is a Stock?

Perhaps the most common misperception among new investors is that stocks are simply pieces of paper to be traded. This is simply not the case. In stock investing, trading is a means, not an end.

A stock is an ownership interest in a company. A business is started by a person or small group of people who put their money in. How much of the business each founder owns is a function of how much money each invested. At this point, the company is considered "private." Once a business reaches a certain size, the company may decide to "go public" and sell a chunk of itself to the investing public. This is how stocks are created.

When you buy a stock, you become a business owner. Period. Over the long term, the value of that ownership stake will rise and fall according to the success of the underlying business. The better the business does, the more your ownership stake will be worth.

Why Invest in Stocks

Stocks are but one of many possible ways to invest your hard-earned money. Why choose stocks instead of other options, such as bonds, rare coins, or antique sports cars? Quite simply, the reason that savvy investors invest in stocks is that they provide the highest potential returns. And over the long term, no other type of investment tends to perform better.

On the downside, stocks tend to be the most volatile investments. This means that the value of stocks can drop in the short term. Sometimes stock prices may even fall for a protracted period. For instance, the 10-year return for the S&P 500 was slightly negative as recently as late 2010, largely due to the 2008 financial crisis and the early 2000s tech bubble bursting. Bad luck or bad timing can easily sink your returns, but you can minimize this by taking a long-term investing approach.

There's also no guarantee you will actually realize any sort of positive return. If you have the misfortune of consistently picking stocks that decline in value, you can lose money, even over the long term!

Of course, we think that by educating yourself and using the knowledge in this Investing Classroom, you can make the risk acceptable relative to your expected reward. We will help you pick the right businesses to own and help you spot the ones to avoid. Again, this effort is well worth it, because over the long haul, your money can work harder for you in equities than in just about any other investment.

Your Investment Choices

Let's see how stocks stack up to some of your other investment options:

Mutual Funds. Stock mutual funds can offer similar returns to investing in stocks on your own, but without all the extra work. When you invest in a fund, your money is pooled with that of other investors, and then it is managed by a group of professionals who try to earn a return by selecting stocks for the pool.

Beyond requiring much less effort, one key advantage of funds is that they can be less volatile. Simple statistics says that a portfolio is going to experience less volatility than the individual components of the portfolio. After all, individual stocks can and sometimes do go to zero, but if a mutual fund held 50 stocks, it would be very unlikely that all 50 of those stocks become worthless.

The flipside of this reduced volatility is that fund returns can be muted relative to individual stocks. In investing, risk and return are intimately correlated—reduce one, and odds are you will reduce the other. Another disadvantage to offloading all the effort of picking individual stocks is that you must pay someone else for this service. The professionals running mutual funds do not do so for free. They charge fees, and fees eat into returns.

Plus, the more money you have invested in mutual funds, the larger the absolute value of fees you will pay every year. For instance, paying 1% a year in fees on a $1,000 portfolio is not a big deal, but it's a much larger deal if the portfolio is worth $500,000. In the past, mutual funds often made the most sense for those with relatively small amounts to invest because they were the most cost-efficient. But with the advent of $10 (or less) per-trade commissions on stocks, this is no longer necessarily the case.

Just as picking the wrong stock is a risk, so is picking the wrong fund. What if the group of people you selected to manage your investment does not perform well? Just like stocks, there is no guarantee of a return in mutual funds.

It's also worth noting that investing in a mix of mutual funds and stocks can be a perfectly prudent strategy. Stocks versus funds (or any other investment vehicle) need not be an either/or proposition.

Bonds. At their most basic, bonds are loans. When you buy a bond, you become a lender to an institution, and that institution pays you interest. As long as the institution does not go bankrupt, it will also pay back the principal on the bond, but no more than the principal.

There are two basic types of bonds: government bonds and corporate bonds. U.S. government bonds (otherwise known as T-bills or Treasuries) are issued and guaranteed by Uncle Sam. They typically offer a modest return with low risk. Corporate bonds are issued by companies and carry a higher degree of risk (should the company default) as well as return.

Bond investors must also consider interest rate risk. When prevailing interest rates rise, the market value of existing bonds tends to fall. (The opposite is also true.) The only way to alleviate interest rate risk is by holding the bond to maturity. Investing in corporate bonds also tends to require just as much homework as stock investing, yet bonds generally have lower returns.

Given their lower risk, there is certainly a place for bonds or bond mutual funds in most portfolios, but their relative safety comes with the price of lower expected returns compared with stocks over the long term.

Real Estate. Most people's homes are indeed their largest investments. We all have to live somewhere, and a happy side effect is that real estate tends to appreciate in value over time. But if you are going to use real estate as a true investment vehicle by buying a second home, a piece of land, or a rental property, it's important to keep the following in mind.

First, despite the strong historical appreciation, real estate can and does decline in value, as the home price bubble painfully demonstrated to Americans in 2008. Second, real estate taxes will constantly eat into returns. Third, real estate owners must worry about physically maintaining their properties or must pay someone else to do it. Likewise, they often must deal with tenants and collect rents. Finally, real estate is rather illiquid and takes time to sell—a potential problem if you need your money back quickly.

Some people do nothing but invest their savings in real estate and do quite well. But just as stock investing requires effort, so does real estate investing.

Bank Savings Accounts. The problem with bank savings accounts and certificates of deposit is that they offer very low returns. The upside is that there is essentially zero risk in these investment vehicles, and your principal is protected. These types of accounts are fine as rainy-day funds—a place to park money for short-term spending needs or for an emergency. But they really should not be viewed as long-term investment vehicles.

The low returns of these investments are a problem because of inflation. For instance, if you get a 3% return on a savings account, but inflation is also dropping the buying power of your dollar by 3% a year, you really aren't making any money. Your real return (return adjusted for inflation) is zero, meaning that your money is not really working for you.

The Bottom Line

Though investing in stocks may indeed require more work and carry a higher degree of risk compared with other investment opportunities, you cannot ignore the higher potential return that stocks provide. And as we will show in the next lesson, given enough time, a slightly higher return on your investments can lead to dramatically larger dollar sums for whatever your financial goals in life may be.

102: The Magic of Compounding

Introduction

When you were a kid, perhaps one of your friends asked you the following trick question: "Would you rather have $10,000 per day for 30 days or a penny that doubled in value every day for 30 days?" Today, we know to choose the doubling penny, because at the end of 30 days, we'd have about $5 million versus the $300,000 we'd have if we chose $10,000 per day.

Compound interest is often called the eighth wonder of the world, because it seems to possess magical powers, like turning a penny into $5 million. The great part about compound interest is that it applies to money, and it helps us to achieve our financial goals, such as becoming a millionaire, retiring comfortably, or being financially independent.

The Components of Compound Interest

A dollar invested at a 10% return will be worth $1.10 in a year. Invest that $1.10 and get 10% again, and you'll end up with $1.21 two years from your original investment. The first year earned you only $0.10, but the second generated $0.11. This is compounding at its most basic level: gains begetting more gains. Increase the amounts and the time involved, and the benefits of compounding become much more pronounced.

Compound interest can be calculated using the following formula:

FV = PV (1 + i)^N

FV = Future Value (the amount you will have in the future)
PV = Present Value (the amount you have today)
i = Interest (your rate of return or interest rate earned)
N = Number of Years (the length of time you invest)

Who Wants to Be a Millionaire?

As a fun way to learn about compound interest, let's examine a few different ways to become a millionaire. First we'll look at a couple of investors and how they have chosen to accumulate $1 million.

1. Jack saves $25,000 per year for 40 years.
2. Jeff starts with $1 and doubles his money each year for 20 years.

While most would love to be able to save $25,000 every year like Jack, this is too difficult for most of us. If we earn an average of $50,000 per year, we would have to save 50% of our salary!

In the second example, Jeff uses compound interest, invests only $1, and earns 100% on his money for 20 consecutive years. The magic of compound interest has made it easy for Jeff to earn his $1 million and to do it in only half the time as Jack. However, Jeff's example is also a little unrealistic since very few investments can earn 100% in any given year, much less for 20 consecutive years.

TIP: A simple way to know the time it takes for money to double is to use the rule of 72. For example, if you wanted to know how many years it would take for an investment earning 12% to double, simply divide 72 by 12, and the answer would be approximately six years. The reverse is also true. If you wanted to know what interest rate you would have to earn to double your money in five years, then divide 72 by five, and the answer is about 15%.

Time Is on Your Side

Between the two extremes of Jeff and Jack, there are realistic situations in which compound interest helps the average individual. One of the key concepts about compounding is this: The earlier you start, the better off you'll be. So what are you waiting for?

Let's consider the case of two other investors, Luke and Walt, who'd also like to become millionaires. Say Luke put $2,000 per year into the market between the ages of 24 and 30, that he earned a 12% aftertax return, and that he continued to earn 12% per year until he retired at age 65. Walt also put in $2,000 per year, earned the same return, but waited until he was 30 to start and continued to invest $2,000 per year until he retired at age 65. In the end, both would end up with about $1 million. However, Luke had to invest only $12,000 (i.e., $2,000 for six years), while Walt had to invest $72,000 ($2,000 for 36 years) or six times the amount that Walt invested, just for waiting only six years to start investing.

Clearly, investing early can be at least as important as the actual amount invested over a lifetime. Therefore, to truly benefit from the magic of compounding, it's important to start investing early. We can't stress this fact enough! After all, it's not just how much money you start with that counts, it's also how much time you allow that money to work for you.

In our first example, Jack had to save $25,000 a year for 40 years to reach $1 million without the benefit of compound interest. Luke and Walt, however, were each able to become millionaires by saving only $12,000 and $72,000, respectively, in relatively modest $2,000 increments. Luke and Walt earned $988,000 and $928,000, respectively, due to compound interest. Gains beget gains, which beget even larger gains. This is again the magic of compound interest.

Why Is Compound Interest Important to Stock Investing?

In addition to the amount you invest and an early start, the rate of return you earn from investing is also crucial. The higher the rate, the more money you'll have later. Let's assume that Luke from our previous example had two sisters who, at age 24, also began saving $2,000 a year for six years. But unlike Luke, who earned 12%, sister Charlotte earned only 8%, while sister Rose did not make good investment decisions and earned only 4%. When they all retired at age 65, Luke would have $1,074,968, Charlotte would have $253,025, and Rose would have only $56,620. Even though Luke earned only 8 percentage points more per year on his investments, or $160 per year more on the initial $2,000 investment, he would end up with about 20 times more money than Rose.

Clearly, a few percentage points in investment returns or interest rates can mean a huge difference in your future wealth. Therefore, while stocks may be a riskier investment in the short run, in the long run the rewards can certainly outweigh the risks.

The Bottom Line

Compound interest can help you attain your goals in life. In order to use it most effectively, you should start investing early, invest as much as possible, and attempt to earn a reasonable rate of return.

103: Investing for the Long Run

Introduction

In the last lesson, we noticed that the difference of only a few percentage points in investment returns or interest rates can have a huge impact on your future wealth. Therefore, in the long run, the rewards of investing in stocks can outweigh the risks. We'll examine this risk/reward dynamic in this lesson.

Volatility of Single Stocks

Individual stocks tend to have highly volatile prices, and the returns you might receive on any single stock may vary wildly. If you invest in the right stock, you could make bundles of money. For instance, Monster Beverage (MNST), the maker of the popular energy drink, had the highest 10-year return of all S&P 500 stocks as of October 2012. If you had invested $10,000 in Monster in 2002, your investment would have been worth over $2 million by October 2012.

On the downside, since the returns on stock investments are not guaranteed, you risk losing everything on any given investment. In the early 2000s, there were hundreds of examples of dot-com investments that went bankrupt, and during the 2008 financial crisis, once-storied Lehman Brothers collapsed entirely and Wall Street cornerstone Merrill Lynch was acquired by Bank of America (BAC) at a fraction of its pre-crisis value.

Between these two extremes is the daily, weekly, monthly, and yearly fluctuation of any given company's stock price. Most stocks won't double in the coming year, nor will many go to zero. But do consider that the average difference between the yearly high and low stock prices of the typical stock on the New York Stock Exchange is nearly 40%.

In addition to being volatile, there is the risk that a single company's stock price may not increase significantly over time. For instance, J.C. Penney (JCP) stock has lost more than 7% per year on average over the last three years, declined 13% per year on average over the last five years, and long-term shareholders have suffered an average 3% decline per year over the last 15 years. This compares with a 5% average annual return for the S&P 500 Index over the same time period, and a 6% return for the bond market.

Clearly, if you put all of your eggs in a single basket, sometimes that basket may fail, breaking all the eggs. Other times, that basket will hold the equivalent of a winning lottery ticket.

Volatility of the Stock Market

One way of reducing the risk of investing in individual stocks is by holding a larger number of stocks in a portfolio. However, even a portfolio of stocks containing a wide variety of companies can fluctuate wildly. You may experience large losses over short periods. Market dips, sometimes significant, are simply part of investing in stocks.

For example, consider the Dow Jones Industrials Index, a basket of 30 of the most popular, and some of the best, companies in America. If during the last 100 years you had held an investment tracking the Dow, there would have been 10 different occasions when that investment would have lost 40% or more of its value.

The yearly returns in the stock market also fluctuate dramatically. The highest one-year rate of return of 67% occurred in 1933, while the lowest one-year rate of return of negative 53% occurred in 1931. It should be obvious by now that stocks are volatile, and there is a significant risk if you cannot ride out market losses in the short term. But don't worry; there is a bright side to this story.

Over the Long Term, Stocks Are Best

Despite all the short-term risks and volatility, stocks as a group have had the highest long-term returns of any investment type. This is an incredibly important fact! When the stock market has crashed, the market has always rebounded. And over the very long term, stocks have outperformed bonds on a total real return (after inflation) basis, on average.

If you had deplorable timing and invested $100 into the stock market during any of the seven major market peaks in the 20th century, that investment, over the next 10 years, would have been worth $125 after inflation, but it would have been worth only $107 had you invested in bonds, and $99 if you had purchased government Treasury bills. In other words, stocks have been the best-performing asset class over the long term, while government bonds, in these cases, merely kept up with inflation.

This is the whole reason to go through the effort of investing in stocks. Again, even if you had invested in stocks at the highest peak in the market, your total after-inflation returns after 10 years would have been higher for stocks than either bonds or cash. Had you invested a little at a time, not just when stocks were expensive but also when they were cheap, your returns would have been much greater.

Time Is on Your Side

Just as compound interest can dramatically grow your wealth over time, the longer you invest in stocks, the better off you will be. With time, your chances of making money increase, and the volatility of your returns decreases.

From 1926-2011, the average annual return for the S&P 500 stock index (including reinvested dividends) for a single year has ranged from negative 43% to positive 54%, while averaging about 10%. Five-year average annualized returns have ranged from about negative 12% to positive 24%.

These returns easily surpass those you can get from any of the other major types of investments. Again, as your holding period increases, the expected return variation decreases, and the likelihood for a positive return increases. This is why it is important to have a long-term investment horizon when getting started in stocks.

Why Stocks Perform the Best

While historical results certainly offer insight into the types of returns to expect in the future, it is still important to ask the following questions: Why, exactly, have stocks been the best-performing asset class? And why should we expect those types of returns to continue? In other words, why should we expect history to repeat?

Quite simply, stocks allow investors to own companies that have the ability to create enormous economic value. Stock investors have full exposure to this upside. For instance, in 1985, would you have rather lent Microsoft money at a 6% interest rate, or would you have rather been an owner, seeing the value of your investment grow several-hundred fold?

Because of the risk, stock investors also require the largest return compared with other types of investors before they will give their money to companies to grow their businesses. More often than not, companies are able to generate enough value to cover this return demanded by their owners.

Meanwhile, bond investors do not reap the benefit of economic expansion to nearly as large a degree. When you buy a bond, the interest rate on the original investment will never increase. Your theoretical loan to Microsoft yielding 6% would have never yielded more than 6%, no matter how well the company did. Being an owner certainly exposes you to greater risk and volatility, but the sky is also the limit on the potential return.

The Bottom Line

While stocks make an attractive investment in the long run, stock returns are not guaranteed and tend to be volatile in the short term. Therefore, we do not recommend that you invest in stocks to achieve your short-term goals. To be effective, you should invest in stocks only to meet long-term objectives that are at least five years away. And the longer you invest, the greater your chances of achieving the types of returns that make investing in stocks worthwhile.

104: What Matters and What Doesn't

Introduction

Different people have different notions of what stock investing is all about. Before we go any further, we want to put things into focus and set you on the right path.

Investing Does Not Equal Trading

Your perception of stock investing may involve highly caffeinated, frantic traders sweating in front of a half dozen computer screens packed with information, while phones ring off the hook in the background.

Feel free to dump these images from your mind, because solid stock investing is not about trading, having the fastest computers, or getting the most up-to-the-second information. Though some professionals make their living by creating a liquid market for stocks, actively "day trading" is simply not how most good investing is done by individuals.

Beyond having to expend an incredible amount of effort to track stocks on an hour-by-hour basis, active day traders have three powerful factors working against them. First, trading commissions can rack up quickly, dramatically eroding returns. Second, there are other trading costs in terms of the bid/ask spread, or the small spread between what buyers are bidding and sellers are asking at any moment. These more hidden frictional costs are typically only a small fraction of the stock price, but they can add up to big bucks if incurred often enough. Finally, frequent traders tend not to be tax efficient, and paying more taxes can greatly diminish returns.

Just as someone can be a great racecar driver without being a mechanical engineer, you can be a great investor without having a clue about how the trades actually get executed in the market. How your orders flow from one computer system to the other is of little consequence.

Just remember that investing is like a chess game, where thought, patience, and the ability to peer into the future are rewarded. Making the right moves is much more important than moving quickly.

Investing Means Owning Businesses

If the mechanics of actual trading mean little, what does matter? Do charts of stock prices hold the answers? We've said it once, and we'll say it again and again: When you buy stocks, you are buying ownership interests in companies. Stocks are not just pieces of paper to be traded.

So if you are buying businesses, it makes sense to think like a business owner. This means learning how to read financial statements, considering how companies actually make money, spotting trends, and figuring out which businesses have the best competitive positions. It also means coming up with appropriate prices to pay for the businesses you want to buy. Notice that none of this requires lightning-fast reflexes!

You should also buy stocks like you would any other large purchase: with lots of research, care, and the intention to hold as long as it makes sense. Some people will spend an entire weekend driving around to different stores to save $60 on a television, but they put hardly any thought into the thousands of dollars they could create for themselves by purchasing the right stocks (or avoiding the wrong ones). Again, investing is an intellectual exercise, but one that can have a large payoff.

You Buy Stocks, Not the Market

We've all seen the prognosticators on television, predicting where the market is going to go in the future. One thing to remember when listening to these market premonitions is that stock investing is about buying individual stocks, not the market as a whole. If you pick the right stocks, you can make money no matter what the broader market does.

Another reason to heavily discount what the prognosticators say is that correctly predicting market movements is nearly impossible. No one has done it consistently and accurately. There are simply too many moving parts, and too many unknowns. By limiting the field to individual businesses of interest, you can focus on what you can actually own while dramatically cutting down on the unknowns. You can save a lot of energy by simply tuning out market predictions.

We established in the previous lesson that stocks are volatile. Why is that? Does the value of any given business really change up to 50% year-to-year? (Imagine the chaos if the value of our homes changed this much!) The fact is, "Mr. Market" tends to be a bit of an extremist in the short term, over-reacting to both good and bad news. We will talk more about this phenomenon later, but it is nevertheless a good fact to know when starting.

Competitive Positioning Is Most Important

Future profits drive stock prices over the long term, so it makes sense to focus on how a business is going to generate those future earnings. Competitive positioning, or the ability of a business to keep competitors at bay, is the most important determining factor of future profits. Despite where the financial media may spend most of its energy, competitive positioning is more important than the economic outlook, more important than the near-term flow of news that jostles stock prices, and even more important than management quality at a company.

It may be helpful to think of the investing process as if you were planning a trip across the ocean. You cannot do anything about the current weather or the tides (the current economic conditions). You can try to wait out bad weather that might sink your ship, but then you are also giving up time. And as we've already covered, time is a precious resource in investing.

The main thing you can control is what ship to board. Think of the seaworthiness of a ship as the competitive positioning of a business, and the horsepower of the engine as its cash flow. Some ships have thick, reinforced metal hulls, while others have rotting wood. Clearly, you would pick the ships that are the most seaworthy (with the best competitive positioning) and have the most horsepower (cash flow).

Though the ship's captain (company management) certainly matters, the quality of the ship is more important. On a solid vessel, as long as the captain does not mess up, there is not much difference between a good and a great captain. Meanwhile, there is nothing the best skipper can do if the boat's engine is broken and the boat is constantly taking on water (poor business). To relate this to stocks, business economics trump management skill.

It's also worth noting that all ships will experience waves (volatility). And though it is true that a rising tide lifts all ships, the tides have nothing to do with the quality of the boats on the sea. All else equal, a better ship is still going to arrive faster, and a company with the best competitive positioning is going to create the most value for its shareholders. We will talk about exactly how to spot the best ships in later lessons.

The Bottom Line

It is very easy for new stock investors to get started on the wrong track by focusing only on the mechanics of trading or the overall direction of the market. To get yourself in the proper mind-set, tune out the noise and focus on studying individual businesses and their ability to create future profits. In the coming lessons, we will begin to build the skills you will need to become a successful buyer of businesses.

105: The Purpose of a Company

Introduction

It's worth repeating that when you hold a stock, you own part of a company. Part of being an owner is understanding the financial underpinnings of any given business, and this lesson will provide an introduction.

The main purpose of a company is to take money from investors (their creditors and shareholders) and generate profits on their investments. Creditors and shareholders carry different risks with their investments, and thus they have different return opportunities. Creditors bear less risk and receive a fixed return regardless of a company's performance (unless the firm defaults). Shareholders carry all the risks of ownership, and their return depends on a company's underlying business performance. When companies generate lots of profits, shareholders stand to benefit the most.

As we learned in Lesson 101, at the end of the day, investors have many choices about where to put their money; they can invest it into savings accounts, government bonds, stocks, or other investment vehicles. In each, investors expect a return on their investment. Stocks represent ownership interests in companies that are expected to create value with the money that is invested in them by their owners.

Money In and Money Out

Companies need money to operate and grow their businesses in order to generate returns for their investors. Investors put money--called capital--into a company, and then it is the company's responsibility to create additional money--called profits--for investors. The ratio of the profit to the capital is called the return on capital. It is important to remember that the absolute level of profits in dollar terms is less important than profit as a percentage of the capital invested.

For example, a company may make $1 billion in profits for a given year, but it may have taken $20 billion worth of capital to do so, creating a meager 5% return on capital. This particular company is not very profitable. Another firm may generate just $100 million in profits but only need $500 million to do so, boasting a 20% return on capital. This company is highly profitable. A return on capital of 20% means that for every $1.00 that investors put into the company, the company earns $0.20 per year.

The Two Types of Capital

Before discussing return on capital further, it is important to distinguish between the two types of capital. As we mentioned above, two types of investors invest capital into companies: creditors ("loaners") and shareholders ("owners"). Creditors provide a company with debt capital, and shareholders provide a company with equity capital.

Creditors are typically banks, bondholders, and suppliers. They lend money to companies in exchange for a fixed return on their debt capital, usually in the form of interest payments. Companies also agree to pay back the principal on their loans.

The interest rate will be higher than the interest rate of government bonds, because companies generally have a higher risk of defaulting on their interest payments and principal. Lenders generally require a return on their loans that is commensurate with the risks associated with the individual company. Therefore, a steady company will borrow money cheaply (lower interest payments), but a risky business will have to pay more (higher interest payments).

Shareholders that supply companies with equity capital are typically banks, mutual or hedge funds, and private investors. They give money to a company in exchange for an ownership interest in that business. Unlike creditors, shareholders do not get a fixed return on their investment because they are part owners of the company. When a company sells shares to the public (in other words, "goes public" to be "publicly traded"), it is actually selling an ownership stake in itself and not a promise to pay a fixed amount each year.

Shareholders are entitled to the profits, if any, generated by the company after everyone else--employees, vendors, lenders--gets paid. The more shares you own, the greater your claim on these profits and potential dividends. Owners have potentially unlimited upside profits, but they could also lose their entire investment if the company fails.

It is also important to keep in mind a company's total number of shares outstanding at any given time. Shareholders can benefit more from owning one share of a billion-dollar company that has only 100 shares (a 1% ownership interest) than by owning 100 shares of a billion-dollar company that has a million shares outstanding (a 0.01% ownership interest).

Once a Profit Is Created...

Companies usually pay out their profits in the form of dividends, or they reinvest the money back into the business. Dividends provide shareholders with a cash payment, and reinvested earnings offer shareholders the chance to receive more profits from the underlying business in the future. Many companies, especially young ones, pay no dividends. Any profits they make are plowed back into their businesses.

One of the most important jobs of any company's management is to decide whether to pay out profits as dividends or to reinvest the money back into the business. Companies that care about shareholders will reinvest the money only if they have promising opportunities to invest in--opportunities that should earn a higher return than shareholders could get on their own.

Different Capital, Different Risk, Different Return

Debt and equity capital each have different risk profiles. Therefore, as we showed in Lesson 103, each type of capital offers investors different return opportunities. Creditors shoulder less risk than shareholders because they are accepting a lower rate of return on the debt capital they supply to a company. When a company pays out the profits generated each year, creditors are paid before anyone else. Creditors can break up a company if it does not have sufficient money to cover its interest payments, and they wield a big stick.

Consequently, companies understand that there is a big difference between borrowing money from creditors and raising money from shareholders. If a firm is unable to pay the interest on a corporate bond or the principal when it comes due, the company is bankrupt. The creditors can then come in and divvy up the firm's assets in order to recover whatever they can from their investments. Any assets left over after the creditors are done belong to shareholders, but often such leftovers do not amount to much, if anything at all.

Shareholders take on more risk than creditors because they only get the profits left over after everyone else gets paid. If nothing is left over, they receive nothing in return. They are the "residual" claimants to a company's profits. However, there is an important trade-off. If a company generates lots of profits, shareholders enjoy the highest returns. The sky is the limit for owners and their profits. Meanwhile, loaners keep receiving the same interest payment year in and year out, regardless of how high the company's profits may reach. By contrast, owners keep whatever profits are left over. And the more that is left over, the higher their return on capital.

Return on Capital and Return on Stock

The market often takes a long time to reward shareholders with a return on stock that corresponds to a company's return on capital. To better understand this statement, it is crucial to separate return on capital from return on stock. Return on capital is a measure of a company's profitability, but return on stock represents a combination of dividends and increases in the stock price (better known as capital gains). The two simple formulas below outline the return calculations in more detail:

Return on Capital: Profit / (Invested Capital)
Return on Stock: Shareholder Total Return = Capital Gains + Dividends

The market frequently forgets the important relationship between return on capital and return on stock. A company can earn a high return on capital but shareholders could still suffer if the market price of the stock decreases over the same period. Similarly, a terrible company with a low return on capital may see its stock price increase if the firm performed less terribly than the market had expected. Or maybe the company is currently losing lots of money, but investors have bid up its stock in anticipation of future profits.

In other words, in the short term, there can be a disconnect between how a company performs and how its stock performs. This is because a stock's market price is a function of the market's perception of the value of the future profits a company can create. Sometimes this perception is spot on; sometimes it is way off the mark. But over a longer period of time, the market tends to get it right, and the performance of a company's stock will mirror the performance of the underlying business.

The Voting and Weighing Machines

The father of value investing, Benjamin Graham, explained this concept by saying that in the short run, the market is like a voting machine--tallying up which firms are popular and unpopular. But in the long run, the market is like a weighing machine--assessing the substance of a company. The message is clear: What matters in the long run is a company's actual underlying business performance and not the investing public's fickle opinion about its prospects in the short run.

Over the long term, when companies perform well, their shares will do so, too. And when a company's business suffers, the stock will also suffer. For example, Starbucks (SBUX) has had phenomenal success at turning coffee--a simple product that used to be practically given away--into a premium product that people are willing to pay up for. Over time, Starbucks has enjoyed handsome growth in number of stores, profits, and share price. Starbucks also has a respectable return on invested capital of over 20%.

Meanwhile, Sears (SHLD) has languished. It has had a difficult time competing with discount stores and strip malls, and it has not enjoyed any meaningful profit growth in years. Plus, its return on invested capital rarely tops 10%. As a result, its stock has bounced around without really going anywhere in decades.

The Bottom Line

In the end, stocks are ownership interests in companies. We can't emphasize this fact enough. Being a stockholder is being a partial owner of a company.

Over the long term, a company's business performance and its stock price will converge. The market rewards companies that earn high returns on capital over a long period. Companies that earn low returns may get an occasional bounce in the short term, but their long-term performance will be just as miserable as their returns on capital. The wealth a company creates--as measured by returns on capital--will find its way to shareholders over the long term in the form of dividends or stock appreciation.

106: Gathering Relevant Information

Introduction

Now that you know the definition of a stock and the purpose of a company, how do you go about finding more information about a firm you may be interested in? Because knowledge truly is power when it comes to investing, your success as a stock investor depends on your ability to locate information and determine its importance. In this lesson, we'll point you in the right direction and tell you where to concentrate your efforts.

Sorting Out the Public Filings

At first, public filings may look like alphabet soup, but when researching a company, they are some of the most important documents you will read.

If a company has a stock on a major exchange like the New York Stock Exchange (NYSE), it is required to file certain documents for public consumption with the Securities and Exchange Commission (SEC). The SEC imposes guidelines on what information gets published in these filings, so they are somewhat uniform. Finally, companies are required to file documents in a timely fashion.

Among the public filings available, the most comprehensive and useful document is the 10-K. The 10-K is an annual report that outlines a wealth of general information about a company, including number of employees, business risks, description of properties, and strategies. The 10-K also contains the company's audited year-end financial statements. In addition to possessing crucial facts and figures, the 10-K also includes management's discussion and analysis of the past business year and compares it with preceding years.

We suggest making the 10-K the first stop in your journey to researching a company. How do you find a firm's 10-K? Just visit the SEC Web site, click on "Filings & Forms," and then "Search for Company Filings." After plugging your company's name into the "Companies & Other Filers" search, you can pick the 10-K out of the list of forms. Morningstar.com also has links directly to the SEC Web site. Just enter a company's name or ticker into the search box, and choose the "Filings" tab on the quote page navigation.

What about all those other forms? Some of them are worth a read. For instance, the 10-Q contains some of the same data that you'll find in the 10-K, except that it is published on a quarterly basis. Although it's a little less comprehensive and the financial statements are typically unaudited, the 10-Q is a good way to keep tabs on a company throughout the year.

Another important document is the annual proxy statement, also called DEF 14a. In the proxy, you will find detailed information about executive compensation, the board of directors, and the shareholder voting process. The proxy is a must read for gaining better insight into the corporate governance of the company you're researching and determining your rights as a potential shareholder.

If you're interested in a recent event, typically associated with an earnings release or major company announcement, you can find the details in the most recent 8-K. Also, you may want to occasionally peruse the Form 4's to see if insiders have been trading company stock. Every time company insiders make a transaction in company stock, they are required to file the Form 4, allowing you a peek into whether they are buying or selling shares. While an insider's trading activity may be no smarter than your own, it can at least reveal if management's investment behavior is consistent with its tone.

Making the Most of a Company Web Site

Another source of information is the company itself. Just plug the name of the company you want to research into the search engine of your choice. You should find the company Web site near the top of your results.

The investor section of a company's website can offer a variety of information. Copies of the public filings are usually available in more flexible, downloadable formats--such as PDF, Microsoft Excel, or Microsoft Word. Also, you can sort through the firm's press releases and examine the latest investor presentations (typically in PDF or Microsoft Power Point formats).

It's definitely worth a visit to the company Web site. It doesn't take long, and reading the press releases will give you some of the most up-to-date information available. Also, it may be useful to see how a company does business on the Web.

Setting Up a Watch List

After you've researched your first batch of companies (read the public filings and visited company Web sites), it's time to set up a watch list.

By creating a watch list, you'll be able to keep tabs on company news and easily find stock price information. Among other things, you can set alerts to notify you when a stock price has met or exceeded a particular threshold. Thus, your watch list will eventually become an integral tool in helping you make buy and sell decisions, stay organized, and keep informed.

Seeking Out Expert Opinions

After you've become a bit of an expert yourself by sifting through the information we've already discussed, you may want to read what other analysts and investors have to say about a particular company. While your investing decisions are yours to make, you might be able to gain a new insight or angle by reading others' research.

Avoiding Information Overload

You shouldn't feel bad if you can't read every article from every source that comments on a company you're researching. In your journey to becoming an informed stock investor, you'll almost inevitably feel overwhelmed from time to time by the vast amounts of information available. Fortunately, you don't need to read it all to be successful. In fact, some information may actually harm your performance by taking your focus away from what's truly important. That's why we've highlighted the key pieces of information you will need to make an informed decision.

Here's a quick step-by-step guide to becoming informed about a company:

1. Obtain the firm's 10-K and really try to give it a thoughtful read. Don't feel bad if you spend a lot of time on this step. (Give it a couple of days to digest.)
2. Read through the 10-Qs when they are released each quarter. These are usually much shorter than the 10-K and shouldn't require more than an hour or two of your time.
3. Set up a watch list to organize the steady flow of news on all the companies that interest you.
4. Poke around on the company's Web site. This takes less than a half hour.
5. When time allows, visit relevant industry Web sites and catch up on some of the industry trends.

The Bottom Line

If you follow these steps, you'll be able to form a foundation of understanding about a company in about a week. Over time, you can build on your foundation and gain a much deeper understanding. Further, you'll be able to weed out the news that just isn't worth your time. All told, if you stay the course, you could be surprised how your knowledge will grow by applying this simple process.

107: Introduction to Financial Statements

Introduction

Although the words "financial statements" and "accounting" send cold shivers down many people's backs, this is the language of business, a language investors need to know before buying stocks. The beauty is you don't need to be a CPA to understand the basics of the three most fundamental and important financial statements: the income statement, the balance sheet, and the statement of cash flows. All three of these statements are found in a firm's annual report, 10-K, and 10-Q filings.

The financial statements are windows into a company's performance and health. We'll provide a very basic overview of each financial statement in this lesson and go into much greater detail in Lesson 301-303.

The Income Statement

What is it and why do I care?
The income statement tells you how much money a company has brought in (its revenues), how much it has spent (its expenses), and the difference between the two (its profit). The income statement shows a company's revenues and expenses over a

specific time frame such as three months or a year. This statement contains the information you'll most often see mentioned in the press or in financial reports--figures such as total revenue, net income, or earnings per share.

The income statement answers the question, "How well is the company's business performing?" Or in simpler terms, "Is it making money?" A firm must be able to bring in more money than it spends or it won't be in business for very long. Firms with low expenses relative to revenues--and thus, high profits relative to revenues--are particularly desirable for investment because a bigger piece of each dollar the company brings in directly benefits you as a shareholder.

Revenues, Expenses, and Profit
Each of the three main elements of the income statement is described below.

Revenues. The revenue section is typically the simplest part of the income statement. Often, there is just a single number that represents all the money a company brought in during a specific time period, although big companies sometimes break down revenues in ways that provide more information (e.g., segregated by geographic location or business segment). Revenues are also commonly known as sales.

Expenses. Although there are many types of expenses, the two most common are the cost of sales and SG&A (selling, general, and administrative) expenses. Cost of sales, which is also called cost of goods sold, is the expense most directly involved in creating revenue. For example, Gap GPS may pay $10 to make a shirt, which it sells for $15. When it is sold, the cost of sales for that shirt would be $10--what it cost Gap to produce the shirt for sale. Selling, general, and administrative expenses are also commonly known as operating expenses. This category includes most other costs in running a business, including marketing, management salaries, and technology expenses.

Profits. In its simplest form, profit is equal to total revenues minus total expenses. However, there are several commonly used profit subcategories investors should be aware of. Gross profit is calculated as revenues minus cost of sales. It basically shows how much money is left over to pay for operating expenses (and hopefully provide profit to stockholders) after a sale is made. Using our example of the Gap shirt before, the gross profit from the sale of the shirt would have been $5 ($15 sales price - $10 cost of sales = $5 gross profit). Operating profit is equal to revenues minus the cost of sales and SG&A. This number represents the profit a company made from its actual operations, and excludes certain expenses and revenues that may not be related to its central operations. Net income generally represents the company's profit after all expenses, including financial expenses, have been paid. This number is often called the "bottom line" and is generally the figure people refer to when they use the word "profit" or "earnings."

The Balance Sheet

What is it and why do I care?
The balance sheet, also known as the statement of financial condition, basically tells you how much a company owns (its assets), and how much it owes (its liabilities). The difference between what it owns and what it owes is its equity, also commonly called "net assets," "stockholder's equity," or "net worth."

The balance sheet provides investors with a snapshot of a company's health as of the date provided on the financial statement. Generally, if a company has lots of assets relative to liabilities, it's in good shape. Conversely, just as you would be cautious loaning money to a friend who is burdened with large debts, a company with a large amount of liabilities relative to assets should be scrutinized more carefully.

Assets, Liabilities, and Equity
Each of the three primary elements of the balance sheet is described below.

Assets. There are two main types of assets: current assets and noncurrent assets. Within these two categories, there are numerous subcategories, many of which will be explained in Lesson 302. Current assets are likely to be used up or converted into cash within one business cycle--usually defined as one year. For example, the groceries at your local supermarket would be classified as current assets because apples and bananas should be sold within the next year. Noncurrent assets are defined by our left-brained accountant friends as, you guessed it, anything not classified as a current asset. For example, the refrigerators at your supermarket would be classified as noncurrent assets because it's unlikely they will be "used up" or converted to cash within a year.

Liabilities. Similar to assets, there are two main categories of liabilities: current liabilities and noncurrent liabilities. Current liabilities are obligations the firm must pay within a year. For example, your supermarket may have bought and received $1,000 worth of eggs from a local farm but won't pay for them until next month. Noncurrent liabilities are the flip side of noncurrent assets. These liabilities represent money the company owes one year or more in the future. For example, the grocer may borrow $1 million from a bank for a new store, which it must pay back in five years.

Equity. Equity represents the part of the company that is owned by shareholders; thus, it's commonly referred to as shareholder's equity. As described above, equity is equal to total assets minus total liabilities. Although there are several categories within equity, the two biggest are paid-in capital and retained earnings. Paid-in capital is the amount of money shareholders paid for their shares when the stock was first offered to the public. It basically represents how much money the firm received when it sold its shares. Retained earnings represent the total profits the company has earned since it began, minus whatever has been paid to shareholders as dividends. Since this is a cumulative number, if a company has lost money over time, retained earnings can be negative and would be renamed "accumulated deficit."

The Statement of Cash Flows

What is it and why do I care?
The statement of cash flows tells you how much cash went into and out of a company during a specific time frame such as a quarter or a year. You may wonder why there's a need for such a statement because it sounds very similar to the income statement, which shows how much revenue came in and how many expenses went out.

The difference lies in a complex concept called accrual accounting. Accrual accounting requires companies to record revenues and expenses when transactions occur, not when cash is exchanged. While that explanation seems simple enough, it's a big mess in practice, and the statement of cash flows helps investors sort it out.

The statement of cash flows is very important to investors because it shows how much actual cash a company has generated. The income statement, on the other hand, often includes noncash revenues or expenses, which the statement of cash flows excludes.

One of the most important traits you should seek in a potential investment is the firm's ability to generate cash. Many companies have shown profits on the income statement but stumbled later because of insufficient cash flows. A good look at the statement of cash flows for those companies may have warned investors that rocky times were ahead.

The Three Elements of the Statement of Cash Flows
Because companies can generate and use cash in several different ways, the statement of cash flows is separated into three sections: cash flows from operating activities, from investing activities, and from financing activities.

The cash flows from operating activitiessection shows how much cash the company generated from its core business, as opposed to peripheral activities such as investing or borrowing. Investors should look closely at how much cash a firm generates from its operating activities because it paints the best picture of how well the business is producing cash that will ultimately benefit shareholders.

The cash flows from investing activitiessection shows the amount of cash firms spent on investments. Investments are usually classified as either capital expenditures--money spent on items such as new equipment or anything else needed to keep the business running--or monetary investments such as the purchase or sale of money market funds.

The cash flows from financing activitiessection includes any activities involved in transactions with the company's owners or debtors. For example, cash proceeds from new debt, or dividends paid to investors would be found in this section.

Free cash flow is a term you will become very familiar with over the course of these workbooks. In simple terms, it represents the amount of excess cash a company generated, which can be used to enrich shareholders or invest in new opportunities for the business without hurting the existing operations; thus, it's considered "free." Although there are many methods of determining free cash flow, the most common method is taking the net cash flows provided by operating activities and subtacting capital expenditures (as found in the "cash flows from investing activities" section).

Cash from Operations - Capital Expenditures = Free Cash Flow

The Bottom Line

Phew!!! You made it through an entire lesson about financial statements. While we're the first to acknowledge that there are far more exciting aspects about investing in stocks than learning about accounting and financial statements, it's essential for investors to know the language of business. We also recommend you sharpen your newfound language skills by taking a good look at the more-detailed discussion on financial statements in Lessons 301-303.

108: Learn the Lingo--Basic Ratios

Introduction

Now that you've learned the basics of reading financial statements (the language of business), let's learn the basic language of investing.

Ratios are a common tool investors use to relate a stock's price with an element of the underlying company's performance. These quick and dirty ratios can be useful in their own way, as long as you're aware of the limitations.

But before we get to calculating any ratios, we must first cover some essential definitions.

Earnings Per Share

Earnings per share (EPS) is a company's net income (typically over the trailing 12 months) divided by its number of shares outstanding. EPS comes in two varieties, basic and diluted. Basic EPS includes only actual outstanding shares of a company's stock, while diluted EPS represents all potential stock that could be outstanding with current stock option grants and the like. Diluted EPS is the more "conservative" number.

EPS = (Total Company Earnings) / (Shares Outstanding)

Although EPS can give you a quick idea of a company's profitability, it should not be used in isolation without also looking at cash flow and other performance metrics.

Market Capitalization

Market capitalization is essentially the market value of a company. It is calculated by multiplying the number of shares outstanding by the current share price. For example, if there are 10 million shares outstanding of ABC Corporation and ABC's stock is currently trading at $25 per share, the market capitalization of ABC is $250 million. As we will find out shortly, market capitalization not only gives you an idea concerning the size of a company, it can also be used when calculating the basic valuation ratios.

Market Capitalization = (Stock Price) x (Shares Outstanding)

Profit Margins

Just as there are three types of profits--gross, operating, and net--there are also three types of profit margins that can be calculated to offer insight into a company's profitability. Gross margin is simply gross profits divided by revenues, and so on. Margins are usually stated in percentages.

Gross Margin = (Gross Profits) / Revenues
Operating Margin = (Operating Profits) / Revenues
Net Margin = (Net Profits) / Revenues

Price/Earnings and Related Ratios

One of the most popular valuation measures is the price/earnings ratio, or P/E. The P/E is the price of a stock divided by its EPS from the trailing four quarters. As an example, a stock trading for $15 per share with earnings of $1 per share during the past year has a P/E of 15.

P/E = (Stock Price) / EPS =

The P/E ratio gives a rough idea of the price investors are paying for a stock relative to its underlying earnings. It is a quick and dirty way to gauge how cheap or expensive a stock may be. Generally, the higher the P/E ratio, the more investors are willing to pay for a dollar's worth of earnings from a company. High P/E stocks (typically those with a

P/E above 30) tend to have higher growth rates and/or the expectation of a profit turnaround. Meanwhile, low P/E stocks (typically those with a P/E below 15) tend to have slower growth and/or lesser future prospects.

The P/E ratio can also be useful when compared with the P/Es of similar companies to see how the competitors stack up. In addition, you can compare a company's P/E with the average P/E of the S&P 500 or some other benchmark index to get a rough idea of how richly a stock is valued relative to the broader market.

One useful variant of P/E is earnings yield, or EPS divided by the stock price. Earnings yield is the inverse of P/E, so a high earnings yield indicates a relatively inexpensive stock while a low earnings yield indicates a more expensive one. It can be useful to compare earnings yields with 10- or 30-year Treasury bond yields to get an idea of how expensive a stock is.

Earnings Yield = 1 / (P/E ratio) = EPS / (Stock Price)

Another useful variant of P/E is the PEG ratio. A high P/E generally means that the market expects the company to grow its profits rapidly in the future, so a much greater percentage of the company's potential earnings are in the future. This means its market value (which reflects those future earnings) is large relative to its present-day earnings.

The PEG ratio can help you determine if a stock's P/E has gotten too high in these cases by giving you an idea of how much investors are paying for a company's growth. A stock's PEG ratio is its forward P/E divided by its expected earnings growth over the next five years as predicted by a consensus of Wall Street estimates. For example, if a company has a forward P/E of 20 with annual earnings estimated to grow 10% per year on average, its peg ratio is 2.0. Again, the higher the peg ratio, the more relatively expensive a stock is.

PEG = (Forward P/E Ratio) / (5-Year EPS Growth Rate)

As with other measures, the PEG ratio should be used with caution. PEG relies on two different Wall Street analyst estimates--next year's earnings and five-year earnings growth--and thus is doubly subject to the possibility of overly optimistic or pessimistic analysts. It also breaks down at the extremes of zero-growth or hyper-growth companies.

Price/Sales Ratio

The price/sales (P/S) ratio is figured the same way as P/E, except with a company's annual sales as the denominator instead of its earnings. An advantage to using the P/S ratio is that it is based on sales, a figure that is much harder to manipulate and is subject to fewer accounting estimates than earnings. Also, because sales tend to be more stable than earnings, P/S can be a good tool for screening cyclical companies and other companies with fluctuating earnings patterns.

P/S = (Stock Price) / (Sales Per Share) = (Market Capitalization) / (Total Sales)

When using the P/S ratio, it is important to keep in mind that a dollar of earnings has essentially the same value regardless of the level of sales needed to create it. Meaning, a dollar of sales at a highly profitable firm is worth more than a dollar of sales for a company with narrow profit margins. This means comparing price/sales is generally useful only when comparing companies in similar industries.

To understand the differences across industries, let's compare grocery stores with the medical-device industry. Grocery stores tend to have very small profit margins, earning only a few pennies on each dollar of sales. As such, grocers have an average P/S ratio of 0.5, one of the lowest in Morningstar's coverage universe. It takes a lot of sales to create a dollar of earnings at a grocery store, so investors do not value those sales dollars very highly.

Meanwhile, medical-device makers have much fatter profit margins. Relative to the grocer, it does not take nearly as much in sales for a medical-device company to create a dollar in earnings. It is little wonder the device makers have a high average price/sales ratio of 5.0. A grocer with a P/S ratio of 2.0 would look quite expensive while a medical-device maker with the same P/S could be dirt-cheap.

Price/Book Ratio

Another common valuation measure is the price/book ratio (P/B), which relates a stock's market value with its book value (also known as shareholder equity) from the latest balance sheet. Book value can be thought of as what would be left over for shareholders if a company shutters operations, pays off its creditors, collects from its debtors, and liquidates itself.

Book Value Per Share = (Total Shareholders Equity) / (Shares Outstanding)

P/B = (Stock Price) / (Book Value Per Share) = (Market Capitalization) / (Total Shareholder Equity)

As with the other ratios we've covered so far, there are caveats to using P/B. For instance, book value may not accurately measure a company's worth, especially if the firm possesses significant intangible assets such as brand names, market share, and other competitive advantages. The lowest price/book ratios tend to be in capital-intensive industries such as utilities and retail, whereas the highest P/B ratios are in fields such as pharmaceuticals and consumer products, where intangibles are more important.

Price/book is also tied to return on equity (ROE), which is net income divided by shareholder equity. Given two companies that are otherwise equal, the one with the higher ROE will have a higher P/B ratio. A high P/B shouldn't be cause for alarm, especially if the company continually earns a high ROE.

Price/Cash Flow

The price/cash flow (P/CF) ratio is not as commonly used or as well known as the other measures we've discussed. It's calculated similarly to P/E, except that it uses operating cash flow instead of net income as the denominator.

P/CF = (Stock Price) / (Operating Cash Flow Per Share)

Cash flow can be less subject to accounting shenanigans than earnings because it measures actual cash, not paper or accounting profits. Price/cash flow can be helpful for firms such as utilities and cable companies, which can have more cash flow than reported earnings. Price/cash flow can also be used in place of P/E when there are so many one-time expenses that reported earnings are negative.

Dividend Yield

There are two ways to make money when buying a stock--capital gains (when a stock goes up in price) and dividend payments. Dividends are payments that companies make directly to shareholders.

Dividend yield has been an important measure of valuation for many years. The dividend yield is equal to a company's annual dividend per share divided by its stock price per share. So, if a company pays an annual dividend of $2.00 and has a stock that trades for $100, its dividend yield is 2.0%. If that same stock's price fell to $50 per share, its dividend yield would rise to 4.0%. Conversely, all else equal, the dividend yield falls when a stock's price goes up.

Dividend Yield = (Annual Dividends Per Share) / (Stock Price)

Stocks with high dividend yields are generally mature companies with few growth opportunities. The economic reasoning behind this is that these companies can't find enough promising projects to invest in for future growth, so they pay a larger portion of profits back to shareholders. While utility companies are considered the typical dividend-paying stocks, you can also find dividends in sectors with lots of room left for growth such as the pharmaceutical industry.

Dividends have recently begun to garner investors' attention again. A big driver of this new focus was a recent change in the United States tax code that lowered the tax rate on dividends. So if you are looking for dividend income from your stock investments, remember that the best high-yielding stocks have strong cash flows, healthy balance sheets, and relatively stable businesses. And, if you're relying on that stream of dividends for income, checking for a steady history of dividend payments is also a good idea.

The Bottom Line

We've gone over how to calculate a lot of ratios in this lesson, but understanding the components of these ratios is key to learning the lingo of investors. It is also essential in beginning to understand when a stock is cheap or expensive. The good news is that if you invest long enough, the ratios highlighted here will become second nature.

Stocks200

201: Stocks and Taxes

Introduction

Unlike death, taxation can at least be minimized. In this lesson, we will examine the basic framework of individual taxation in the United States as it relates to stock investing and review some simple steps you can take to be a more tax-efficient investor.

The information in this lesson is not necessarily exclusive to stock investing; much of it is also relevant to mutual fund investing. Nevertheless, if you are going to invest in any asset class, including stocks, it is imperative to understand exactly how taxes work so you may keep as many dollars as possible in your pocket and away from Uncle Sam.

Ordinary Income Versus Capital Gains

Capital gains--the difference between what you sell a stock for versus what you paid for it--are "tax preferred," or taxed at lower rates than ordinary income. Ordinary income includes items such as wages and interest income.

Capital gains arise when you sell a capital asset, such as a stock, for more than its purchase price, or basis. Capital gains are further subdivided into short term and long term. If a stock is sold within one year of purchase, the gain is short term and is taxed at the higher ordinary income rate. On the other hand, if you hold the stock for more than a year before selling, the gain is long term and is taxed at the lower capital gains rate.

Conversely, you realize a capital loss when you sell the asset for less than its basis. While it's never fun to lose money, you can reduce your tax bill by using capital losses to offset capital gains. Also, to the extent that capital losses exceed capital gains, you can deduct the losses against your other income up to an annual limit of $3,000. Any additional loss above the $3,000 threshold is carried over to be used in subsequent years. (Note that due to the IRS' wash-sale rule, you cannot claim a loss if you purchase substantially identical securities 30 days before or after the sale.)

Jobs & Growth Tax Relief Reconciliation Act of 2003

Most taxpayers pay a 15% rate on both dividends and long-term capital gains--the same level has been in place since 2003, when the Jobs & Growth Tax Relief Reconciliation Act was passed. (Beginning in 2013, investment taxes did go up for high-income earners: Single taxpayers earning more than $400,000 and married couples filing jointly earning more than $450,000 pay a 20% tax rate on dividends and long-term capital gains.)

Prior to 2003, dividends were taxed at an investor's ordinary income-tax rate. The basic idea behind the 2003 dividend tax cut was to reduce the burden of "double taxation," or taxation of the same profits at both the corporate and shareholder level, so any dividends paid out of profits not subject to corporate taxation will not be considered "qualified dividends" eligible for the reduced tax rate. Therefore, one notable exception is dividends from real estate investment trusts, or REITs, which are typically still taxed at ordinary income rates. In addition, to qualify for the reduced dividend tax rate, you must have held a stock for at least 60 days out of the 120-day period beginning 60 days before the ex-dividend date (the date on which you must be holding a stock to receive the dividend).

Tax-Advantaged Accounts

One easy way to become a more tax-efficient stock investor is to utilize tax-advantaged accounts such as 401(k)s and individual retirement accounts (IRAs). These special accounts allow you to enjoy either tax-deferred or tax-free growth of your investments.

Tax deferral can lead to significant savings over time. Let's assume two investors each start with $10,000 and earn a 10% annual return for 30 years. One has 100% of her gains tax-deferred, while the other realizes the full amount of his capital gains each year and pays a 20% tax on those gains. Under this scenario, the tax-deferred investor ends up with almost $75,000 more at the end than the investor with the taxable gains.

Clearly, it is worthwhile to learn about the types of tax-advantaged accounts available. Below are some of the most popular:

401(k)s

401(k) plans, so named after a section of the Internal Revenue Code, are set up by employers as a retirement-savings vehicle. The primary advantage of a 401(k) is tax deferral. First, employees can contribute a percentage of their income from each paycheck to their own 401(k) accounts on a pretax basis. This means the amount you contribute to your 401(k) is exempt from current federal income tax. For example, if you are in the 25% income tax bracket, a $100 contribution will reduce your current tax burden by $25. Second, dividends and capital gains earned inside a 401(k) are not subject to current taxation. In short, 401(k) plans allow you to defer taxation on dividends, capital gains, and a portion of your wages until you begin withdrawing from the plan, presumably during retirement, when you may be in a lower tax bracket. (All withdrawals are taxed at ordinary income rates.)

The amount you can contribute to your 401(k) plan is limited to $17,500 in 2013. You also must begin mandatory withdrawals from your 401(k) when you reach age 70 1/2. Withdrawals made before you turn 59 1/2 are taxed as ordinary income, and you may be subject to an additional 10% penalty.

Traditional IRAs

Individual retirement accounts are another vehicle for tax deferral. When you contribute to a traditional IRA, the IRS allows you to take an income tax deduction up to the amount of the contribution, subject to income limitations. In addition, dividends and capital gains earned inside a traditional IRA are not subject to tax until withdrawal.

However, there are some important limitations to remember. First, you must be age 70 1/2 or younger with earned income to contribute to a traditional IRA. Second, the annual contribution limit is $5,500 in 2013. If you are age 50 or older, you can make additional "catch-up" contributions of $1,000. Finally, like 401(k) plans, you must begin mandatory withdrawals when you reach age 70 1/2. Withdrawals made before you turn 59 1/2 are taxed and may be subject to an additional 10% penalty.

Roth IRAs

These are typically the best retirement account option for many taxpayers. As with traditional IRAs, interest income, dividends, and capital gains accumulate tax-free. However, the main feature of Roth IRAs is that they are funded with aftertax dollars (contributions are not tax deductible). The upside of this is that qualified distributions from a Roth IRA are exempt from federal taxation.

The Roth IRA has the same annual contribution limits and "catch-up" provisions as a traditional IRA, but you must meet certain income requirements to contribute to a Roth IRA. Generally, single filers with income up to $95,000 and joint filers with income up to $150,000 are eligible to make the full annual contribution to a Roth IRA. Contributions to a Roth IRA can be withdrawn at any time without paying taxes or penalties, but withdrawal of earnings may be subject to income taxation and a 10% early withdrawal penalty if made before you turn 59 1/2.

In addition, the distribution must also be made after a five-tax-year period from the time a conversion or contribution is first made into any Roth IRA. So, if you opened your first Roth IRA and make your first contribution on April 15, 2005, for the 2004 tax year, your five-year period started on Jan. 1, 2004. Assuming you meet the other requirements, distributions made in this case after Dec. 31, 2008, from any Roth IRA will receive tax-free treatment.

Tax Planning 101

Besides taking advantage of 401(k) and IRA accounts, you can also follow a few basic planning strategies for investments held in taxable accounts. However, you should keep in mind that your goal as an investor should be to achieve the highest aftertax rate of return, not to avoid paying taxes. Taxes are a consideration, but they should not control your investment decisions.

The Value of Deferral and Stepped-Up Basis
All things being equal, it is better to pay taxes later than sooner. Therefore, you should endeavor to defer taxation as long as possible. An investor who purchases the shares of sound businesses and patiently holds them will not only enjoy the benefits of tax-free compounding, but will also save on brokerage commissions. At the least, toward the end of the year, you should consider delaying the realization of capital gains until January to defer your tax liability until the following year.

If you are extremely patient and die still owning a stock, your beneficiaries will receive the stock with a "stepped-up" basis, or a basis equal to the market value on the date of your death. Your beneficiaries can then sell the stock and owe no tax on the capital gains accumulated during your lifetime.

Wait for Long-Term Capital Gain Treatment
Purchasing a stock on Jan. 1 and selling it for a gain on Dec. 31 of the same year is likely not to be a smart tax move. In this case, your capital gain is short term and taxed at ordinary income rates. Had you sold the same stock a few days later on Jan. 2 of the following year, the gain would have been treated as long term and taxed at lower long-term capital gains rates, and in addition would be delayed another year.

Take Short-Term Losses
If you happen to have both short-term and long-term capital gains, you may want to consider realizing short-term capital losses on stocks you have held for less than one year. These short-term losses will offset your short-term gains, which are taxed at higher ordinary income rates. This will give you the most tax mileage for your capital loss.

Timing Capital Gains and Losses
When faced with large capital gains and losses, it may be advantageous for you to realize both in the same year. Suppose you have $30,000 of capital gains and $30, 000 of capital losses. If you realize only the gain this year, you will have to pay tax on the entire $30,000. If you decide to realize only your loss, you'd have no capital gains to offset it, and you could deduct only $3,000 against your other income. The remaining $27,000 loss must be carried over into future years. Instead of delaying the tax benefits of your loss, you could choose to realize both the capital gain and loss in the same year. Since they completely offset each other, you would not owe any taxes.

On the other hand, if you do not have a large capital loss to offset, you should generally time the realization of long-term capital gains--which will be taxed at favorable rates--for years when you do not realize any capital losses. Then you can realize your future capital losses in years when you can immediately deduct them against other income that may be taxed at higher ordinary income rates.

The Bottom Line

As you can see, taxes can have a meaningful impact on your long-term investment performance. Investing in stocks without regard to the tax impact can greatly reduce your return. But by understanding the basic framework of investment taxation and using a few simple tax-planning strategies, you can work to maximize the only number that matters in the end: the amount of money that goes into your pocket.

202: Using Financial Services Wisely

Introduction

Once you consider taxes and decide what type of investment account you'd like to open, the next nuts-and-bolts decision involves actually choosing a broker.

When thinking about a stockbroker, a picture of Charlie Sheen from the movie "Wall Street" often comes to mind. Thoughts of cold calls interrupting your dinner and pushy salesmen trying to sell the latest "hot stock" can scare investors away from buying stocks. In reality, however, it isn't so bad, and there are many options to choose from. In this lesson, we'll aim to provide the information you need to pick a broker that will help you reach your financial goals.

Think of a broker as the middleman between you and the person you are buying your stock from or selling your stock to. When you place an order to either buy or sell a stock, your broker will find a party that is willing to take the other side of your transaction. Of course, the broker will charge a fee (commission) for this service. There are hundreds of brokers and other financial advisors, and they provide varying levels of service. For the purpose of this book, however, we'll focus on three types of service providers: full-service brokers, fee-based financial planners, and discount brokers.

Full-Service Brokers

Full-service brokers provide handholding through the investment process that often gives investors reassurance that they are not going it alone. They provide personalized service, as well as advice on what to buy and sell. This is the greatest benefit to full-service brokers, but the benefits can be outweighed by the costs--literally. This handholding does not come cheap, and the commissions charged by a full-service provider can quickly eat away at any investment gains your portfolio makes. It is difficult enough to achieve success at investing; we don't need another obstacle. We think investors would be well served to avoid these high fees if possible.

Another concern with full-service brokers is the inherent conflict of interest that drives many of the recommendations they give clients. Many brokers are compensated by trading activity, not performance. For example, most full-service brokers are paid based on a commission they receive for executing sales and purchases. So the more you trade, the more your broker will make. One of the reasons frequent trading is generally a bad idea is that it leads to higher commissions that will eat into your returns. It can also cause you to pay higher taxes on realized short-term capital gains.

So while it is against your best interest to trade often, a full-service broker has an incentive to encourage frequent trading, just to rake in the fees. At the end of the day, even the well-intentioned commission-based brokers face a conflict with your interests. If you decide to use a full-service broker, make sure to seek out those upstanding professionals who are willing to look beyond this conflict and put your interests ahead of their own.

Fee-Based Planners

If you still find the need for personalized, professional investment advice but want to avoid the conflicts of interest at full-service brokers, fee-based planners can be a worthy consideration. Fee-based planners usually charge their clients based on a variety of factors, and the way they get paid does not have a large inherent conflict of interest.

In general, planners and advisors get paid in one of three ways. First, they may charge you a percentage of your assets on an ongoing basis (say, 1% a year, not including brokerage costs or any expenses associated with mutual funds). Other planners charge a dollar rate on a per-job or hourly basis. Finally, others earn commissions on any products they sell you. Some planners may use a combination of these fee structures--for example, a planner might charge you an hourly rate to set up your plan and also put you in funds on which he or she earns a commission. The upshot is that most planners do not have the incentive to encourage frequent trading, but they can be just as (if not more) expensive as full-service brokers.

Discount Brokers

To avoid the pitfalls of full-service brokers and the costs of fee-based planners, using a discount broker is often the best option. Discount brokers differ from their full-service counterparts in that they offer bare-bones brokerage services, and typically do not offer advice. Investors with discount brokers don't have to worry about aggressive sales tactics or the conflicts of interest we discussed above. Instead, discount brokers allow investors to make their own decisions regarding what to invest in.

Most importantly, the commissions that investors pay to discount brokers are significantly cheaper than the commissions charged by full-service brokers. Whereas a full-service brokerage may charge a commission in the hundreds of dollars per trade, a discount broker's commissions are often a fraction of this. And with the advent of the Internet, Web-based discount brokers make it easier than ever for individuals to maintain their own stock portfolios. Although discount brokers make investing easier, picking which broker to use can be difficult. In the following sections, we'll tell you what to look for when choosing a discount broker.

Costs
When looking for a discount broker, cost should be a major focal point. We've already established that discount brokers are significantly less expensive than full-service brokers, but there is a wide range of price options within the discount broker arena as well. For example, commissions can range anywhere from $30 to less than $10, depending on the broker. Obviously, the less you have to pay in commissions, the better. But there are also many other factors you should consider. Many brokers charge lower per-trade commissions for "active traders." For example, a brokerage house can require that investors make more than 20 or 30 trades a quarter or month before they qualify for the lower commissions. We've said it before and we'll say it again: All else equal, frequent trading will eat away at your returns over the long run.

Peripheral Services
Brokers sometimes charge higher commissions because they offer investors a variety of other useful services. For example, many brokerages offer third-party research for stocks.

Although we think most investors are capable of making their own investment decisions, even the most experienced investors will eventually have a question or two about their accounts. This is why it's important to look for a broker that provides good customer service. Some companies have satellite offices in neighborhood strip malls, while others may provide 24-hour phone support. It's certainly worthwhile to look into a broker's customer service before making a decision.

A more recent trend is for brokers to also provide other financial services, such as retail banking (checking and savings accounts) and loans. These services may be attractive for those looking for a "one-stop shop" for all their financial needs. The range of these services can vary, but they are also worth looking into.

After you've opened an account with your broker of choice, you have a variety of investing options and strategies at your fingertips. At Morningstar, we believe that a long-term investing strategy is the best way to achieve financial success, but it is important to understand some of the mechanics and options involved in trading and investing in stocks.

Market and Limit Orders

Investors can trade stocks through a broker using several methods, some of which offer them more control or the opportunity to juice their returns--with added risk, of course.

Placing an order to buy or sell shares of a company is relatively straightforward. There are various methods you can use, however, if you want to execute a trade at a specific price.

A market order is the most straightforward method of placing a trade. A market order tells the broker to buy or sell at the best price he or she can get in the market, and the trades are usually executed immediately. Since we recommend a long-term investing philosophy, fretting over a few pennies here and there doesn't make sense to us, and a market order is best in most cases.

A limit order means you can set the maximum price you are willing to pay for a stock, or a minimum price you'd be willing to sell a stock for. If the stock is trading anywhere below your maximum purchase price, or above the minimum selling price, the trade will be executed. However, because there are limitations when a limit order is placed, the trade might not be executed immediately. Also, some brokers charge extra when a limit order is requested.

Buying on Margin

Buying on margin is a risky way to pump up the potential return on your investment. Margin trades involve borrowing money from your broker to purchase an investment. Let's run through an example of how buying on margin can be profitable and also how it can be a risky game:

Let's say you want to buy 100 shares of fictional company Illini Basketballs Inc. Each share costs $10, so your total cost would be $1,000 (we'll ignore commissions for now). If those shares go up to $12 after you buy, your return would be 20%, or $200 (100 shares x $2 per share profit).

Now let's say you bought those 100 shares on margin. Instead of using $1,000 of your own money, you borrow $500 and use only $500 of your own money. Now if the stock goes up to $12, your return jumps to 40% ($200 profit/$500 initial investment).

Of course nothing is free, so you'd have to pay interest on the $500 you borrowed. Nevertheless, it's easy to see how buying shares of a company on margin can really juice your returns. But below is an example of how buying on margin can turn ugly. We'll use the same example as above, but with a twist:

You've borrowed $500 and used $500 of your own money to buy 100 shares of Illini Basketballs Inc. at $10. If Illini's shares drop to $8, you've suddenly lost 40% of your investment, and you still owe your broker the $500 it lent you.

If stock bought on margin keeps going down, you might even eventually get a dreaded "margin call." This means your broker is getting nervous that you might not have enough money to pay back the loan. If you get a margin call, you'd have to contribute more cash to your account, or sell some of your stocks to reduce your loan. Typically, these sales happen at precisely the wrong time--when stocks are down and at bargain-basement prices. Brokerage houses usually have set requirements that dictate how much of your own cash you need to have in your portfolio when trading on margin. Buying on margin is not for beginners, so tread carefully.

Shorting

It may sound funny, but investors can actually profit when a stock goes down in price. Shorting stocks involves selling borrowed shares with the intent of repurchasing them at a lower price. Instead of trying to buy low and sell high, you are simply reversing the order. Once again, let's go through an example:

You've been tracking fictional company Badgers Bricks Corp. and think its newest products are going to flop. The company is already on the ropes financially, and you think that this may be the last straw. You decide to short 100 shares of the company. After an order to short Badgers Bricks Corp.'s stock is placed, your broker will find 100 shares that it can lend to you. You immediately sell those shares on the marketplace for $10 and receive proceeds of $1,000. If the stock drops to $8, you can buy the shares for $800 and return them to your broker. Your profit is $200 ($1,000 minus $800).

This sounds easy enough, but no investment is foolproof. If you make the wrong bet when shorting a stock, your downside is potentially unlimited. In a best-case scenario, the stock you short will go down to $0 and your profit equals all the cash you received from selling the borrowed shares. On the downside, the stock you short could increase in price, and there is no limit on how high it may go. Remember, those shares are borrowed and eventually will have to be returned. If the price keeps going up, you'll be stuck paying a lot more to buy the stock back, perhaps much more than you could have made if the stock went to zero. The important thing to remember is that the potential downside in shorting stocks is unlimited. As with buying on margin, be careful.

The Bottom Line

The mechanics of trading are really not very difficult to grasp. But to be a successful investor, it is certainly worthwhile to use financial services wisely by paying attention to fees and commissions, which will inevitably eat into your returns. Minimizing your fees, like minimizing your taxes, is an extremely worthwhile endeavor.

203: Understanding the News

Understanding the News

"The Dow fell 71 points today"

"The S&P 500 continued its recent climb"

"ABC Company missed its quarterly earnings target"

"XYZ Company's shares jumped $2 as a result of analyst upgrades"

These are common statements you may hear on any given day as you flip past a financial news channel on your TV or scan the headlines in your newspaper. But what are the Dow and the S&P 500? What is the Nasdaq? What happens when a company misses earnings targets or gets upgraded or downgraded by analysts? What does any of this stuff mean to you, as an investor?

In this lesson, we are going to focus on building an understanding of some of the things you may typically hear in the financial news. Then we are going to learn how to separate what actually matters from what is nothing more than "noise."

Stock Indexes

A stock index is simply a grouping or a composite of a number of different stocks, often with similar characteristics. Stock indexes are typically used to discuss the overall performance of the stock market, in terms of changes in the market price of the stocks as well as how much trading activity there is in any particular period. Three of the most widely followed indexes are the Dow Jones Industrial Average, the S&P 500, and the Nasdaq Composite.

The Dow Jones Industrial Average

Known as just the "Dow" for short, this index is not really an average, nor does it exclusively track heavy industry anymore. The index is composed of 30 large stocks from a wide spectrum of industries. General Electric (GE) is the longest-tenured constituent of the Dow, which has changed substantially over time. The latest change to the Dow was UnitedHealth Group (UNH) replacing Kraft Foods (KFT) in 2012. In 2009, former constituents General Motors (GM) and Citigroup (C) were replaced with Travelers (TRV) and Cisco (CSCO).

At the close of business on Oct. 26, 2012, the Dow stood at 13,107. How is this figure calculated?

The index is calculated by taking the 30 stocks in the average, adding up their prices, and dividing by a divisor. This divisor was originally equal to the number of stocks in the average (to give the average price of a stock), but this divisor has shrunk steadily over the years. It dropped below one in 1986 and was equal to 0.1302 in October 2012. This shrinkage is needed to offset arbitrary events such as stock splits and changes in the roster of companies. With the divisor at 0.1302, the effect is to multiply the sum of the prices by about 7.7. (The numeral one divided by 0.1302 is approximately 7.7.) To look at it another way, each dollar of price change in any of the 30 Dow stocks represents a roughly 7.7-point change in the Dow.

Because the Dow includes only 30 companies, one company can have much more influence on it than on more broad-based indexes. Also, since the prices of the 30 stocks are added and divided by the common denominator, stocks with larger prices have more weight in the index than stocks with lower prices. Thus, the Dow is a price-weighted index. It's also useful to remember that the 30 stocks that make up the Dow are picked by the editors of The Wall Street Journal, rather than by any quantitative criteria. The editors try to pick stocks that represent the market, but there's an inevitable element of subjectivity (and luck) in such a method.

Despite its narrower focus, the Dow tracks quite well with broader indexes such as the

S&P 500 over the long run.

The S&P 500

The Dow Jones Industrial Average usually gets most of the attention, but the S&P 500 Index is much more important to the investment world. Index funds that track the S&P 500 hold hundreds of billions of dollars, and thousands of fund managers and other financial professionals track their performance against this ubiquitous index. But what exactly is the S&P 500, anyway?

The Standard & Poor's 500 as we know it today came into being on March 4, 1957. The makers of that first index retroactively figured its value going back to 1926, and they decided to use an arbitrary base value of 10 for the average value of the index during the years 1941 through 1943. This meant that in 1957 the index stood at about 45, which was also the average price of a share of stock. The companies in the original S&P 500 accounted for about 90% of the value of the U.S. stock market, but this percentage has shrunk to just more than 75% today as the number of stocks being traded has expanded.

Although it's usually referred to as a large-cap index, the S&P 500 does not just consist of the 500 largest companies in the U.S. The companies in the index are chosen by a committee at investment company Standard & Poor's. The committee meets monthly to discuss possible changes to the list and chooses companies on the basis of "market size, liquidity, and group representation." New members are added to the 500 only when others drop out because of mergers or (less commonly) a faltering business.

Some types of stocks are explicitly excluded from the index, including real estate stocks and companies that primarily hold stock in other companies. For example, Berkshire Hathaway (BRK.B), the holding company of Warren Buffett, arguably the world's greatest investor, isn't included, despite having one of the largest market values of all U.S. companies. Also, the index is composed exclusively of U.S. companies today.

Size matters with the S&P 500. Because the companies chosen for the index tend to be leaders in their industries, most are large firms. But the largest of the large-capitalization stocks have a much greater effect on the S&P 500 than the smaller companies do. That's because the index is market-cap-weighted, so that a company's influence on the index is proportional to its size. (Remember, a company's market cap is determined by multiplying the number of shares outstanding by the price for each share.) Thus, ExxonMobil (XOM) and General Electric (GE), with the two biggest market caps among U.S. companies, accounted for 4.2% and 2.4%, respectively, of the S&P 500 as of June 2008. In contrast, other smaller companies can account for less than 0.1% of the index.

The Nasdaq Composite

The Nasdaq Composite was formed in 1971 and includes the stocks of more than 3,000 companies today. It includes stocks that are listed on the technology-company-heavy Nasdaq stock exchange, one of the market's largest exchanges. (Other major stock exchanges include the New York Stock Exchange, or the NYSE, and the American Stock Exchange, or AMEX.) Like the S&P 500, the Nasdaq is a market-cap-weighted index. For a stock to be included in the Nasdaq Composite, it must trade on the Nasdaq stock exchange and meet other specific criteria. If a company fails to meet all of the criteria at any time, it is then removed from the composite.

"Noise" Versus News

Anyone interested in keeping up with current business events has plenty of opportunity. Walk into any newsstand, and you'll see all kinds of newspapers and magazine titles dedicated to the business world. Cable television offers several business news channels. And the Internet provides countless business and financial Web sites.

Oftentimes, events in the news cause stock prices to move both up and down, sometimes dramatically. Sometimes the market's reaction to the headlines is warranted; many other times, it's not. For an investor, the real challenge is deciphering all of the headlines and stories to determine what is really relevant for your stocks.

Here at Morningstar, we practice the discipline of scouting out great companies with long-term competitive advantages that we expect will create shareholder value for the foreseeable future. Then we wait until their stocks become cheap before investing in them for the long haul. In keeping a watchful eye out for solid investment opportunities, we constantly monitor and evaluate the ever-changing business environment. As we digest the events that affect any given company, we continually ask ourselves, "Does this information affect the long-term competitive advantages and resulting cash flow of this company? Does it change the stock's long-term investing prospects?"

This is key to understanding the investment process. Periodically, news will break that does not affect a company's long-term competitive advantages, but its stock price will fall anyway. This may lead to a buying opportunity. Remember, "Mr. Market" tends to be quite temperamental, and not always rightfully so.

Negative Earnings Surprises

Wall Street is full of professionals whose job is to analyze companies and provide opinions about them and estimates about their future financial results. While most of them are very intelligent individuals who have a wealth of information and experience, they tend to be much too shortsighted. These analysts typically will come up with "earnings estimates" for the upcoming three-month period. If a company's actual results fall short of analysts' expectations, this is known as a "negative earnings surprise." On such disappointing news, the company's stock price may fall. (Conversely, if a company performs better than what analysts expect, it will have a "positive earnings surprise," which may cause the stock price to increase.)

Let's pretend that Wal-Mart (WMT) announced earnings that fell short of analysts' estimates by a measly two cents a share because it didn't sell as many widgets during the holiday season as people expected. Let's also assume that the stock fell on the disappointment. Does this disappointing shopping season mean that Wal-Mart's long-term competitive advantages have been eroded? Probably not. Wal-Mart remains the largest retailer in the world, with great economies of scale and a remarkable distribution network, which allows the company to pass huge cost savings on to customers, which, in turn, keeps customers coming back. So it fell slightly below analysts' estimates in one particular quarter big deal!

Analyst Upgrades/Downgrades

In addition to providing estimates of what they think a company's sales and earnings will be, Wall Street analysts also provide recommendations for stocks they cover, such as "Buy," "Hold," or "Sell." When an analyst changes his or her rating for a company's stock, the stock price often moves in the direction of the change. Does this upgrade or downgrade affect the business prospects of the company? No, the opinion of one person does not alter the intrinsic value of the firm, which is determined by the company's cash flows. But maybe the analyst made the change because he or she thought the company's business prospects have deteriorated. Maybe that's right, maybe not. Check it out, and decide for yourself.

Newsworthy Events

Other times investors will hear about events that have them running for cover, and rightfully so. One such event is the announcement of a regulatory investigation by an organization such as the Securities and Exchange Commission or the Department of Justice. While such announcements by themselves by no means predict impending doom, who knows what nasty surprises may lurk for investors as regulators start turning over rocks? In recent history, plenty of investors have been burned badly by such investigations, including Enron, Tyco (TYC), and WorldCom in the early 2000s, scandals at Countrywide and other firms in the wake of the financial crisis, and a string of more-recent scandals at Chesapeake Energy.

Another item to be wary of is a significant lawsuit. Corporate litigation is almost everywhere you look (these days, it's almost a normal part of doing business), and estimates of any significant legal damage are usually already priced into a stock. However, lawsuits often attract others, which could place very large uncertainties on a company's performance.

Changes in regulation can also affect the value and future prospects of a company. For instance, in addition to facing thousands of lawsuits, cigarette maker Lorillard (LO) also faces the threat of potential increased regulation of menthol cigarettes (which account for roughly 90% of its volume) from the Food and Drug Administration. Should the FDA choose to meaningfully restrict or ban menthol cigarettes (which the agency has been investigating), Lorillard's financial performance would likely collapse catastrophically.

The Bottom Line

Successful investing requires you to keep a steady hand. Your patience and willpower will get regularly tested as the stock market reacts to news, sometimes justifiably, other times not. Just remember that not every bump in the road is the edge of a cliff. If you react by racing to sell your stocks on every little piece of bad news, you will find yourself trading far too frequently (with the requisite taxes and commissions), and often selling at the worst possible time. But by using focused discipline in separating the news that matters from the noise that doesn't, you should emerge with satisfactory investment results.

204: Start Thinking Like an Analyst

Introduction

Investing is far more than just learning basic accounting and crunching numbers; it is also about observing the world around us. It is about recognizing trends and what those trends will ultimately mean in terms of dollars.

Thinking like an analyst can help because it can provide some organized ways in which to observe the world. We all have analytical skills, but the degree to which these skills are developed depends on the individual. Honing your analytical skills can help you organize some of the information that overwhelms you each day.

For example, it's hard not to notice how fast food restaurants are all located near one another. Maybe this is an obvious question, but why is that? Clearly those restaurants located at the only exit for 50 miles in the middle of Kansas don't have much choice, and certainly business and residential zoning regulations dictate locations to some extent. But why do all of the quick-service restaurants locate near one another when alternatives are available? After all, what good does it do for some of these restaurants to be located in clusters? What happens to McDonald's (MCD) if Wendy's (WEN) is right next door?

Four Basic Questions

The answers to these questions for restaurants, or for any business, can be found by asking four very general questions to kick-start the analyst thought process:

1. What is the goal of the business?
2. How does the business make money?
3. How well is the business actually doing?
4. How well is the business positioned relative to its competitors?

Once you start thinking in these terms, and sharpen your observational skills, you'll be well on your way to thinking like an analyst, constantly on the hunt for investment opportunities.

The goal of restaurants, for example, is to feed customers. This seems pretty straightforward--although some restaurants have also tried to combine meals with entertainment to mixed success--but don't just assume a business's purpose is obvious. Be sure you have a good idea of what it's really trying to achieve. Then ask if it makes sense for this business to try to achieve this objective. Does it make sense for a restaurant to also entertain customers, for example?

Once you have a good idea of what the business is trying to do, think about how it makes money. In our restaurant example, how much does the food in the restaurant actually cost? Can the restaurant charge more for its food because of a pleasant ambiance or because it is providing entertainment? Is the restaurant trying to sell a lot of meals at a low price, or is it attempting to sell fewer meals but at a much higher profit per meal?

Then ask yourself, "How well is the business doing?" Don't worry about picking up any financial statements just yet; rather, focus on observing what you can about the business. Back to our restaurant example, think about where you choose to eat and why. Has your favorite place been around a long time? Are there lots of locations for your favorite restaurant? Are they busy, with people in line or in the parking lot? Are they in good locations? Do they seem to get a lot of repeat business? Do they seem to have a better caliber of wait staff? How fancy are the interiors? As a potential investor in this or similar businesses, all this stuff counts.

If you think you have a pretty good understanding of the business's performance, at least as an observer, spend some time thinking about how well it functions in its industry. In other words, assess the competition.

Is there a lot of competition in its industry? With restaurants, there certainly seem to be a lot of choices, but what about an entirely different industry, like computers? Are there as many types of computer companies as there are restaurants? Not by a long shot. Does that mean that the computer industry isn't as competitive as the restaurant industry? Not necessarily. Instead it might mean that competition functions very differently. Since it takes a ton of capital to start up a computer company, and not so much to start up a restaurant, maybe there is more risk in computer manufacturing? Maybe finding new products is also more difficult? Maybe one of the only ways to compete in the industry is on price? Asking these kinds of questions can give you a good idea of how well a specific business is positioned to cope with the challenges it may encounter.

At this point it may seem like we're going a little nuts generating questions, but thinking like an analyst involves observing the business world and asking questions to understand how it works. Thankfully, there are also experts who have done a lot of this thinking already, and many of them have developed useful frameworks to help organize our thinking even more.

If we think back on the four questions we mentioned earlier, we should be able to get a good handle on a business's goals and on its performance just by reading about it and studying its financial statements. It's really the last question, the one in which we consider how well a company is positioned relative to its competitors, where we might need some more help.

Finding a Framework: Moats

It's a bit strange to think that an image typically associated with England and the Middle Ages might offer a framework for stock analysis. As we've already seen, in order to really think like an analyst, it's important to consider factors beyond just the numbers. After all, our quest is to find exceptional companies delivering outstanding performance, in which case we may need to put forth extra effort to find that "Holy Grail."

One helpful concept is that of an "economic moat." And while you may not hear it used as often as terms such as P/E ratio or operating profit, the concept of an economic moat should be one guiding principle in stock analysis and valuation. Eventually the idea may gain more of a following since we think it is the foundation for identifying companies that create shareholder value over the long term. In the meantime, we'll just consider ourselves lucky to have a framework that can separate really great companies from the merely good ones.

What Is an Economic Moat?

Quite simply, an economic moat is a long-term competitive advantage that allows a company to earn oversized profits over time. The term was coined by one of our favorite investors of all time, Warren Buffet, who realized that companies that reward investors over the long term have a durable competitive advantage. Assessing that advantage involves understanding what kind of defense, or competitive barrier, the company has been able to build for itself in its industry.

Moats are important from an investment perspective because any time a company develops a useful product or service, it isn't long before other firms try to capitalize on that opportunity by producing a similar--if not better--product. Basic economic theory says that in a perfectly competitive market, rivals will eventually eat up any excess profits earned by a successful business. In other words, competition makes it difficult for most firms to generate strong growth and profits over an extended period of time since any advantage is always at risk of imitation.

The strength and sustainability of a company's economic moat will determine whether the firm will be able to prevent a competitor from taking business away or eroding its earnings. In our view, companies with wide economic moats are best positioned to keep competitors at bay over the long term, but we also use the terms "narrow" and "none" to describe a company's moat. We don't often talk about the depth of a moat, yet it's a good way of thinking about how much money a company can make with its advantage.

To determine whether or not a company has an economic moat, follow these four steps:

1. Evaluate the firm's historical profitability. Has the firm been able to generate a solid return on its assets and on shareholder equity? This is probably the most important component to identifying whether or not a company has a moat. While much about assessing a moat is qualitative, the bedrock of analyzing a company still relies on solid financial metrics.

2. Assuming that the firm has solid returns on its capital and is consistently profitable, try to identify the source of those profits. Is the source an advantage that only this company has, or is it one that other companies can easily imitate? The harder it is for a rival to imitate an advantage, the more likely the company has a barrier in its industry and a source of economic profit.

3. Estimate how long the company will be able to keep competitors at bay.
We refer to this time period as the company's competitive advantage period, and it can be as short as several months or as long as several decades. The longer the competitive advantage period, the wider the economic moat.

4. Think about the industry's competitive structure. Does it have many profitable firms or is it hypercompetitive with only a few companies scrounging for the last dollar? Highly competitive industries will likely offer less attractive profit growth over the long haul.

Types of Economic Moats

After researching hundreds of companies, we've identified four main types of economic moats.

Low-Cost Producer. Companies that can deliver their goods or services at a low cost, typically due to economies of scale, have a distinct competitive advantage because they can undercut their rivals on price.

Wal-Mart (WMT) is a great example of a low-cost producer, and its low costs allow it to price its products the most attractively. As a dominant player in retailing, the company's size provides it with enormous scale efficiencies, or operating leverage, that it uses to keep costs low. Scale allows Wal-Mart to do its own purchasing more efficiently since it has roughly 5,000 large stores worldwide, and it gives the company tremendous bargaining power with its suppliers. Since the company positions itself as a low-cost retailer, it wants to ensure it gives the lowest prices to its customers. This can translate into tough bargaining terms for those firms that want to sell their products on Wal-Mart's shelves. As a result, Wal-Mart is able to offer prices that competitors have a difficult time matching--one reason why you don't see too many Kmarts around anymore.

High Switching Costs. Switching costs are those one-time inconveniences or expenses a customer incurs in order to switch over from one product to another. If you've ever taken the time to move all of your account information from one bank to another, you know what a hassle it can be--so there would have to be a really good reason, like a package deal on an account and mortgage for example, for you to consider switching again.

Companies aim to create high switching costs in order to "lock in" customers. The more customers are locked in, the more likely a company can pass along added costs to them without risking customer loss to a competitor.

Surgeons encounter these switching costs when they train to do procedures using specific medical devices, such as the artificial joint products from medical-device companies Zimmer (ZMH) or Stryker (SYK). After training to learn to use a specific product, switching to another would require the surgeon to forgo comfort and familiarity--and what patient, much less surgeon, would want that? Additionally, because the surgeon would have to be trained to use a new, competing product, he or she would also have to contend with lost time and money resulting from not performing as many surgical procedures. Clearly, with certain products and services, the switching costs can be quite high.

The Network Effect. The network effect is one of the most powerful competitive advantages, and it is also one of the easiest to spot. The network effect occurs when the value of a particular good or service increases for both new and existing users as more people use that good or service.

For example, the fact that there are literally millions of people using eBay makes the company's service incredibly valuable and all but impossible for another company to duplicate. For anyone wanting to sell something online via an auction, eBay (EBAY) provides the most potential buyers and is the most attractive. Meanwhile, for buyers, eBay has the widest selection. This advantage feeds on itself, and eBay's strength only increases as more users sign on.

Intangible Assets. Some companies have an advantage over competitors because of unique nonphysical, or "intangible," assets. Intangibles are things such as intellectual property rights (patents, trademarks, and copyrights), government approvals, brand names, a unique company culture, or a geographic advantage.

In some cases, whole industries derive huge benefits from intangible assets. Consumer-products manufacturers are one example. They build profits on the power of brands to distinguish their products. Well-known PepsiCo (PEP) is a leader in salty snacks and sports drinks, and the firm boasts a lineup of strong brands, innovative products, and an impressive distribution network. The company's investment in advertising and marketing distinguishes its products on store shelves and allows PepsiCo to command premium prices. Consumers will pay more for a bag of Frito-Lay chips than for a bag of generic chips. As the value of a brand increases, the manufacturer is also often able to be more demanding in its distribution relationships. To a large degree, brand power creates demand for those chips and secures their placement on store shelves.

One final thought about economic moats: It is possible for some companies to have more than one type of moat. For example, many companies that use the network effect also benefit from economies of scale, because these companies tend to grow so large that they dwarf smaller competitors. In general, the more types of economic moat a company has--and the wider those moats are--the better.

The Bottom Line

Successful long-term investing involves more than just identifying solid businesses, or finding businesses that are growing rapidly, or buying cheap stocks. We believe that successful investing also involves evaluating whether a business will stand the test of time.

Moats are a useful framework to help answer this question. Identifying a moat will take a little more effort than looking up a few numbers, but we think understanding a company's competitive position is an important process for determining its long-term profitability. And as we stated earlier in this book, how well a company's stock performs is directly related to the profits the firm can generate over the long haul.

205: Economic Moats

Introduction

In earlier lessons of this series, we introduced the concept of an economic moat and the role it plays in identifying whether a business will stand the test of time. To define, an economic moat is a long-term competitive advantage that allows a company to earn oversized profits over time. Quite simply, companies with a wide moat will create value for themselves and their shareholders over the long haul, and these are the companies you should focus your attention on.

The term "moat" in regard to finance was coined by one of our favorite investors of all time, Warren Buffett, who realized that companies that reward investors over the long term most often have a durable competitive advantage. Assessing that advantage involves understanding what kind of defense, or competitive barrier, the company has been able to build for itself in its industry.

Moats are important from an investment perspective because any time a company develops a useful product or service, it isn't long before other firms try to capitalize on that opportunity by producing a similar--if not better--product. Basic economic theory says that in a perfectly competitive market, rivals will eventually eat up any excess profits earned by a successful business. In other words, competition makes it difficult for most firms to generate strong growth and profits over an extended period of time since any advantage is always at risk of imitation. The strength and sustainability of a company's economic moat will determine whether the firm will be able to prevent a competitor from taking business away or eroding its earnings.

How to Build a Moat

There are a number of ways a company can build a sustainable competitive advantage in its industry. Among the more qualitative measures commonly used to assess a firm's economic moat:

- Creating real or perceived product differentiation
- Driving costs down and being a low-cost leader
- Locking in customers by creating high switching costs
- Locking out competitors by creating high barriers to entry or high barriers to success

Thankfully we've been able to whittle down all of the types of advantages in the marketplace. In Lesson 204, we identified the four main types of economic moats, and below we provide a bit more detail, using examples. The more types of moats a company can build, the better.

Low-Cost Producer or Economies of Scale

Companies that can deliver their goods or services at a low cost, typically from economies of scale, have a distinct competitive advantage because they can undercut their rivals on price. Likewise, companies with low costs can price their products at the same level as competitors, but make a higher profit while doing so.

This type of moat creates a significant barrier to entry, since a prohibitively large amount of capital is often required to achieve a size needed to be competitive in a market.

Wal-Mart
Wal-Mart WMT is perhaps the most salient example of a company benefiting from economies of scale, and for good reason. As a dominant player in retailing, the company's size provides it with enormous efficiencies that it uses to keep costs low. For example, its size allows Wal-Mart to do its own purchasing more efficiently since it has roughly 5,000 large stores worldwide. This gives the company tremendous bargaining power with its suppliers.

Not only does it get its products cheaper, but its size allows it more inexpensive distribution. In addition, it has an enormous amount of information concerning consumer likes and dislikes, and it can spread its best practices across its entire store base.

To see economies of scale in action, let's assume that Wal-Mart can acquire a DVD from a supplier for $5, while it costs one of Wal-Mart's smaller competitors $6. It also costs Wal-Mart $4 to distribute the DVD and pay for the overhead costs of the stores, while it costs the smaller competitor $5 to do the same. Wal-Mart can then sell the DVD for $9.50, and still make a $0.50 profit. The smaller competitor can't charge that little, because at a cost of $11 per DVD, it would be losing money.

High Switching Costs

Switching costs are those one-time inconveniences or expenses a customer incurs in order to switch over from one product to another, and they can make for a very powerful moat. Companies that make it tough for customers to switch to a competitor are in a position to increase prices year after year to deliver hefty profits. Companies aim to create high switching costs in order to "lock in" customers. The more customers are locked in, the more likely a company can pass along added costs to them without risking customer loss to a competitor.

Autodesk
Autodesk ADSK dominates architecture and construction-design software with its market-leading AutoCAD product. With roughly 6 million loyal users, it has a wide economic moat--high switching costs make it tough for customers to get comparable products elsewhere or do their jobs without the help of Autodesk. Because customers are essentially required to understand its software to be successful in their careers, it is nearly impossible for competitors to take meaningful market share from Autodesk.

Autodesk's software is also relatively affordable, making it somewhat immune when the economy turns south. While some software costs millions of dollars, Autodesk's products cost much less; the initial price of AutoCAD is only a few thousand dollars. This makes the company less susceptible to cutbacks in information-technology spending. In addition, using its software reduces expenses by shortening the design and manufacturing processes. The firm has also incorporated subscription sales, which add more predictability to its business model and further "lock in" its customers. As with many technology companies, uncertainty remains regarding its new product development cycle and adoption of new products, but Autodesk's committed customer base give the firm a wide economic moat.

The Network Effect

The network effect occurs when the value of a particular good or service increases for both new and existing users as more people use that good or service. It can also occur when other firms design products that complement an existing product, thereby enhancing that product's value. The network effect is arguably one of the most potent competitive advantages, and it can also quickly catapult firms to the lead in new industries.

Adobe
Like Autodesk, Adobe ADBE actually enjoys two economic moats. The firm's Acrobat software has become the standard for reading and creating documents electronically. Because customers, such as graphic designers, are trained early in their careers to use products like Photoshop and Illustrator, it's nearly impossible for competitors to take meaningful market share. High switching costs make it tough for customers to get comparable products elsewhere or do their job without Adobe.

As if switching costs weren't enough, Adobe also benefits from the network effect. With more than 500 million copies downloaded, Acrobat has a foothold on computer desktops everywhere. As its network effect increases, and more designers and readers use Adobe's software, its position as a standard-bearer grows.

eBay

When the online auction market was just getting started, eBay EBAY was the largest. As the site with the most sellers, it had the widest selection of products. This attracted the most buyers. Because it had the most buyers, it attracted more sellers.

The cycle just continued to feed on itself, and now eBay is essentially the only real online auction site of size. It was able to capture this position even though some large, well-known, and well-financed Internet companies such as Yahoo YHOO and Amazon AMZN tried to make a frontal assault on eBay in the late 1990s with very little success.

Intangible Assets

This category incorporates several types of competitive advantages including intellectual property rights (patents, trademarks, and copyrights), government approvals, brand names, a unique company culture, or a geographic advantage. It may be difficult to assess the durability of some of these advantages, so be sure you have a grasp of how long this type of competitive advantage might last. Brand equity, for example, can be damaged or slowly erode over time, while government approval can be revoked. Try to understand how susceptible a firm might be should this kind of advantage be disrupted.

Harley-Davidson

Anytime people are willing to tattoo a company's logo onto their arms, it is a surefire sign of a powerful brand. The firm, the only continuous survivor from the original American motorcycle industry, is more than 100 years old. The brand built over this time has allowed Harley HOG dealers to sell motorcycles at or above manufacturer's suggested retail price for years. Despite selling essentially the same steel, chrome, and rubber as its competitors, it can charge premium prices for its products. And as we'll see in later lessons, Harley's brand has translated into solid financial results for the company.

The Bottom Line

While having these four types of moats, or competitive advantages, as guidelines is helpful, there is still a lot of art to determining whether a firm has a moat. At the heart of it, the harder it is for a firm's advantage to be imitated, the more likely it is to have a barrier to entry in its industry and a defensible source of profit.

206: More on Competitive Positioning

Introduction

In the previous lesson, we reviewed the different types of defenses (economic moats) and offered examples of wide-moat firms. Understanding moats, and determining whether or not a firm has a moat is a tricky process. In this lesson we'll examine the mental model that underpins our moat framework and explore some of the nuances of wide moats, narrow moats, and deep moats.

Porter's Five Forces

Michael E. Porter's *Competitive Strategy*, originally published in 1980, is a definitive work on industry competition. In the book, the Harvard professor provides a framework for understanding competitor behavior and a firm's strategic positioning in its industry. Much of Porter's framework should be familiar as it underpins our thinking about economic moats.

In essence, Porter provided a framework of five forces that can be used to understand an industry's structure. Since firms strive for competitive advantage, the first four forces at work help to assess the fifth, an industry's level of rivalry:

- **Barriers to Entry.** How easy is it for new firms to start competing in a market? Higher barriers are better.

- **Buyer (Customer) Power.** Similar to switching costs, what keeps customers locked in or causes them to jump ship if prices were to increase? Lower power is better.

- **Supplier Power.** How well can a company control the costs of its goods and services? Lower power is better.

- **Threat of Substitutes.** A company may be the best widget maker, but what if widgets will soon become obsolete? Also, are there cheaper or better alternatives?

- **Degree of Rivalry.** Including the four factors above, just how competitive is a company's industry? Are companies beating one another bloody over every last dollar? How often are moats trying to be breached and profits being stolen away?

Porter's five forces considered together can help you to determine whether a firm has an economic moat. The framework is particularly useful for examining a firm's external competitive environment. After all, if a company's competitors are weak, it may not take much of a moat to keep them at bay. Likewise, if a company is in a cutthroat industry, it may require a much wider moat to defend its profits.

A Five Forces Example: Consumer Products

The five forces concept is perhaps best explained through example. (Porter's work is nothing short of excellent, but it is a heavy read.) Let's briefly examine the household consumer-products industry by considering rival firms Clorox CLX, Kimberly-Clark KMB, Colgate-Palmolive CL, and Procter & Gamble PG in terms of Porter's five forces:

Buyer Power. Consumer-products companies face weak buyer power because customers are fragmented and have little influence on price or product. But if we consider the buyers of consumer products to be retailers rather than individuals, then these firms face very strong buyer power. Retailers like Wal-Mart WMT and Target TGT are able to negotiate for pricing with companies like Clorox because they purchase and sell so much of Clorox's products. Verdict: Strong buyer power from retailers.

Supplier Power. More than likely, consumer-products companies face some amount of supplier power simply because of the costs they incur when switching suppliers. On the other hand, suppliers that do a large amount of business with these companies--supplying Kimberly-Clark with raw materials for its diapers, for instance--also are somewhat beholden to their customers, like Kimberly-Clark. Nevertheless, bargaining power for both the firms and their suppliers is probably limited. Verdict: Limited supplier power.

Threat of New Entrants. Given the amount of capital investment needed to enter certain segments in household consumer products, such as manufacturing deodorants, we suspect the threat of new entrants is fairly low in the industry. In some segments within the household consumer-products industry, this may not be the case since a small manufacturer could develop a superior product, such as a detergent, and compete with Procter & Gamble. The test is whether the small manufacturer can get its products on the shelves of the same retailers as its much larger rivals. Verdict: Low threat of new entrants.

Threat of Substitutes. Within the consumer-products industry, brands succeed in helping to build a competitive advantage, but even the pricing power of brands can be eroded with substitutes such as store-branded private-label offerings. In fact, some of these same store-brand private-label products are manufactured by the large consumer-products firms. The firms believe that if they can manufacture and package a lower-price alternative themselves, they would rather accept the marginal revenue from their lower-priced items than risk completely losing the sale to a private-label competitor. Verdict: High threat of substitutes.

Degree of Rivalry. Consumers in this category enjoy a multitude of choices for everything from cleaning products to bath washes. While many consumers prefer certain brands, switching costs in this industry are quite low. It does not cost anything for a consumer to buy one brand of shampoo instead of another. This, along with a variety of other factors, including the forces we've already examined, makes the industry quite competitive. Verdict: High degree of rivalry.

Examining an industry through the framework of Porter's five forces helps illustrate the different dynamics at work. It's not always clear-cut, either, so one wouldn't expect all of the firms in this industry to fall into one big bucket labeled wide moat or narrow moat. Instead, there are firms with distinct, long-term advantages and wide moats, like Procter & Gamble and Colgate, while others have advantages that we think may be less sustainable, such as Clorox and Kimberly-Clark.

Getting Back to Moats

Porter's framework makes scouring an industry for great investment ideas much easier. Understanding an industry helps us find the great businesses with economic moats that will withstand the inevitable economic, competitive, and random other challenges that often cripple weaker businesses.

Once we have a collection of great businesses from which to choose, finding those that meet our criteria and deliver above-average returns on invested capital over the long term becomes even easier. (We will discuss returns on invested capital more in Lesson 305.)

Generally speaking, we believe investors should steer clear of companies that have no moat (those with a Morningstar moat rating of "none") because they have very few, if any, competitive advantages and can't keep rivals from eating away at their profits. (Lots of these companies don't even have any profits.) For example, we don't think Delta Air Lines DAL, SUPERVALU SVU, and Goodyear Tire & Rubber GT have moats around their respective businesses. More than likely, we wouldn't want to hold a no-moat company for the long haul, so we probably wouldn't buy stock in one of these firms to begin with.

Some people are shrewd enough to buy no-moat stocks on a dip, hold them for a short term, and make a profit. As long-term investors this isn't a game we like to play. We think the rewards are far better, and the risks much lower, for those who spend a little effort to find strong companies to hold for a long time.

Types of Narrow Moats

There are certainly gradations of moat width, and we here at Morningstar describe companies with milder competitive advantages as having "narrow" moats. From our point of view, far more companies have narrow moats than wide ones. Narrow-moat firms are, on average, of a much higher quality than no-moat companies. Generally, narrow-moat companies generate lower returns on invested capital than wide-moat companies but still have returns slightly above their cost of capital. (We will talk about return on invested capital and cost of capital extensively in coming lessons.) Narrow-moat companies typically come in two varieties:

Firms with Eroding Moats. These companies have competitive advantages, but they are eroding due to a shifting industry landscape. This scenario is faced by some of the consumer-products companies, like those we just examined. For example, we consider both General Mills GIS and Kellogg K to be narrow-moat firms. The pricing power they once enjoyed is eroding as a result of increased competition and an ever-consolidating retail landscape that is increasing buyer power. The Baby Bells, such as AT&T T and Verizon VZ, are another example; their economic moats are also slowly eroding. In future years, they won't enjoy the monopoly pricing power they once did because of the increased use of wireless phones and, of course, the Internet.

Firms with Structural Industry Challenges. A company in this category dominates its peers, but resides in an industry where wide moats are nearly impossible to create. For example, Waste Management WMI has a solid position in the waste services industry. The trash taker is the largest operator of landfills in the country, a position that is nearly impossible to replicate due to political and citizens' group opposition. Such barriers to entry in waste disposal are augmented by regional scale and route density on the collection side of its business, which makes life difficult for local independent haulers. This competitive position allows it to garner real pricing increases, which help to mitigate rising diesel fuel prices and cyclical declines in waste volume.

Wide Moats

All things equal, we'd choose a wide-moat company over one with a narrow-moat rating for the significant competitive advantages that should enable the wide-moat firm to earn more than its cost of capital for many years to come.

Most wide-moat companies have some sort of structural advantage versus competitors. By "structural," we mean a fundamental advantage in the company's business model that wouldn't go away even if the current management team did. With a structural advantage, a company isn't dependent on having a great management team to remain profitable. To paraphrase Peter Lynch, these are companies that could turn a profit even with a monkey running them, and it's a good thing, because at some point that may happen.

We hate to sound like a broken record here, but the four types of moats that we identified in the previous lesson are incredibly useful when thinking about structural advantages a company may or may not possess. Keep the four types of moats in mind:

- Low-Cost Producer or Economies of Scale
- High Switching Costs
- Network Effect
- Intangible Assets

Wide Moats Versus Deep Moats

With the concept of a wide moat firmly in place, it's also important to realize that the width of a firm's moat, or how broad and numerous its competitive advantages are, matters more than the moat's depth, or how impressive any individual advantage is. Discerning between width and depth can be difficult, however.

First, it's absolutely critical to understand not only what an economic moat is, but also how it translates to above-average returns on capital. Many investors easily surmise the first point about moats--that a competitive advantage is required--but they miss the importance of the second point, above-average returns. If the business doesn't throw off attractive returns, then who cares if it has a competitive advantage? Autos and airlines are two businesses with some barriers to entry, but few new competitors are trying to crash the party in a race for single-digit ROEs or bankruptcy.

Over the years, Warren Buffett has frequently referred to his desire to widen the moats of his companies, but it's rare to see him refer to a moat's depth. Buffett's frequent talk of moat width--and silence on moat depth--speaks volumes. Michael E. Porter has said, "Positions built on systems of activities are far more sustainable than those built on individual activities."

Unfortunately, no company is going to tell you if it has a moat, much less whether that moat is of the wide or deep variety. If a firm has a competitive advantage, it behooves it to not tell you how its moat has been built. After all, you just might emulate it.

Still, it can be worth investors' time to ponder whether the stocks they're invested in have one really fantastic competitive advantage that, while deep, may lack width, or if they're invested in firms with a series of advantages that can sustain above-average returns on capital over the long haul.

Consider well-run giant conglomerates like General Electric GE or Citigroup C. Finance theory tells us that these decades-old firms should have seen their returns on capital dribble down to their cost of capital ages ago due to rivals competing away the excess returns. (We'll talk much more about returns on capital and cost of capital in coming lessons.) Yet, Citigroup's ROEs are still in the upper teens even in a bad year.

Why haven't competitors captured these profits? Quite simply, these firms are pretty good at an awful lot of things. If Citigroup is hobbled by problems in its private banking unit or regulatory scandals on its trading desks, it can rely on its impressive credit card operations and retail banking business to carry the day. At GE, if new competition from cable hurts the NBC network or its insurance division posts lackluster returns, it can rely on a cadre of numerous other good businesses to pick up the slack. Like stacked plywood, each of these businesses is strong in its own right, but virtually indestructible together.

The Bottom Line

This and the preceding lesson have covered a lot of material about moats and the qualitative aspects of a company's positioning. Though this step in identifying attractive companies for investment is an important one, it is only the first step. In coming lessons in this book, we will show you how to quantitatively confirm that a company has a moat, as well as show you how to value stocks so that you don't blindly pay too much for a quality company.

207: Weighing Management Quality

Introduction

Because people run companies, any investment opinion about a company is an opinion about the likely outcome of the combined efforts of the people who work for and manage it.

Keeping this in mind when you evaluate companies as investment opportunities can provide valuable perspective on some of the qualitative factors you should focus on. This lesson will cover some of the most important questions to ask and the sources you can use to evaluate the people who run public companies.

Why Management Matters

In his groundbreaking work *Common Stocks and Uncommon Profits*, Philip Fisher argues that because company managers are much closer to a company's assets than stockholders, they wield considerable day-to-day influence over the arrangement and disposition of the company's affairs. (For more on Fisher, see Lesson 505.) According to Fisher, "Without breaking any laws, the number of ways in which those in control can benefit themselves and their families at the expense of the ordinary stockholders is almost infinite."

Fisher suggests that investors should accumulate as much background information on companies and their managers as possible by talking to people in the industry. He refers to the process as gathering "scuttlebutt." Visiting management in person, and interviewing line managers, competitors, customers, and suppliers are most stock analysts' preferred means for gathering such information, and the impressions they garner during these visits can have a strong, yet subtle impact on their view of the company's prospects. This type of research is typically not realistic for nonprofessional investors with limited time, but there are still things you can do to get a sense of the quality of a company's management.

Ultimately, it boils down to trust: As an investor, can you trust this management team to develop and execute the right business plan and perform their duties in your best interest?

Investors can easily familiarize themselves with the backgrounds and qualifications of the managers of the companies they invest in by checking their biographies on company Web sites or in the annual proxy statements sent to shareholders (and filed with the SEC as Schedule DEF 14a). Part of answering the question, "Can I trust this team?" certainly hinges on basic information like, "Is the team qualified?" But often enough in corporate America, managers have grown up with a company, and their resumes won't say much about what they've done recently, and they won't tell you much about whether to trust these individuals with your money.

We believe that in the grand scheme, people respond to the incentives they are given or set for themselves. In some ways, this represents the kernel of the American Dream: Regardless of your background, if you prove yourself and work hard, you can do anything. The promise of financial reward accompanies most versions of the American Dream we've heard of. This is the angle from which we here at Morningstar approach the question about trusting management. We assume the team is qualified (whether by pedigree, education, or hard knocks), but we question the motivation and reward system that the team (including the board of directors) has put in place and by which they measure their own performance.

Management Structure

Technically, the management team of a public company works for and reports to the board of directors, who represent the company's owners: its shareholders. In the U.S., companies typically hold annual elections at which shareholders vote (or assign their vote to someone else, called a proxy) to elect directors to the board. In theory, then, shareholders can wield great influence over the management and direction of the companies whose shares they own. In practice, as corporate and investing cultures have evolved, the relationship between shareholders and company managers has become ritualized and more distant.

So how should investors close the gap? We believe that by identifying and investing in companies that have demonstrated their commitment to treat shareholders well, individual investors can reassert their influence on the day-to-day choices and priorities that companies set.

What do we mean by "demonstrated commitment to shareholders?" Perhaps an analogy will help. Imagine you have decided to start a lemonade stand with your neighbor. When you meet at the appointed time to go over your plans, your neighbor brings a pound of sugar for the lemonade. Such a gesture demonstrates your neighbor's commitment to doing business with you.

Similarly, when you view a home for sale, you expect it to be orderly, and that the owner will make arrangements for you to see it. In this small way, the seller has demonstrated his or her commitment to doing the things that are necessary to sell you the home. If it's a hassle to view the home, or it's disorderly when you view it, that should prompt questions about how the later stages of negotiation and closing will be handled.

Buying a Business

Now imagine that you are considering buying part of a business, potentially to keep and to profit from for a long time. What signs should you look for that the company's directors and managers are interested in doing business with you?

Investors should look for companies that offer clear communication about the business, have established a clear separation between business and personal relationships, and have set clear goals for measuring progress in conducting the business. In practice, these goals often involve raising barriers or instituting policies meant to inhibit human nature.

By snooping around the edges and examining the outward signs of how a company's management team behaves and rewards itself, we can surmise how committed they are to honoring their role as stewards of investor capital.

While it would be impractical for every private shareholder to visit management and dig around for scuttlebutt, this doesn't mean that individual investors should simply give up on investigating the people who run their businesses. On the contrary, through a handful of public sources, investors can begin to crack the nut around one of the most subjective elements of stock research: management.

We will refer to the host of topics surrounding management as "stewardship." Fisher describes the qualities he looks for in managers as trusteeship. Others refer to these issues as corporate governance, fiduciary responsibilities, and other names. We call it stewardship because we look for managers who see themselves as stewards of investors' capital and who have signaled their self-image to us in verifiable ways. We find the alternative--managers who see the company they run as their personal piggy-bank--repugnant.

20 Questions

Here's the fun part. If you liked 20 questions as a parlor game, you may enjoy using the same 20 questions that Morningstar's stock analysts currently use to evaluate the three main areas of stewardship at the companies they cover. As you will see, some of these require a working knowledge of accounting and the company's track record. Nonetheless, familiarizing yourself with the subject matter of even a handful of these inquiries will bring you closer to evaluating management on your own behalf.

Transparency

1. Does the company overuse "one-time" charges or write-offs? In public announcements, does it consistently disregard GAAP earnings and point to pro forma numbers (i.e., figures "excluding charges...")?

2. Does the firm have aggressive accounting? For example, has there been a major change to accounting practices, such as revenue recognition, during the past three years that may have been intended to hide something?

3. Has the company recently restated earnings for any reason other than compliance with an accounting rule change? Has the company had an unexplained delay in making regulatory filings or reporting quarterly results?

4. Does the company grant options without expensing them?

5. Does the company choose not to provide any balance sheet with its quarterly earnings release?

6. Bonus: Does the company's disclosure go above and beyond what its competitors provide?

Shareholder Friendliness

7. Does the company have a separate voting class of shares that an insider controls?

8. Does the company have takeover defenses in place that, if exercised, would significantly dilute existing shareholders or favor the interests of management over shareholders in a takeover situation?

9. Has a majority vote of shareholders on a proposal been thwarted by any of the following: (a) management inaction; (b) management interference in the ballot process; or (c) the existence of a supermajority provision?

10. Are the chairman of the board and the CEO the same person?

11. Has the board or management engaged in significant related-party transactions that cast doubt on its ability to act in shareholders' best interests?

12. Bonus: Is there cumulative voting (i.e., are shareholder votes equal to shares owned times number of directors)?

Incentives, Ownership, and Stewardship

13. Has the board agreed to a compensation structure that rewards management merely for being employed, rather than for making value-enhancing decisions?

14. Over the past three years, has the firm given away more than 3% of shares annually as options?

15. In bad times, has the board granted "one-time" "retention bonuses," redefined management goals midstream, repriced options, or bestowed other "extraordinary" perks?

16. Is the CEO's equity stake in the company (including options) too small to align his or her interests with shareholders'?

17. Do directors receive a substantial portion of their compensation in cash, rather than stock?

18. Do the goals set out for top management by the board's compensation committee encourage short-term actions rather than long-term value creation? Is the board's disclosure of such goals insufficient, too generic, or too fuzzy to allow you to answer the preceding question?

19. Given the company's financial performance, the board's and management's past actions, and the above factors, is management inappropriately motivated and/or rewarded?

20. Bonus: Does the board and management have a substantial track record of doing right by shareholders?

We do not weigh all of these questions equally, and sometimes the details necessitate the exercise of judgment. Of all these questions, we place the greatest emphasis on Question 11 because related-party transactions can be especially harmful to shareholders and are a decent indicator of bigger governance problems. Frequent and egregious lapses are a leading indicator that a given company's inner sanctum has too easily rationalized putting its self-interest over shareholders' interests. Caveat emptor.

To illustrate an egregious related-party transaction, consider Magna International MGA. For one, this diversified auto-parts maker has a dual-class share structure, which essentially limits shareholder influence. The other significant negative regarding governance is the extremely large consulting contracts paid to its founder Frank Stronach. In exchange for consulting work relating to Magna's European matters, he has received $140 million in fees from 2004 to 2007 alone. Magna has also purchased golf courses and other real estate from Stronach-controlled companies, which we feel are not necessary to run an auto parts firm. Morningstar's analysts have compiled lots of egregious examples of related-party transactions just like these.

The Bottom Line

Though competitive positioning remains extremely important to a company's long-term fortunes, quality of management matters, too. After all, even the most attractive ship can be run ashore by an incompetent skipper, or be pillaged by a pirate. The whole reason it is worthwhile to go through these exercises is to make sure you are investing your money with people you can trust.

Stocks300

301: The Income Statement

Introduction

Though learning basic accounting may not be the most enjoyable exercise, knowing how to interpret a company's financial statements is critical to understanding how a business is performing as well as figuring out if a stock is a good value.

In Lesson 107, we gave a basic introduction to financial statements. In this section, we will dig deeper and devote a lesson to each of the three main financial statements: the income statement, the balance sheet, and the statement of cash flows. Lessons 304 and 305 will help you use each of these statements to get a picture of a company's financial health and performance.

First up is the income statement, which summarizes how the company's operations performed during a given period. It tells you how much money a company has brought in (its revenues), how much it has spent (its expenses), and the difference between the two (its profit). Did the company make a profit during the period? Did it improve its business over last year? The income statement will provide you with this information, and more.

Next, we will walk through the different components of the income statement and illustrate how they may vary across different companies. By the end of the lesson, you should have a grasp of how to read an income statement, and you'll be able to test your knowledge by answering questions using a fictional company's income statement.

Revenue

While income statements for companies in different industries may not look exactly the same, almost all of them begin with the company's revenue for the period. Revenue, which is sometimes called "sales," represents the amount of money a company brings in for selling its goods or services. (Because banks and some other financial institutions make money from interest--i.e., they don't really "sell" anything--their income statements look different.)

Depending on the nature of a company's revenue stream, a company will record revenue in one of several ways. When you buy a DVD from Best Buy BBY, for example, Best Buy recognizes revenue when you give the company your money or your credit card and walk out with your purchase. As another example, an insurance company will "recognize," or earn and record, revenue from premiums that you pay gradually over the period in which you are covered. Be sure to check out a company's "revenue recognition policy," which can be found in the notes accompanying its financial statements, to see how it accounts for its revenue.

Expenses

A company needs to spend money to make money, and these outflows from making and selling its products or providing and selling its services represent a company's expenses. Companies' expenses are usually grouped into similar categories.

Cost of Sales. Cost of sales (also known as cost of goods sold--COGS--or cost of services) represents all of the expenses directly incurred in creating the goods or services that a company sells. Examples include raw materials, items purchased for resale, the cost of running a factory, and labor. If it cost Best Buy $9 to acquire the DVD that you purchased, that $9 is considered a cost of sales. The steel and rubber Harley-Davidson HOG had to purchase to make its motorcycles would also be grouped into cost of sales.

Selling, General, and Administrative Expenses. Selling, general, and administrative expenses (also known as "SG&A") consist of several types of costs. Selling expenses are those expenses incurred in attempting to create sales for the company. Examples include marketing expenses and compensation for sales staff. General and administrative expenses, meanwhile, represent most overhead costs of operating a company's business. Costs related to a company's human resources and finance departments and costs related to its office buildings are examples of general and administrative expenses.

Depreciation and Amortization. When a company purchases an asset that the company intends to use over a period of time, such as a piece of factory equipment or a building, the asset's entire cost isn't immediately expensed on the income statement. Instead, the company expenses the asset gradually over the estimated useful life of the asset. This expense represents the building's or equipment's normal wear and tear over time, and is referred to as depreciation expense.

Amortization is similar to depreciation, except amortization relates to intangible assets, or assets that do not have a physical presence, such as a brand name. Oftentimes, depreciation and amortization are already included in the other expenses mentioned above, so you may not see them listed separately on the income statement. However, the statement of cash flows, one of the other key financial statements, has depreciation and amortization amounts (sometimes combined) disclosed.

It is worth noting that depreciation and amortization expenses are noncash expenses. For more information about noncash revenue and expenses, read the section on accrual accounting later in this lesson.

Other Operating Expenses. Other operating expenses represent all other expenses related to a company's primary operations not included in the above categories. Often, nonrecurring costs or accounting gains are included here. Pay close attention to these items. Some companies abuse these "one-time" accounting events to the point where they become annual events. Also, they frequently include items such as restructuring charges, which are costs incurred to close a factory or lay off part of the workforce, for example. They may also include asset write-offs or write-downs, which often suggest that management may have paid too much for a particular asset or invested too much in an unprofitable business.

Interest Income and Interest Expense. In order to raise funds for the purchase of assets used to run the business, a company may issue debt (i.e., borrow money). In most cases, the company is required to pay interest on these obligations. Conversely, when a company has more cash than it currently needs for operating its business, it may invest this excess money. These investments often earn interest or investment income. On the income statement, you may see interest expense and interest income listed separately or lumped together as net interest expense or net interest income.

Taxes. Just as you pay taxes to Uncle Sam, most companies do, too. For companies that make a profit, taxes are an expense on the income statement.

Important Income Statement Calculations

Now that we've talked about some of the major line items found on the income statement, let's discuss some of the important figures that are already calculated for us on it.

Gross Profit. You actually won't find this amount on all income statements, but it is very easy for you to calculate yourself. Just take revenue and subtract cost of sales. Gross profit shows how much of a markup a company receives on the goods and services it sells. If you paid $12 for a DVD at Best Buy, and Best Buy's acquisition cost was $9, the gross profit Best Buy realizes is $3, or 25% of the sales price.

Operating Income. Arguably the best indicator of a company's true performance, operating income is often called operating profit. It is calculated by subtracting cost of sales and all operating expenses (SG&A, depreciation, amortization, restructuring, and other operating expenses) from total revenue. Operating income measures the profit (or, in the case of poorly performing companies, the loss) that a company is able to generate through its main operations. Operating income is also sometimes called "earnings before interest and taxes" (EBIT) because those expenses are not considered "operating" expenses.

Net Income. Net income is what's left over for a company after all expenses have been accounted for. It is sometimes referred to as a company's "bottom line." Many management teams and Wall Street analysts talk quite a bit about net income, but keep in mind that many types of items, such as one-time gains, can distort this figure. It is generally a poor proxy for a company's cash flow. And though net income is important, it should not be thought of as the end-all, be-all figure to focus on.

Earnings Per Share. Earnings per share, or "EPS," is simply net income divided by the weighted average number of shares outstanding during the relevant period. (This number of shares is also listed on the income statement.) EPS is what management and Wall Street analysts seem to focus on most, since it is the profit left over for stockholders. While EPS can be a useful number, be sure to consider it in context with the company's other financial information.

You'll notice that two EPS calculations are performed on the income statement: one for basic EPS and the other for diluted EPS. The difference is in the way the number of shares outstanding is used. The basic EPS calculation uses basic shares, which are the actual shares of a company's stock outstanding, as its denominator.

Conversely, the diluted EPS calculation uses diluted shares outstanding, which takes into account securities that could be converted into common stock at some future point. Such securities include stock options issued to employees and convertible bonds. Using diluted shares is much more informative than using basic shares, because if and when these securities are converted into shares of common stock, your stake in the company, or your piece of the total pie, gets smaller and smaller.

Accrual Accounting

Chances are, at some point in your life you've subscribed to a newspaper or magazine. Most likely, the newspaper or magazine publisher asked you to pay for the cost of the entire year's worth of issues at the beginning of your subscription. However, when the publisher received your up-front payment, it was not allowed to record the entire amount of cash that you paid it as revenue.

The above occurrence highlights the concept of accrual accounting, the accounting method used in the United States by publicly traded companies. Accrual accounting attempts to recognize revenue and expenses in the specific period in which they occur. For instance, accrual accounting recognizes revenue in the period in which the company sells its goods or actually provides its services. In our newspaper subscription example, the publisher recognizes revenue from your subscription gradually over the length of the subscription. So, in effect, the publisher is still recognizing revenue from your subscription weeks and even months after receiving your payment.

Accrual accounting is also applied to reflect the purchase and use of a large piece of equipment or a building. When a company purchases such an asset, it does not record the entire cost of the asset as an up-front expense that runs through the income statement. Rather, it records the purchase price of the asset on the balance sheet. Then, each year, it takes a portion of that asset's cost and expenses it on the income statement as a depreciation expense.

Depreciation expense, which represents normal wear and tear for an asset (much as your car depreciates a little each year), reduces the recorded book value of the asset every year (very similar to how the value of your car goes down the longer you keep it). Keep in mind that depreciation is a noncash expense because the cash outlay already occurred when the asset was purchased and recorded on the balance sheet.

Accrual accounting allows revenue and expenses to be recognized in the appropriate periods, letting a company match as best it can its sales with the expenses incurred in generating those sales. As you can see, cash in the door does not always mean immediate revenue for a company, and cash out the door does not always mean immediate expense for a company, either. Keep this important concept in mind as you analyze any company's income statement.

The Bottom Line

With this lesson, we've laid the foundation for how to interpret the numbers on an income statement to assess a company's performance and profitability. There is a lot of information in this lesson, so do not be afraid to read it more than once in order to absorb all the concepts. With the ability to analyze an income statement, you should get some sense as to how profitable a company actually is, a key consideration in deciding whether or not to become an owner in that company.

302: The Balance Sheet

Introduction

Now that you have a good idea of how profits are recorded on the income statement, let's adjust those green eyeshades, insert that pocket protector, and move on to the balance sheet. As mentioned in Lesson 107, the balance sheet--also known as the "statement of financial condition"--tells investors how much a company owns (its assets), how much it owes (its liabilities), and the difference between the two (its equity) at a specific point in time. Thus, you can think of the balance sheet as a snapshot of what a company is worth--according to accounting rules--on a given day.

Although we're going to keep it fairly simple, this lesson will provide more details on the key sections of a company's balance sheet and may get a little technical at times.

However, we think it will be well worth the time and effort needed to plow through it. So take a deep breath and let's dig in.

Assets, Liabilities, and Equity--It All Equals Out

One of the most important things to understand about the balance sheet is that it must always balance. Total assets will always equal total liabilities plus total equity. Thus, if a company's assets increase from one period to the next, you know for sure that the company's liabilities and equity increased by the same amount.

Let's now take a deeper look at the various sections of the balance sheet. Although there are potentially many more specific line items that we could cover, we're going to stick with the most common, and in our opinion, the most important sections that investors should be aware of.

Current Assets

Assets are generally defined as things a company owns, which are expected to provide future benefits. There are two main types of assets: current assets and noncurrent assets. Within these two categories, there are numerous subcategories, or line items.

Current assets are things a business owns that are likely to be used up or converted into cash within one business cycle--usually defined as one year. The most common line items in this category are cash and cash equivalents, short-term investments, accounts receivable, inventories, and other various current assets.

Cash and Cash Equivalents. This line item doesn't necessarily refer to actual bills sitting in a cash register or vault. Generally, cash is held in low-risk, highly liquid investments such as money market funds. These holdings can be liquidated quickly with little or no price risk. This is considered money that can be used for any purpose the company wants.

Short-Term Investments. This represents money invested in bonds or other securities that have less than one year to maturity and earn a higher rate of return than cash. These investments may take a little more effort to sell, but in most cases, investors can lump them with cash to figure out how much money a firm has on hand to meet its immediate needs.

Accounts Receivable. Think of receivables as bills that a company sends its customers for goods or services it has provided but for which the customer has not yet paid but is expected to pay within the next year. In other words, these are sales (recorded on the income statement) that haven't been paid for yet with cash. Generally, accounts receivable are shown as a net amount of what a company expects to ultimately collect, because some customers are likely not to pay. The amount of receivables a company thinks it won't collect is typically known as an allowance for doubtful accounts. Not only do additions to the allowance for doubtful accounts decrease the amount of accounts receivable, but they also increase a company's expenses--known as bad debt expense.

Keep an eye on accounts receivable in relation to a company's sales. If accounts receivable are growing much faster than sales, it generally means a company isn't doing an ideal job collecting the money it is owed. This could potentially be a sign of trouble because the company may be offering looser credit terms to increase its sales, but it may have difficulty ultimately collecting the cash it's owed. Conversely, if accounts receivable are growing much slower than sales, the firm's credit terms may be too stringent, at the expense of sales.

Inventories. There are many different types of inventories, including raw materials, partially finished products, and finished products that are waiting to be sold. This line item is especially important to watch in manufacturing and retail firms, which are saddled with large amounts of physical inventory.

The value of inventories shown on a company's balance sheet should be taken with a grain of salt because of the way inventories are accounted for. Similar to accounts receivable, changes in inventories are generally related to a company's sales, or more specifically, the gross profit--sales price minus the cost of the inventory sold--it makes from each sale. If inventory levels are growing much faster than a company's sales, it may be making or buying more goods than it can sell. That may force the company to lower its prices, which results in lower profits for each item sold and lower profitability for the company. In some cases, it may have to reduce prices to levels below the value of the inventory itself, resulting in losses.

Additionally, inventories tie up capital. The cash that was used to create inventory can't be used for anything else until it's sold. Thus, another important thing for investors to monitor is how fast a company is able to sell its inventory.

Other Current Assets. While there are too many to list here, this category includes any other assets the firm may have that are expected to turn into cash within the next year. However, some current assets will not turn into cash, the most common of which are known as prepaid expenses (yes, even though it's called prepaid expenses, it's actually an asset). For example, say Harley-Davidson HDIbuys and pays up-front for an insurance policy for the coming year. Accounting rules say the company should record the entire payment as a prepaid expense (asset) as opposed to a normal expense on the income statement because it represents something of future worth to the company--a full year's worth of insurance coverage. As the year goes on, the value of the asset will decrease--less time remaining on the policy--and the amount of the decrease is recorded as an expense, a process known as amortization. Keep in mind that a company's prepaid expenses--which belong to a broader category known as capitalized costs--represent cash that was paid up-front and will turn into expenses instead of cash within the next year.

Noncurrent Assets

Noncurrent assets are cleverly defined as anything not classified as a current asset. The main line items in this section are long-term investments; property, plant, and equipment (PP&E); and goodwill and other intangible assets.

Long-Term Investments. This is money invested in either bonds with longer terms than one year or the stock of other companies. These aren't as liquid as cash and short-term investments, and prices may fluctuate, so it's possible that the value shown on the balance sheet may be too high or too low. If it's a big enough balance, you may want to dig into the details to make sure you're comfortable with the kinds of risks the firm is taking with shareholders' money.

Property, Plant, and Equipment (PP&E). These assets represent the bricks and mortar of a company: land, buildings, factories, furniture, equipment, and so forth. The PP&E amount on the balance sheet is typically reported net of accumulated depreciation--the total amount of depreciation recorded against the assets over their life. Eventually, PP&E has to be replaced, and depreciation is a company's best estimate of these "replacement" costs from wear and tear. Keep in mind that PP&E is usually not a very accurate measure of what a firm's bricks and mortar are really worth. Many times, buildings worth millions of dollars are reported at next to nothing in PP&E because of accumulated depreciation. Likewise, the actual value of a company's land--which is recorded in PP&E at its acquisition price--may be worth exponentially more than what is recorded.

Goodwill and Other Intangible Assets. Intangibles are, just as the name describes, assets that can't be touched and are generally not going to turn into cash. The most common form of intangible assets is goodwill. Goodwill is formed when one company buys another and pays more than the target company is worth (as defined by the net worth, or equity on the target's balance sheet).

You should view this line item with high levels of skepticism because most companies tend to pay too much when making acquisitions. Therefore, the value of goodwill that shows up on the balance sheet is often higher than what the intangible assets are really worth. Accounting rules require companies to value goodwill every year, and if a company lowers the value of the goodwill it records--a phenomenon known as impairment--it's a tacit admission that the company paid too much for an acquisition it made in the past.

Current Liabilities

Now that we're more familiar with what a company owns, let's move to the other side of the balance sheet, what it owes. Similar to assets, there are two main categories of liabilities: current liabilities and noncurrent liabilities.

Obligations the firm must pay within a year are known as current liabilities. The main line items you should be concerned with in this category are short-term debt and accounts payable.

Short-Term Debt. This refers to money the company has borrowed for a term of less than one year. It's often in the form of a line of credit that may be drawn down at the company's discretion. Typically, the proceeds are used for short-term needs. Often, the amount of long-term debt that must be paid back within one year is also lumped into this line item. The amount of short-term borrowings is an important figure, especially if a company is in financial distress or pays a high dividend, because the entire amount must be paid back relatively quickly, leaving little wiggle room.

Accounts Payable. Accounts payable represents bills the company owes for goods or services it hasn't paid for yet. It is the opposite of accounts receivable, and generally speaking, investors like to see the opposite trends for the two line items. For example, with receivables, we'd prefer a company to collect what it's owed as soon as possible. However, if a company can postpone paying what it owes for a longer period of time--without getting in trouble--it will hold on to its cash for a longer period of time, a plus for cash flow.

Noncurrent Liabilities

Noncurrent liabilities are the flip side of noncurrent assets. These liabilities represent money the company owes one year or more in the future. Although you'll see a variety of line items in this category, the most important one by far is long-term debt.

Long-Term Debt. This represents money the company has borrowed, typically by issuing bonds, that doesn't need to be paid back for several years. Too much long-term debt is generally risky for a company, because the interest on debt must be repaid no matter how the business is doing. Determining how much debt is too much is very firm-specific and depends on many things including the interest rate a company pays on its debt, and the stability of the firm's earnings and cash flows. One good way to determine if a company can afford the interest payments on its debt is to see how many times the firm's operating income--otherwise known as income before interest and taxes (EBIT)--will cover its interest expenses (interest coverage ratio).

Equity

As we mentioned earlier in this lesson, equity is equal to total assets minus total liabilities. It represents the part of the company that is owned by shareholders; thus, it's commonly referred to as shareholders' equity. It is also referred to as net assets, or net worth. Although there are several line items within equity, the two main categories investors should focus on are retained earnings and treasury stock.

Retained Earnings. This line item represents the total profits the company has earned since it began, minus whatever has been paid to shareholders as dividends. Because this is a cumulative number, if a company has lost money over time, retained earnings can be negative and would be renamed "accumulated deficit."

Treasury Stock. This line item shows how much of its own stock a company has repurchased. Because repurchasing stock is analogous to paying dividends to investors--and in some cases can be even more desirable--investors should take note of changes in this account to see how much stock a company is repurchasing from one period to the next.

The Bottom Line

You can exhale because you've made it through our tour of the balance sheet. Although we've admittedly left out plenty of specifics, you should know enough now about the income statement and balance sheet to be dangerous.

In the next lesson we'll move forward to what's arguably the most important financial statement of all, the statement of cash flows.

303: The Statement of Cash Flows

Introduction

Now that we've run through the income statement and balance sheet, it's time to take a look at arguably the most important as well as the most complex of the three major types of financial statements, the statement of cash flows. The statement of cash flows tells you how much cash went into and out of a company during a specific time frame like a quarter or a year. In other words, it shows how much cash a company is generating from one period to the next--and cash is what matters most.

What It Tells You

The statement of cash flows seems similar to the income statement, which shows how much revenue came in and how many expenses went out. The difference lies in a concept called accrual accounting. As discussed in Lesson 301, accrual accounting requires companies to record revenues and expenses when transactions occur, not when cash is exchanged. The principle is known as matching--expenses must match the revenues those expenses created whenever possible. While that explanation seems simple enough, it gets messy in practice, and the statement of cash flows helps investors sort it out.

The statement of cash flows strips out all the abstract, noncash revenues and expenses that are included in the income statement. Many companies have shown profits on the income statement but have stumbled later because of insufficient cash flows. A good look at the statement of cash flows for those companies may have warned investors that rocky times were ahead.

Cash Flows from Operating Activities

Because companies can generate cash in several different ways, the statement of cash flows is separated into three sections: cash flows from operating activities, from investing activities, and from financing activities.

The cash flows from operating activities section comes first and tells you how much cash the company generated from its core business, as opposed to peripheral activities such as investing or borrowing. This is the area you should focus most of your attention on because it paints the best picture of how well a firm's business operations are producing cash that will ultimately benefit shareholders. Some of the main line items found in this section are described below:

Net Income. This figure is taken directly from a company's income statement. Net income is the starting point of how much cash a company provides from its operations. However, there are plenty of items on the income statement that affect income but don't affect cash flow, so all the remaining items are adjustments to net income that help you reconstruct how much actual cash was generated by the business.

Depreciation and Amortization. As we mentioned in Lesson 301, depreciation is accounting's way to record wear and tear on a company's property, plant, and equipment (PP&E). Even though it's an expense on the income statement, depreciation is not a cash charge, so it's added back to net income.

Changes in Working Capital. Working capital is calculated as current assets minus current liabilities on the balance sheet (see Lesson 302). Just as the name suggests, working capital is the money that the business needs to "work." Therefore, any cash used in or provided by working capital is included in the "cash flows from operating activities" section.

Any change in the balances of each line item of working capital from one period to another will affect a firm's cash flows. For example, if a company's accounts receivable increase at the end of the year, this means that the firm collected less money from its customers than it recorded in sales during the same year on its income statement. This is a negative event for cash flow and may contribute to the "Net changes in current assets and current liabilities" on the firm's cash flow statement to be negative. On the flip side, if accounts payable were also to increase, it means a firm is able to pay its suppliers more slowly, which is a positive for cash flow.

We're all about shortcuts to make financial statement analysis easier, so here's a little secret that's all you really need to remember regarding changes in working capital:

- If balance of an asset *increases*, cash flow from operations will *decrease*.
- If balance of an asset *decreases*, cash flow from operations will *increase*.

- If balance of a liability *increases*, cash flow from operations will *increase*.
- If balance of a liability *decreases*, cash flow from operations will *decrease*.

Current assets may include things like inventories and accounts receivable, while current liabilities would include short-term debt and accounts payable.

Net Cash Provided by Operating Activities. After all adjustments to net income are accounted for, what's left over is the net cash provided by operating activities, also known as operating cash flow. This number is not a replacement for net income, but it does provide a great summary of how much cash a company's core business has generated.

Cash Flows from Investing Activities

This section of the cash flow statement shows the amount of cash firms spend on investments. Investments are usually classified as either capital expenditures--money spent on items such as new equipment or anything else needed to keep the business running--or monetary investments such as the purchase or sale of government bonds. The most important parts of this section for investors are typically the capital expenditures line item and the line item for acquisitions of other businesses.

Capital Expenditures. This figure represents the amount of cash a company spent on items that last a long time, such as property, plant, and equipment (PP&E). Basically, capital expenditures--often referred to as "capex"--are brick-and-mortar types of investments that are necessary to keep the company running and growing in its current form. For example, in order for a supermarket to keep operating and growing, it will typically need to remodel its existing stores, replace its equipment, and build new stores. These expenditures will show up in the capex line item in the "cash flows from investing activities" section.

One of the most important terms and figures you should become familiar with is *free cash flow*. Free cash flow is calculated as net cash from operating activities minus capital expenditures. This figure represents the amount of excess cash a company generated, which can be used to enrich shareholders or invest in new opportunities for the business without hurting the existing operations. We can't emphasize enough that this figure--free cash flow--is one of the most important foundations in determining a company's ability to enrich its shareholders.

Cash Used for Acquisitions. The acquisitions line item refers to how much cash a company paid to acquire another. Because companies tend to overpay for acquisitions, it's a good idea to keep an eye on this line item to see how much cash a company is spending on acquisitions. This line item will also give you a good sense of how much of a company's growth is coming from internal sources versus acquisitions.

Cash Flows from Financing Activities

The final section of the statement of cash flows is "cash flows from financing activities." This section includes any activities that involve the company's owners or creditors. For example, the issuance or purchase of common stock, the issuance or repayment of debt, and dividends paid to investors would be found in this section. Although these line items are pretty self-explanatory--dividends paid is exactly what it says--we think investors should look carefully at how much stock a company is issuing or repurchasing.

Issuance/Purchase of Common Stock. This is an important number to look at because it shows how a company is financing its business. Newer companies and rapidly growing companies often need to issue lots of new stock to fund their growth. New stock issuance typically dilutes existing shareholders' ownership--they own a smaller piece of the whole pie--but it also gives the company cash to expand.

Meanwhile, mature companies that have ample free cash flow often will buy back their own stock, which has the effect of increasing the value of existing shares--existing shareholders own a bigger piece of the pie. Share repurchases and dividend payments are typically the only two ways a company can enrich its shareholders with its cash flows.

The Bottom Line

Congratulations! You've made it through three lessons of pretty in-depth coverage of the three most important financial statements. While this knowledge may not make you the life of your next party, understanding how to read financial statements is a fundamental skill required to be a knowledgeable investor.

304: Interpreting the Numbers

Introduction

In the preceding three lessons, we discussed each of the three main financial statements. You learned about the different components of the income statement and how to determine if a company is profitable. We talked about the distinction between assets, liabilities, and shareholders' equity and where to find them on the balance sheet. Finally, we went over the statement of cash flows to figure how much cash a company uses or makes from its operating, investing, and financing activities.

But now that you have this knowledge about each of the financial statements, how do you, as an investor, use it?

In this lesson we'll apply what you've learned so far in a process called financial statement analysis. Financial statement analysis looks to explain, often through financial ratios, the important relationships among the different numbers included in the financial statements. The ultimate goal of financial statement and ratio analysis is to

help you interpret the numbers and come up with a clear picture of a company's financial performance and condition.
Before we jump in, we should inform you that the following ratios are for non-financial companies only. Financial companies, such as banks or insurance companies, have unique characteristics. As a result, their financial statements look much different than those of most other companies.

How to Use Financial Ratios

We've touched on some of the ratios mentioned here in earlier lessons, but this lesson will give you a comprehensive look at the most important numbers to key in on. Some ratios can be useful by themselves. Others are completely useless when considered without context. Typically, financial ratios provide the most benefit when they are compared with other identical ratios.
A company's ratios are used comparatively in two main fashions: over time and against other companies. Comparing the same ratios for a firm over time is a great way to identify a company's trends. If certain ratios are steadily improving, it may suggest an improvement in a company's operations or financial situation; conversely, if certain ratios seem to be getting worse, it may highlight some troubling prospects about the firm.
It's also important to compare a company's ratios against those of others in the industry. A company's ratios may be improving over time, but how do they stack up against their peers' ratios? If they aren't as rosy as those of competitors, this may indicate that the company isn't as well positioned or managed as well as other industry players.
At Morningstar, we evaluate many ratios as we perform our analyses. Four of the major types we consider are efficiency, liquidity, leverage, and profitability ratios. As we describe some of the main ratios within each category, we'll discuss what each one attempts to measure and what changes in them may indicate.

Efficiency Ratios

No matter what kind of business a company is in, it must invest in assets to perform its operations. Efficiency ratios measure how effectively the company utilizes these assets, as well as how well it manages its liabilities.
Inventory Turnover. Inventory turnover illustrates how well a company manages its inventory levels. If inventory turnover is too low, it suggests that a company may be overstocking or overbuilding its inventory or that it may be having issues selling products to customers. All else equal, higher inventory turnover is better.
Inventory Turnover = (Cost of Sales) / (Average Inventory)
Accounts Receivable Turnover. The accounts receivable turnover ratio measures how effective the company's credit policies are. If accounts receivable turnover is too low, it

may indicate the company is being too generous granting credit or is having difficulty collecting from its customers. All else equal, higher receivable turnover is better.
Accounts Receivable Turnover = Revenue / (Average Accounts Receivable)
Accounts Payable Turnover. You'll notice that the accounts payable turnover ratio uses a liability in the equation rather than an asset, as well as an expense rather than revenue. Accounts payable turnover is important because it measures how a company manages paying its own bills. High accounts payable turnover may be a signal that a firm isn't receiving very favorable payment terms from its own suppliers. All else equal, lower payable turnover is better.
Accounts Payable Turnover = (Cost of Sales) / (Average Accounts Payable)
Total Asset Turnover. Total asset turnover is a catch-all efficiency ratio that highlights how effective management is at using both short-term and long-term assets. All else equal, the higher the total asset turnover, the better.
Total Asset Turnover = (Revenue) / (Average Total Assets)

Liquidity Ratios

In a nutshell, a company's liquidity is its ability to meet its near-term obligations, and it is a major measure of financial health. Liquidity can be measured through several ratios.
Current ratio. The current ratio is the most basic liquidity test. It signifies a company's ability to meet its short-term liabilities with its short-term assets. A current ratio greater than or equal to one indicates that current assets should be able to satisfy near-term obligations. A current ratio of less than one may mean the firm has liquidity issues.
Current Ratio = (Current Assets) / Current Liabilities
Quick Ratio. The quick ratio is a tougher test of liquidity than the current ratio. It eliminates certain current assets such as inventory and prepaid expenses that may be more difficult to convert to cash. Like the current ratio, having a quick ratio above one means a company should have little problem with liquidity. The higher the ratio, the more liquid it is, and the better able the company will be to ride out any downturn in its business.
Quick Ratio = (Cash + Accounts Receivable + Short-Term or Marketable Securities) / (Current Liabilities)
Cash Ratio. The cash ratio is the most conservative liquidity ratio of all. It only measures the ability of a firm's cash, along with investments that are easily converted into cash, to pay its short-term obligations. Along with the quick ratio, a higher cash ratio generally means the company is in better financial shape.
Cash Ratio = (Cash + Short-Term or Marketable Securities) / (Current Liabilities)

Leverage Ratios

A company's leverage relates to how much debt it has on its balance sheet, and it is another measure of financial health. Generally, the more debt a company has, the

riskier its stock is, since debtholders have first claim to a company's assets. This is important because, in extreme cases, if a company becomes bankrupt, there may be nothing left over for its stockholders after the company has satisfied its debtholders.
Debt/Equity. The debt/equity ratio measures how much of the company is financed by its debtholders compared with its owners. A company with a ton of debt will have a very high debt/equity ratio, while one with little debt will have a low debt/equity ratio. Assuming everything else is identical, companies with lower debt/equity ratios are less risky than those with higher such ratios.
Debt/Equity = (Short-Term Debt + Long-Term Debt) / Total Equity
Interest Coverage. If a company borrows money in the form of debt, it most likely incurs interest charges on it. (Money isn't free, after all!) The interest coverage ratio measures a company's ability to meet its interest obligations with income earned from the firm's primary source of business. Again, higher interest coverage ratios are typically better, and interest coverage close to or less than one means the company has some serious difficulty paying its interest.
Interest Coverage = (Operating Income) / (Interest Expense)

Profitability Ratios

How good is a company at running its business? Does its performance seem to be getting better or worse? Is it making any money? How profitable is it compared with its competitors? All of these very important questions can be answered by analyzing profitability ratios.
Gross Margin. You'll recall from our earlier discussion of the income statement that gross profit is simply the difference between a company's sales of goods or services and how much it must pay to provide those goods or services. Gross margin is simply the amount of each dollar of sales that a company keeps in the form of gross profit, and it is usually stated in percentage terms. The higher the gross margin, the more of a premium a company charges for its goods or services. Keep in mind that companies in different industries may have vastly different gross margins.
Gross Margin = (Gross Profit) / (Sales)
Operating Margin. Operating margin captures how much a company makes or loses from its primary business per dollar of sales. It is a much more complete and accurate indicator of a company's performance than gross margin, since it accounts for not only the cost of sales but also the other important components of operating income we discussed in Lesson 301, such as marketing and other overhead expenses.
Operating Margin = (Operating Income or Loss) / Sales
Net Margin. Net margin considers how much of the company's revenue it keeps when all expenses or other forms of income have been considered, regardless of their nature. While net margin is important to take note of, net income often contains quite a bit of "noise," both good and bad, which does not really have much to do with a company's core business.
Net Margin = (Net Income or Loss) / Sales

Free Cash Flow Margin. In Lesson 303, we discussed the concept and importance of free cash flow. The free cash flow margin simply measures how much per dollar of revenue management is able to convert into free cash flow.

Free Cash Flow Margin = (Free Cash Flow) / Sales

Return on Assets (ROA). Return on assets measures a company's ability to turn assets into profit. (This may sound similar to the total assets turnover ratio discussed earlier, but total assets turnover measures how effectively a company's assets generate revenue.)

Return on Assets = (Net Income + Aftertax Interest Expense) / (Average Total Assets)

You'll notice that we are adding back the company's aftertax interest expense to net income in the calculation. Why is that? Return on assets measures the profitability a company achieves on all of its assets, regardless if they are financed by equity holders or debtholders; therefore, we add back in what the debtholders are charging the company to borrow money.

Why are we adding interest back in on an "aftertax" basis? Interest expense is one of the many line items that are either added to or subtracted from revenue to calculate the pretax income amount. This pretax income amount is then taxed to come up with net income. Thus, when the income-reducing effect of interest expense is ultimately filtered down to net income, it is on an aftertax basis.

A company's aftertax interest expense is easy to determine. First, determine its tax rate by dividing its income tax expense by its pretax income. Then plug that figure into the following formula:

Aftertax Interest Expense = (1 - Tax Rate) x (Interest Expense)

Return on assets is generally stated in percentage terms, and higher is better, all else equal.

Return on Equity (ROE). Return on equity is a straightforward ratio that measures a company's return on its investment by shareholders. Like all of the profitability ratios we've discussed, it is usually stated in percentage terms, and higher is better.

Return on Equity = (Net Income) / (Average Shareholders' Equity)

The Bottom Line

In this lesson, we began to apply what we had learned about the financial statements in the previous three lessons. We talked about the use of financial ratios and the importance of considering them in a comparative context. We covered several types of ratios, including efficiency, liquidity, leverage, and profitability ratios. By studying the concepts outlined above and completing the exercises that follow, you'll be well on your way toward understanding how to interpret a company's financial statements and analyzing a company for investment purposes.

305: Quantifying Competitive Advantages

Introduction

Deciding whether or not a company has an economic moat is certainly more art than science. It largely involves looking at qualitative factors that influence competitive positioning. But those qualitative factors that we spoke of in Lessons 205 and 206 can, in fact, be measured by analyzing select numbers found in the financial statements. It is most certainly prudent to make sure a company you are interested in does indeed have a moat before buying. In this lesson, we'll tell you what to look for.

Free Cash Flow

Strong free cash flow is a hallmark of firms with moats, provided that the cash flow comes from ongoing operations and not one-time events. Remember, free cash flow represents the funds left over after a firm has already reinvested in its business to keep it running. It is usually defined as operating cash flow minus capital expenditures (both measures are found on the cash flow statement). If a firm's free cash flow as a percentage of sales is greater than 5%, you've probably found a cash machine and a good basis to dig deeper to see if the company has an economic moat.

Profit Margins

Remember that there are three main types of profit margins we can measure: gross, operating, and net. These three look at gross profit, operating profit, and net income as a percentage of sales. In a nutshell, margins tell you how much of each type of profit a company is generating per dollar of sales.

It should make sense that companies with economic moats generally have larger profit margins than their competitors. Wal-Mart (WMT) may sell an apple at the same price as a local grocery store. But if Wal-Mart's costs are lower, its profit margins on the sale of the apple will be higher. Likewise, it may cost the same for Harley-Davidson (HOG) and one of its competitors to build a motorcycle, but Harley should be able to sell its bike at a higher price because of its brand. Harley will have the higher profit margin.

A net margin consistently in excess of 15% is a good benchmark that often indicates a company has sustainable competitive advantages. Do keep in mind, however, that margins by themselves are of limited use; you also have to consider the context of turnover and return, which we will discuss shortly.

Turnover

Turnover measures how efficiently a company is using its assets to generate sales. Several types of turnover can be used to measure efficiency, but perhaps the most relevant for our discussion here is total asset turnover, or sales divided by total assets. All else equal, a company with higher turnover than its competitors is more efficient and may have some sort of advantage.

As with profit margins, turnover is of limited use when considered in a vacuum. Rather, it is usually best to compare the turnovers of companies in the same industry. Likewise, turnover should usually be used in the context of profit margin and return.

Return on Equity and Assets

Remember that return on equity (ROE) measures profits per dollar of the capital shareholders have invested in the company. Meanwhile, return on assets (ROA) measures the same thing, but over the entire asset base, not just equity.

Both are good measures of the overall profitability of a company. Companies with moats will usually have higher returns than their competitors.

There are two decent return benchmarks that can be used across most industries: If a company has generated ROAs in excess of 10% and/or its ROEs have been in excess of 15% for some time, the company may indeed possess a moat.

DuPont Equation

We've mentioned that margin and turnover mean little when used by themselves and should be compared with the margins and turnover ratios of other, very similar companies. There is one equation, the so-called DuPont equation, that helps tie all the concepts together. The DuPont equation simply breaks down the components of ROA and ROE. You may recall the following formula for ROA (For simplicity, we will ignore aftertax interest expenses.)

Return on Assets = Net Profits / (Average Assets)

But we can also express ROA this way:

Return on Assets = (Asset Turnover) x (Net Profit Margin)

If we break this equation down further by defining turnover and margin, we can see why this works--sales in the definitions of turnover and margin cancel each other out.

ROA = ((Sales) / (Average Assets)) x ((Net Profits) / (Sales))

=

(Net Profits) / (Average Assets)

We aren't just doing random algebra for fun here. Rather, this highlights the two different ways a company can create high returns for itself. Companies can either use their assets more efficiently to generate sales, or they can have higher profit margins, or both.

Margin vs. Turnover

Let's look at the two ways--margin and turnover--that a company can create high returns for itself. Thanks to the several types of moats it possesses, Microsoft (MSFT) is incredibly profitable, with gross profit margins around 80% and net profit margins around 23%. This means for every dollar of sales it generates, its cost of goods sold is only $0.20. Meanwhile, even after all overhead expenses and taxes, it still generates $0.23 in bottom-line profit per dollar of sales.

But Microsoft does not turn over its assets very effectively, having a total asset turnover of only 0.6. Part of this is because a large chunk of its assets are represented by a giant cash hoard that is not generating anything but mere interest income. As such, Microsoft's ROA is "only" 14%.

Wide-moat retailer Wal-Mart (WMT) is at the opposite end of the spectrum. Its net profit margin is only 3.5%, about one-seventh that of Microsoft. However, it turns its assets over 2.4 times. As a result, its ROA is a little over 8% (3.5% times 2.4).

Of course, companies that can create both high profit margins and turnover can generate exceptionally strong returns. Weight Watchers International (WTW) has 17% net profit margins and asset turnover of 1.64, for an ROA of more than 25%--a testament to the firm's wide economic moat.

DuPont and ROE

To use the DuPont equation to calculate a company's ROE, we have to add a step to the process to account for the amount of leverage (debt) a company employs. We can break down ROE using the DuPont equation as follows:

ROE = ROA x (Asset / Equity Ratio)

ROE = (Asset Turnover) x (Net Profit Margin) x (Asset / Equity Ratio)

ROE = (Sales / Average Assets) x (Net Profits / Sales) x (Average Assets / Average Equity)

=

(Net Profits) / (Average Equity)

Notice that in the ROE breakdown, both sales and average assets cancel each other out.

One can draw the same insights about operating efficiency (profit margins) and asset use efficiency (turnover) as with ROA, but this adds the element of leverage to the equation. Clearly, companies can use leverage (debt) in order to boost their ROEs.

Return on Invested Capital

The best way to determine whether or not a company has a moat is to measure its return on invested capital (ROIC). This is similar to ROA but is a bit more involved. The upshot is it gives the clearest picture of exactly how efficiently a company is using its capital, and whether or not its competitive positioning allows it to generate solid returns from that capital.

ROIC = (Net Operating Profit After Taxes--NOPAT) / (Invested Capital--IC)

Notice the numerator is a nonstandard measure, meaning you will not find it on any standard financial statement. We have to calculate it ourselves. The name "net operating profit, after taxes" is fairly descriptive, but you can also think about NOPAT as simply net income with interest expense (net of taxes) added back. We do this to figure out what the profit would be without taking a company's capital structure into consideration.

NOPAT = (Operating Profit) x (1 - Tax Rate)

For the denominator, invested capital is yet another nonstandard, calculated measure not found on any financial statement. Invested capital tries to measure exactly how much capital is required to operate a business. It can be defined as such:

IC = (Total Assets) - (Excess Cash) - (Non-Interest-Bearing Current Liabilities)

This equation introduces two new terms that need some explanation. Excess cash can be defined as the cash a company has that is not required to operate the business. For example, Microsoft clearly does not need the full $35 billion in cash and investments it has in its war chest to keep the business running, and we can subtract a portion of that cash because that capital is not really invested in the business.

The most salient example of a non-interest-bearing current liability is accounts payable. The reason we subtract accounts payable from the invested capital base is because, if you think about it, accounts payable represent capital invested in the business by a company's suppliers, not the company itself. Other forms of liabilities that we should probably subtract out are deferred revenues and deferred taxes. (We say "probably" because, like excess cash, determining what liabilities do and do not represent invested capital requires a lot of judgment.)

Once you have a gone through the exercise of calculating an ROIC for a company, how do you know if it has a wide moat? Typically, if a company has an ROIC in excess of 15% for a number of years, it most likely has a moat. That said, whether a company is creating value depends on whether its ROIC exceeds its cost of capital. We will explain cost of capital in detail in Lesson 403.

The Bottom Line

Figuring out whether or not a company has an economic moat remains largely a qualitative exercise, but the numbers should confirm your observations. Companies with wide economic moats should have strong free cash flow and handsome returns on invested capital.

Stocks400

401: Understanding Value

Introduction

Investors often erroneously assume that a great company translates into a great investment. We discussed several ways to identify superior businesses, but we did not bring up valuation. Finding strong companies is crucial in the investment process, but it is equally important to determine what those companies' stocks are actually worth. Your goal as an investor should be to find wonderful businesses, and invest in them at reasonable prices. If you avoid confusing a great company with a great investment, you will already be ahead of many of your investing peers.

Suppose you are buying a car. Before you make a purchase, you will probably want to do some research, identify a few promising candidates, and take each for a test-drive. But throughout the process, you will also be aware of price. After all, you would not pay $50,000 for a used clunker, though you might pay that much for a new luxury car. Likewise, you would probably never spend $200,000 on a car, no matter the make.

The same thing should be true if you are thinking about buying a stock. A company's profitability, growth prospects, quality of management, and competitive advantages vis-a-vis its rivals are all important factors to consider. However, even the greatest company in the world might not be an attractive investment if its stock is priced too high. The price you pay for a stock can have a significant effect on your returns, and it can mean the difference between a good investment and a mediocre one. (Or worse!)

Why Valuation Matters

To illustrate the importance of valuation, consider the case of hypothetical investors Smith and Johnson. Johnson is a value-conscious investor who always keeps on eye on valuations, even though he loves a great growth story. On the other hand, Smith also loves a growth story, but he buys whatever is hot, regardless of valuation.

On Jan. 2, 2009, Johnson bought 100 shares of Netflix (NFLX) for $30 (not much higher than where it traded four years prior), a P/E of about 28. At the time, the future of the stock was less certain, and its potential subscriber growth was arguably not priced into its shares.

As the firm's business model took off, so did the shares in 2010. Netflix become one of the hottest stocks that year, rising 218% on top of a healthy 84% increase in 2009. However, by early 2011, the stock started to look a overheated to Johnson. Sure, the company's results were still impressive, but the shares continued to skyrocket over $200. Although Johnson raised his expectations for the shares, he concluded that at $200, the firm looked more than twice as expense as it should have. He sold his stake in March 2011 for about $200 a share--an exceptional return on his original $30 investment. The stock went on to reach new highs close to $300, but Johnson didn't look back, because he knew the market price was not based on company fundamentals, but rather investor excitement and unrealistic expectations.

On the other hand, Smith didn't care about Netflix until the company really started to impress. He bought 100 shares in December 2010 (a few months before Smith sold his shares) for $197, after the stock had already established its march upward and had a trailing P/E of about 60. That's pricey by nearly any measure, but Smith didn't care. He was excited about the stock's possibility and willing to pay any price for it.

In retrospect, we can see that Smith was buying near the peak of a stock bubble that was just about to burst. After reaching a high in July 2011, the stock took a swift downturn as results began to disappoint, the company faced intensifed pressure from Amazon (AMZN), and consumers began to increasingly adopt digital streaming, where Netflix had less competitive advantages. The firm's botched business plan involving a split of its DVD and digital-streaming business didn't help matters, either. By November 2012, the stock had retreated to $80 per share.

With 20/20 hindsight, it's easy to see that Netflix was more reasonably valued in 2009 and terribly expensive in 2011. In the real world of investing, we don't have the benefit of knowing exactly what is going to happen, but we can still make our best estimate as to whether a stock is cheap, reasonably priced, or too expensive. Making such estimates is arguably the most important determination of your investment success. In the next several lessons we'll introduce you to some of the ways you could try to determine what a stock is worth.

Measuring Market Capitalization

The first step to figuring out whether a stock is cheap or expensive is measuring the market value of a company. Unfortunately, the stock price you see in the newspaper or on your computer screen doesn't say anything about how much a stock is really worth. A $100 stock is not necessarily more expensive than a $10 stock, and it may be in fact cheaper.

The most common way of measuring a company's value is market capitalization, or market cap for short. (To recap, the market cap of a company is the total market value of all the company's outstanding stock, representing the share price multiplied by the number of shares outstanding.)

Market Cap = (Number of Shares Outstanding) x (Price of Each Share)

Keeping the number of shares constant, a company's market cap will rise and fall with its share price. The market cap also represents the value the market places on the entire company. The companies with the largest market caps are all big, well-known names and by definition are among the most widely held stocks.

It's worth noting that market cap measures only the market value of a company's equity, and you may remember that companies have access to two sources of capital: equity and debt.

To get around this, investors commonly use a variant of market cap called enterprise value, which tries to measure the value of the actual business itself, stripping away purely financial elements. There are many flavors of enterprise value, but the most straightforward way to calculate it is market cap plus long-term debt, minus cash.

Enterprise Value = (Market Cap) + Debt - Cash

Enterprise value measures how much it would cost someone to buy out all the owners of a company, pay off all the company's debts, and take out any cash that is left over. For example, as of Oct. 31, 2012, General Electric's (GE) market cap was $222 billion, and Chevron's (CVX) was $216 billion. GE had about $272.7 billion in long-term debt and $84.5 billion in cash and equivalents, whereas Chevron had only $9.7 billion in long-term debt but $15.9 billion in cash and equivalents. Thus, Chevron's enterprise value was about $209.8 billion, while GE's was $410.2 billion--a significant difference.

The Meaning of Stock Values

At this point, it's important to remember that a stock's value is determined by the company's underlying performance. It's easy to think of Dell as just a number on a computer screen or a squiggly line on a chart, but the reason it has any value at all is that it is a business that is growing and generating profits. Thinking of a stock as a piece of a business will be particularly helpful in understanding many of the valuation methods we will be considering in the next lessons.

There are actually two parts to the value of any business. The first part is the current value of all the business's assets and liabilities, including buildings, employees, inventories, and so forth. The second part is the value of the profits the business is expected to make in the future. Some companies get most of their value from the first part. These types of companies tend to be mature, stable businesses without a lot of growth prospects, such as utilities and real estate companies. For these firms, the assets are in place, and the future cash flow is relatively predictable.

On the other hand, some companies get most of their value from expectations of future growth and profits. These types of companies tend to be younger with a lot of growth potential. Many biotechnology companies would be included in this category.

Actual assets and liabilities are a lot easier to measure than hypothetical future profits. This is one reason stocks of younger companies tend to be more volatile than their more buttoned-down brethren. When expectations are high, the market anticipates that future profits will continue to increase, and it bids up the stock. When pessimism takes over, the market expects fewer profits in the future, and the stock price falls. Ultimately, estimating what a company will do in the future is the key to all forms of stock valuation.

Two Approaches to Stock Valuation

There are two broad approaches to stock valuation. One is the ratio-based approach and the other is the intrinsic value approach. We will be looking at both of these in more detail later, focusing on the intrinsic value approach that we tend to favor at Morningstar. But here's a brief overview to get you oriented.

If you have ever talked about a P/E ratio, you've valued a stock using the ratio-based approach. Valuation ratios compare the company's market value with some financial aspect of its performance--earnings, sales, book value, cash flow, and so on. The ratio-based approach is the most commonly used method for valuing stocks, because ratios are easy to calculate and readily available.

The downside is that making sense of valuation ratios requires quite a bit of context. A P/E ratio of 15 does not mean a whole lot unless you also know the P/E of the market as a whole, the P/Es of the company's main competitors, the company's historical P/Es, and similar information. A ratio that looks sky-high for one company might seem quite reasonable for another.

The other major approach to valuation tries to estimate what a stock should intrinsically be worth. A stock's intrinsic value is based on projecting the company's future cash flows along with other factors, which we'll discuss in Lessons 403 and 404. You can compare this intrinsic or fair value with a stock's market price to determine whether the stock looks underpriced, fairly valued, or overpriced.

The advantage of this approach is that the result is easy to understand and does not require as much context as valuation ratios. However, the main disadvantage is that estimating future cash flows and coming up with a fair value estimate requires a lot of time and effort. We think the advantages outweigh the disadvantages when this type of valuation is done carefully. That is why it forms the basis of Morningstar's fair value estimates and star ratings.

The Bottom Line

Finding great companies is only half the equation in picking stocks. Figuring out an appropriate price to pay is just as important to your investment success. A great company might not be a great investment if its stock is too expensive. Likewise, a company of mediocre quality could be a good investment if bought cheaply enough. Either way, it's critical to be aware of the prices you are paying for your stock investments.

402: Using Ratios and Multiples

Introduction

Now that we have reviewed the basics of stock valuation and why it is important, it's time to get into the nitty-gritty on specific valuation methods. As we discussed in the previous lesson, the most common stock valuation approach involves ratios between a stock's market price and an element of the underlying company's performance--earnings, sales, book value, or something similar. Ratios are very popular with investors because they can be calculated easily, and they are readily available from most financial Web sites and newspapers.

While valuation ratios have become ubiquitous, it's important to recognize their strengths and weaknesses Valuation ratios are handy tools to have at your disposal for a quick-and-dirty analysis, but they all require a lot of context to be useful.

In this lesson, we will review again the most widely used valuation ratios and discuss how to incorporate them into your thinking. We touched on much of this subject matter in Lesson 108, but this lesson will dig deeper. Once you thoroughly understand the promises and pitfalls of valuation ratios, we will move on to more-advanced valuation methods in the next lesson.

Price/Sales (P/S)

One of the most basic valuation ratios is the P/S ratio. The P/S ratio is equal to a stock's market price divided by its sales per share.

P/S = (Stock Price) / Sales Per Share

The nice thing about the P/S ratio is that sales are fairly cut-and-dried numbers, not subject to much accounting assumption and manipulation like earnings can be. Although firms could use accounting tricks to lift sales, it's much harder to do and far easier to catch. Moreover, sales are not as volatile as earnings, because one-time charges or gains can depress or boost earnings temporarily. Plus, the bottom line of economically cyclical companies can vary significantly from year to year, but sales are a more stable benchmark. Moreover, the P/S ratio can be used for companies that don't have positive earnings.

The relative smoothness of sales makes the P/S ratio useful for quickly valuing companies with highly variable earnings by comparing their current P/S ratios with historic P/S ratios. The P/S ratio could also be a helpful tool in analyzing companies in the same industry, particularly when a firm may have unstable earnings or no earnings at all. By 2010, for example, AMR Corp (parent company of American Airlines) had lost billions following the financial crisis and great recession, rending its price-to-earnings multiple useless as a valuation technique. However, comparing UAL’s P/S ratio of 0.1 with Southwest's (LUV) of 0.8 appeared to reveal a substantial pricing discrepancy in the market. However, P/S ratios should be used with caution. In this example, further analysis would indicate that AMR was facing a liquidity crisis and headed to bankruptcy. Meanwhile, Southwest's low-cost structure and fuel hedges have allowed it to deliver operating profits for over 35 consecutive years.

The Drawbacks of P/S

Despite several advantages, the P/S ratio has some limitations. One major flaw is that sales may be worth a little or a lot, depending on a company's profitability. If a company is posting billions in sales, but it is losing money on every transaction, we would have a hard time pinning an appropriate P/S ratio on the shares because we have no idea what level of profits (if any) the company will generate.

We will reiterate that when using the P/S ratio, it is important to keep in mind that a dollar of earnings has the same value regardless of the level of sales needed to create that dollar. A dollar of sales at a highly profitable firm is therefore worth more than a dollar of sales for a company with a narrower profit margin. Thus, the P/S ratio is generally useful only when comparing firms within an industry or industries with similar profitability levels, or when looking at a single firm over time.

Price/Book (P/B)

The P/B ratio compares a stock's market price with its book value. (Book value is the equity balance an a firm's balance sheet divided by the number of shares outstanding.) Conservative investors often prefer the P/B ratio, because it offers a more tangible measure of a company's value than earnings do. Legendary investor Benjamin Graham, one of Warren Buffett's mentors, was a big advocate of book value and P/B in valuing stocks. (See Lesson 504 for more on Ben Graham.)

There are caveats to using P/B, just as there are for all the other simple ratios we will discuss. The carrying value of an asset on a company's balance sheet may not reflect the true value of the asset. For example, a future charge to write down the value of an overvalued asset could dramatically reduce a firm's book value and change the P/B in one swipe. On the other side of the coin, the book value of a company doesn't always accurately measure its true worth, especially for firms with lots of intangible assets such as patents, databases, and brand names that don't show up on the balance sheet. Some assets, like land, are also carried on a company's books at cost. If a company has held a property for a long time, chances are the value of the land is much greater than what its books state.

The P/B ratio is also tied to return on equity (remember, ROE is equal to net income divided by average book value) in the same way that price/sales is tied to net margin (equal to net income divided by sales). Taking two companies that are otherwise equal, the one with a higher ROE will have a higher P/B ratio.

The reason is clear--a firm that can compound book equity at a much higher rate is worth far more because absolute book value will increase more quickly.

Price/Earnings (P/E)

P/E is the most popular valuation ratio used by investors. It is equal to a stock's market price divided by the earnings per share for the most recent four quarters. The nice thing about P/E is that accounting earnings are a much better proxy for cash flow than sales. Moreover, earnings per share results and estimates about the future are easily available from just about any financial data source imaginable.

P/E = (Stock Price) / EPS

The P/E ratio measures how much investors are willing to pay for a company's earnings. Generally speaking, the higher the P/E ratio, the more investors are willing to pay for a dollar's worth of a company's earnings. Stocks with high P/Es (typically those with a P/E exceeding 30) usually have greater future growth prospects, while stocks with low P/Es (typically those with a P/E below 15) tend to have lesser future growth prospects. However, a P/E ratio by itself does not say much about a stock's valuation.

The most useful way to use a P/E ratio is to compare it with a certain benchmark. Good benchmarks are the P/E of another company in the same industry, the P/E of the entire market, or the same company's P/E at a different point in time. Each of these approaches has some value, as long as you know the limitations.

For example, a company that is trading at a lower P/E than its industry peers could be a good value, but even firms in the same industry can have very different capital structures, risk levels, and growth rates, all of which affect the P/E ratio. All else equal, a firm that has better growth prospects, lower risk, and lower capital reinvestment needs should be rewarded with a higher P/E ratio.

You can also compare a stock's P/E with the average P/E of the entire market. However, the same limitations of industry comparisons apply to this process as well. The stock you are investigating might be growing faster (or slower) than the average stock, or it might be riskier (or less risky). In general, comparing a company's P/E with those of industry peers or with the market has some value, but you should not rely on these approaches to make final buy or sell decisions.

Comparing a stock's current P/E with its historical P/E ratios can also be of value. This is especially true for stable firms that have not undergone major business shifts. If you find a solid company that is growing at roughly the same rate with roughly the same business prospects as in the past, but is trading at a lower P/E than its long-term average, you should start getting interested. It's entirely possible that the company's risk level or business outlook has changed, in which case a lower P/E is warranted, but it's also possible that the market is simply pricing the shares at an irrationally low level.

Price/Earnings: The Drawbacks

The P/E ratio also has some important drawbacks. A P/E ratio of 15 does not mean a whole lot by itself; it is neither good nor bad in a vacuum. As we discussed previously, the P/E ratio only becomes meaningful with context.

However, keep in mind that using P/E ratios only on a relative basis means that your analysis can be skewed by the benchmark you are using. After all, there will be periods when entire industries will become overvalued. In 2000, an Internet stock with a P/E of

75 might have looked cheap when the rest of its peers had an average P/E of 200. In hindsight, neither the price of the stock nor the benchmark made sense. Just remember that being less expensive than a benchmark does not mean something is cheap, because the benchmark itself may be vastly overpriced.

When you're looking at a P/E ratio, also make sure that the "E" part of the equation makes sense and is representative of a company's ongoing profits. A few things can distort the P/E ratio. First, firms that have recently sold off a business can have an artificially inflated "E" and a lower P/E as a result. A company may book a big one-time gain from the sale of a division, boosting reported earnings, but based on operating earnings, the stock may not be cheap at all.

Second, reported earnings can sometimes be inflated (or depressed) by one-time accounting gains (or charges). As a result, the P/E ratio can be misleadingly high or low. For example, a firm's earnings can be depressed due to a one-time charge for litigation or other extraordinary events. This may in turn give the stock what appears to be a sky-high trailing P/E.

Third, cyclical firms that go through boom and bust cycles--semiconductor companies and auto manufacturers are good examples--require a bit more investigation. Although you would typically think of a firm with a very low trailing P/E as cheap, this is precisely the wrong time to buy a cyclical firm because it means earnings have been very high in the recent past, which in turn means they are likely to fall off soon. Likewise, a cyclical stock is going to look the most expensive when its "E" has bottomed and is about to start growing again.

Lastly, there are two kinds of P/Es--a trailing P/E, which uses the past four quarters' worth of earnings to calculate the ratio, and forward P/E, which uses analysts' estimates of the next four quarters' earnings to calculate the ratio. Because most companies are increasing earnings from year to year, the forward P/E is almost always lower than the trailing P/E, sometimes markedly for firms that are increasing earnings at a very rapid clip. Unfortunately, estimates of future earnings by Wall Street analysts--the consensus numbers you often read about--are consistently too optimistic. As a result, buying a stock because its forward P/E is low means counting on that future "E" to materialize in its entirety--and that usually doesn't happen.

Price/Earnings Growth (PEG)

As an offshoot of the P/E ratio, PEG is calculated by dividing a company's P/E by its growth rate. PEG is extremely popular with some investors because it seeks to relate the P/E to a piece of fundamental information--a company's growth rate. On the surface, this makes sense because a firm that is growing faster will be worth more in the future (all else being equal).

PEG = (Forward P/E Ratio) / (5-Year EPS Growth Rate)

The problem with PEG is that risk and growth often go hand in glove--fast-growing firms tend to be riskier than average. This conflation of risk and growth is why PEG is frequently misused. When you use a PEG ratio alone to compare companies, you're basically assuming that all growth is equal, generated with the same amount of capital and the same amount of risk.

However, firms that are able to generate growth with less capital should be more valuable, as should firms that take on less risk. If you look at a stock that is expected to grow at 15% trading at 15 times earnings and another one that is expected to grow at 15% trading at 25 times earnings, don't just plunk your money down on the former because it has a lower PEG ratio. Look at the capital that each firm needs to invest to generate the expected growth, as well as the likelihood that those expectations will actually materialize, and you might very well wind up making a very different decision. But still, what PEG does give you is a quick and easy way to estimate the price you're paying for future growth.

Yield-Based Valuation Models

In addition to ratio-based measures, you can also use yield-based measures to value stocks. For example, if we invert the P/E and divide a firm's earnings per share by its market price, we get an earnings yield. If a stock sells for $40 per share and has $2 per share in earnings, then it has a P/E of 20 (40/2) but an earnings yield of 5% (2/40). Unlike P/Es, the nice thing about yields is that we can compare them with alternative investments, such as bonds, to see what kind of a return we can expect from each investment. One main difference, however, is that earnings generally grow over time, whereas bond payments are fixed.

Let's put earnings yield into perspective. In October 2012, you could get a risk-free return from Uncle Sam of about 1.75% by buying a 10-year Treasury bond. Therefore, you would want to demand a higher rate of return from your stocks because they are riskier than Treasuries. A stock with a P/E of 25 would have an earnings yield of 4%, which is a better than Treasuries, but perhaps not enough considering the additional risk you are taking. It all depends on whether the company will be able to grow its profits in the future to make accepting a 4% yield today worthwhile.

Meanwhile, a stock with a P/E of 12 would have an earnings yield of 8.3% (1/12), which is much better than those poky Treasuries, even if earnings never grow. Thus, in this situation you might be induced to take on the additional risk of owning the stock.

Dividend Yield

Dividend yield is actually one of the oldest valuation methods. It was very popular back in the days when dividends were the primary reason people owned stocks, and it is still widely used today, mainly among income-oriented investors. Dividend yield is equal to a company's annual dividend per share divided by a stock's market price. For example, a company that pays an annual dividend of $1.00 per share and trades for $20 has a dividend yield of 5% (1/20). If that same stock's price rose to $40 a share, its dividend yield would fall to 2.5%--the more expensive the stock, the lower the yield.

Dividend Yield = (Annual Dividends Per Share) / (Stock Price)

As with all valuation ratios, dividend yield must be used with caution. Stocks with very high dividend yields might seem like bargains, but these companies are often going through financial problems that have caused their stock price to plunge. It's not unusual for companies in such situations to cut their dividend in order to save cash, so their actual dividend yield going forward might be lower than the currently reported figure. Lastly, one major drawback of dividend yield is that it is useless for companies that don't pay a dividend--a group that includes many technology stocks.

Cash Return

The best yield-based valuation measure is a relatively little-known metric called cash return. In many ways, it's actually a more useful tool than the P/E ratio. You can calculate cash return by adding free cash flow (cash from operations minus capital expenditures) to net interest expense (interest expense minus interest income), and then dividing the sum by enterprise value (market cap plus long-term debt, minus cash). We add back interest expense to free cash flow so that capital structure doesn't impact cash return.

Cash Return = (Free Cash Flow + Net Interest Expense) / (Enterprise Value)

The goal of the cash return metric is to measure how efficiently the business is using its capital--both equity and debt--to generate free cash flow. In other words, cash return tells you how much free cash flow a company generates as a percentage of how much it would cost an investor to buy out the entire business.

Let's use networking giant Cisco Systems (CSCO) as an example of how to use cash return to find reasonably valued investments. In October 2012, Cisco had a market cap of about $90.9 billion and carried $16.3 billion in long-term debt and $9.8 billion in cash on its balance sheet. Its enterprise value was $90.9 + $16.3 - $9.8, or $97.4 billion. That gives us the first part of our ratio. The other half is free cash flow, adjusted for interest expense. In fiscal 2012, Cisco generated about $11 billion in adjusted free cash flow. Thus, our cash return on Cisco will be $11 billion/$97.4 billion, or about 11%.

With 10-year Treasuries yielding just 1.7% and corporate bonds yielding a higher (but still paltry) 2.7% in October 2012, that 11% cash return for Cisco looks pretty good. Throw in the fact that Cisco's free cash flow is likely to grow over time, whereas those bond payments are fixed, and Cisco in October 2012 starts to look like a pretty solid value.

Cash return is a great first step to finding cash cows trading at reasonable prices, but avoid using cash return for financials or foreign stocks. Cash flow is not terribly meaningful for banks and other firms that earn money via their balance sheets. And because definitions of cash flow can vary widely in other countries, a foreign stock that looks cheap based on its cash return may simply be defining cash flow more liberally.

The Bottom Line

Even if you end up using the more thorough valuation methods highlighted in the next lessons, it will be highly likely you will use the ratios highlighted in this lesson when discussing stock valuation with other investors. Just remember the limitations of each of these ratios, and keep in mind the context of every situation.

403: Introduction to Discounted Cash Flow

Introduction

In the previous lesson, we toured the many different valuation ratios, which compare a stock's market price with financial measures such as the underlying company's earnings, book value, and dividends. These ratios provide a quick and dirty way to determine how a stock is valued, but usually require a lot of context to be useful.

It's easy to understand why a faster growing company may deserve a higher P/E or P/S ratio than a slower growing one, but how do we go about estimating what the absolute value of any company should be? Enter discounted cash flow (DCF).

Valuation methods based on discounted cash-flow models determine stock prices in a different and more robust way. DCF models estimate what the entire company is worth. Comparing this estimate, or "intrinsic value," with the stock's current market price allows for much more of an apples-to-apples comparison. For example, if you estimate a stock is worth $75 based on a DCF model, and it is currently trading at $50, you know it's undervalued.

Estimating a stock's fair value, or intrinsic value, is no easy task. In fact, it is quite complex, involving all kinds of variables that are themselves tough to estimate. Even so, we at Morningstar use discounted cash-flow models to value all the stocks we cover. Despite their complexity, valuations based on DCF models are much more flexible than any individual ratio, and they allow an investor to incorporate assumptions about such factors as a company's growth prospects, whether its profit margins are likely to expand or contract, and how risky the company is in general.

Estimating Future Cash Flow

The main idea behind a DCF model is relatively simple: A stock's worth is equal to the present value of all its estimated future cash flows. Putting this idea into practice is where the difficulty lies.

The first step to valuing any stock with a DCF model is estimating the future cash flows the underlying company is going to generate. Many variables go into estimating those cash flows, but among the most important are the company's future sales growth and profit margins. Projecting such variables doesn't involve simply extrapolating present trends into the future. In fact, doing so can often lead you to believe a stock is worth a lot more (or less) than it really is.

When predicting a company's revenue growth, it's important to consider a variety of factors, including industry trends, economic data, and a company's competitive advantages. A company with strong competitive advantages (what Morningstar calls a wide economic moat) may grow faster than its competitors if it is stealing market share. Paying attention to a firm's customers is also important. For example, if GM GM or Ford says it will produce fewer cars over the next couple of years, it would be wise to check your revenue growth assumptions for auto parts suppliers.

Determining a company's future operating profits entails similar detective work. Looking into a company's costs is an obvious first step. Chemical companies heavily reliant on oil and natural gas, for example, could see profit margins contract if these materials go up in price and they cannot pass these cost increases on to customers.

On the other hand, some companies benefit from operating leverage. Operating leverage means that as a company grows larger, it is able to spread its fixed costs across a broader base of production. As a result, the company's operating profits should grow at a faster rate than revenue. Think back to eBay EBAY. It can add thousands of customers with only very modest investments to its existing computer systems. Likewise, a software company sees most of its costs in development. Adding an additional customer doesn't change this key cost.

One question that must be asked of any discounted cash-flow model is exactly what kind of cash flows are you going to be discounting? In the old days, investors used something similar to a dividend discount model, which essentially sums up all the future dividend payments a company is expected to make and expresses them in terms of today's dollars. However, discounting dividends is of little help for valuing companies that pay no dividends, which includes many firms today. Rather, most DCF models nowadays use some form of cash flow, or reported earnings with noncash charges excluded. The DCF model that we will talk about in this and the following lesson discounts free cash flow, which is defined as operating cash flow minus capital expenditures.

Free cash flow represents the cash a company has left over after spending the money necessary to keep the company growing at its current rate. It's important to estimate how much the company reinvests in itself each year via capital expenditures. Reinvestment can take the form of a company purchasing machinery to start up a new production line, or retail companies opening new stores to expand their reach.

Note: There are actually two types of DCF models: "free cash flow to equity" and "cash flow to the firm." The first involves counting just the cash flow available to stockholders and is a bit easier to understand. The second involves counting the cash flow available to both debt and equity holders and has several additional steps. We will talk about just the first method here, though both methods should give you roughly the same result for any given company.

Discounting and Discount Rates

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Cost of Capital

The rate we use to discount a company's future cash flows back to the present is known as the company's required return, or cost of capital.

A company's cost of capital is exactly as its name implies. When a company raises capital from its lenders and owners, both types of investors require a return on their investment. Lenders expect to be paid interest on their loans, while owners expect a return, too.

A stable, predictable company will have a low cost of capital, while a risky company with unpredictable cash flows will have a higher cost of capital. That means, all else equal, that the riskier company's future cash flows are worth less in present value terms, which is why stocks of stable companies often look more expensive on the surface. The cost of capital used in a DCF model can have a significant impact on the fair value, so it's important to pay attention to this estimated figure.

The rate you would use to discount cash flows if using the "cash flow to the firm" method is actually a company's weighted average cost of capital, or WACC. A company's WACC accounts for both the firm's cost of equity and its cost of debt, weighted according to the proportions of equity and debt in the company's capital structure. Here's the basic formula for WACC:

(Weight of Debt)(Cost of Debt) + (Weight of Equity)(Cost of Equity)

For example, if the market value of a company's equity is $600 million and it has $400 million of debt on its balance sheet, then 60% of its capital is equity and 40% is debt. If the company's cost of equity is 10% and its cost of debt is 7%, then its WACC is:

(60% x 10%) + (40% x 7%) = 8.8%

Note: If using the "cash flow to the firm" DCF method, the WACC would be your discount rate. However, this method does not discount free cash flow. Rather, it discounts operating earnings before interest but after taxes. Arriving at this figure involves complicated adjustments for interest and taxes. To keep it simple, we will just use the "free cash flow to equity" method in our example in the next lesson.

Two Types of Capital, Two Costs

Where do the cost of equity and debt come from? The cost of debt is relatively straightforward: It's the interest rate a company must pay to borrow money, based on the current yield on any of the bonds the company has issued. Just as a person with an excellent credit rating can borrow from banks at lower rates than someone who has missed payments in the past, financially strong and stable companies can borrow at lower rates than riskier firms.

The cost of equity is a little more complicated and is often a topic of debate in both academia and the business world. Modern finance theory says that a given company's cost of equity is determined by measuring the risk-free rate investors can achieve (typically the yield on Treasuries) and an equity premium, with this premium determined by the company's stock volatility. The calculation under this theory is called the capital asset pricing model (CAPM), but in our opinion it doesn't always work well in practice. After all, a stock's volatility (which is subject to Mr. Market's temperamental ways) really doesn't tell you much about the fundamental factors that pose a risk to future cash flows.

When we value companies here at Morningstar, we come up with a cost of equity for each company based on a variety of risk factors: how cyclical its business is, how big it is, how much cash flow it generates, the strength of its balance sheet, and its economic moat. One might say that we use a "fundamental risk premium."

We start by assuming that the average risk-free rate over time will be 5.0%, and that the average risk premium will be 5.5%. In other words, for the perfectly average company with the perfectly average risk profile, we assume the cost of equity is 10.5% (based on the 5.0% risk-free rate plus a 5.5% equity risk premium). We then adjust the risk premium up or down to capture any other risks highlighted in the fundamental factors above.

Using this system, the costs of capital that Morningstar analysts come up with generally range between 8% and 14%. Companies at the low end of this range tend to be stable, large-cap firms such as Coca-Cola KO and Johnson & Johnson JNJ. On the other hand, riskier companies where future cash flows are more difficult to predict, such as many biotech firms, usually end up with higher WACCs.

It's important to note that in general, debt usually costs less than equity. One reason for this is that the interest payments associated with debt are tax deductible, thus lowering the company's cost structure. As a result, a company with a large debt load will usually enjoy a lower WACC than a less leveraged firm. Of course, an increasing debt load can lead to bankruptcy risk if a company can't meet its interest and repayment obligations. When a company takes on so much debt that it becomes financially unsound, both its cost of debt and equity will rise exponentially, causing its cost of capital to rise as well.

To reiterate, a higher WACC, or discount rate, will lead to a lower estimated present value of future cash flows, and vice versa. The riskier a company is, the higher its discount rate should be, and the lower the value of its future cash flows, all else equal. Conversely, stable companies with predictable cash flows and strong competitive advantages will generally warrant a lower discount rate.

The Perpetuity Value

The last piece of the puzzle is the perpetuity value. This figure is necessary because it's not feasible to project a company's future cash flows out to infinity, year by year. At some point, we have to stop, even if we believe the company will continue generating profits for a long time. We can solve this problem by estimating a company's future cash flows for a certain period--say five or 10 years--and then estimating the value of all cash flows after that in one lump sum. This lump sum is the perpetuity value.

A company's cost of capital also plays an important part in calculating the perpetuity value. The most common way to do this is to take the last cash flow estimated, increase it by the rate at which you expect cash flows to grow over the long term, and divide the result by the cost of capital minus the estimated growth rate.

Perpetuity Value =
(CFn x (1+ g)) / R - g

CFn = Cash Flow in the Last Individual Year Estimated
g = Long-Term Growth Rate
R = Discount Rate, or Cost of Capital

To better understand the perpetuity value, suppose we're using a five-year DCF model for a company with a 9% cost of capital. We estimate that the company's free cash flow in Year 5 will be $100 million, and that its cash flow will grow at 5% after that. The perpetuity value will equal:

(100 million x (1 + .05)) / (.09 -.05) = $2.625 billion

Remember, the perpetuity value is calculated as of five years from now. To find out what the value is today, we have to discount the calculated value using the formula we learned earlier:

Present Value of Perpetuity Value =
$2.625 billion / (1 + .09)^5 = $1.706 billion

Once we've found the present value of the perpetuity, we simply add this number to the present value of the cash flows we estimated in Years 1 through 5 to determine the fair value, or intrinsic value, of the company. In the next lesson, we'll walk through a sample DCF model that will help you put this into practice.

The Bottom Line

While DCF is certainly a complicated way to value stocks, there are many benefits that come with the increased effort. This lesson was merely an introduction to the concepts. In the next lesson, we'll go over a detailed example of how to actually use a DCF model to value a stock.

404: Putting DCF into Action

Introduction

Now that we have covered the workings of discounted cash-flow (DCF) models in general and a bit about how we treat them at Morningstar, we'll dig a little deeper into how to determine fair values for stocks. In this lesson, we'll walk you through a step-by-step sample DCF model that uses the "free cash flow to equity" method. Here are the main steps to generating a per share fair value estimate with this method:

- Step 1. Project free cash flow for the forecast period.
- Step 2. Determine a discount rate.
- Step 3. Discount the projected free cash flows to the present, and sum.
- Step 4. Calculate the perpetuity value and discount it to the present.
- Step 5. Add the values from Steps 3 and 4, and divide the sum by shares outstanding.

Step 1--Project Free Cash Flow

The first step in projecting future cash flow is to understand the past. This means looking at historical data from the company's income statements, balance sheets, and cash-flow statements for at least the past four or five years.

Once you've examined the historical data and perhaps entered it into a spreadsheet program, it's time to project the company's free cash flow in detail for the next couple of years. These projections are the meat of any DCF model. They will rely on your knowledge of the company and its competitive position, and how you expect things will change in the future. If you think profit margins will expand, or sales growth will slow dramatically, or the company needs to increase its capital expenditure to maintain its facilities, your projections should reflect those predictions.

Next, we need to estimate the company's "perpetuity year." This is the year at which we feel we can no longer adequately project future free cash flow. We also need to make a projection concerning what the company's free cash flow will be in that year.

To begin, let's suppose that the fictitious firm Charlie's Bicycles generated $500 million in free cash flow last year. Let's also assume that Charlie's current lineup of bikes are very hot sellers, and the company is expected to grow free cash flow 15% per year over the next five years. After five years, we assume competitors will have started copying Charlie's designs, eating into Charlie's growth. So after five years, free cash flow growth will slow down to 5% a year. Our free cash flow projection would look like this:

Last Year: $500.00
Year 1: 575.00
Year 2: 661.25
Year 3: 760.44
Year 4: 874.50
Year 5: 1005.68
Year 6: 1055.96
Year 7: 1108.76
Year 8: 1164.20
Year 9: 1222.41
Year 10: 1283.53

Step 2--Determine a Discount Rate

Because we're using the "free cash flow to equity" method of DCF, we can ignore Charlie's cost of debt and WACC in coming up with a discount rate. Instead, we'll focus on coming up with an assumed cost of equity, using the principles highlighted in the previous lesson.

Charlie's has been in business for more than 60 years, and it has not had an unprofitable year in decades. Its brand is well-known and respected, and this translates into very respectable returns on its invested capital. Given this and the relatively stable outlook for Charlie's profits, settling for a 9% cost of equity (lower than average) seems appropriate given the modest risks Charlie's faces.

Step 3--Discount Projected Free Cash Flows to Present

The next step is to discount each of the individual year's cash flows to express them in terms of today's dollars. Remember we are using the following formula, and the "discount factor" just represents the denominator in the equation. We can then multiply each year's cash flow by the discount factor to get the present value of each cash flow.

Present Value of Cash Flow in Year N =
CF at Year N / (1 + R)^N

CF = Cash Flow
R = Required Return (Discount Rate), in this case 9%
N = Number of Years in the Future

Last Year: $500.00
Year 1: 575.00 x (1 / 1.09^1) = 528
Year 2: 661.25 x (1 / 1.09^2) = 557
Year 3: 760.44 x (1 / 1.09^3) = 587
Year 4: 874.50 x (1 / 1.09^4) = 620
Year 5: 1005.68 x (1 / 1.09^5) = 654
Year 6: 1055.96 x (1 / 1.09^6) = 630
Year 7: 1108.76 x (1 / 1.09^7) = 607
Year 8: 1164.20 x (1 / 1.09^8) = 584
Year 9: 1222.41 x (1 / 1.09^9) = 563
Year 10: 1283.53 x (1 / 1.09^10) = 542

We then add up all the discounted cash flows from Years 1 through 10, and come up with a value of $5,870 million ($5.87 billion).

Step 4--Calculate Discounted Perpetuity Value

In this step, we use another formula from the last lesson:

Perpetuity Value =
(CFn x (1+ g)) / (R - g)

CFn = Cash Flow in the Last Individual Year Estimated, in this case Year 10 cash flow
g = Long-Term Growth Rate
R = Discount Rate, or Cost of Capital, in this case cost of equity

For example, we'll use use 3% as the perpetuity growth rate, which is close to the historical average growth rate of the U.S. economy. So, we'll assume that after 10 years, Charlie's Bicycles will also grow at this 3% rate. Plugging the numbers into the formula:

($1,284 x (1 + .03)) / (.09 - .03) = $22,042 million

Notice that for the cash flow figure we used the undiscounted Year 10 cash flow, not the discounted $542 million. But because we used the undiscounted amount, we still need to express the perpetuity value in present-value terms using this trusty formula:

Present Value of Cash Flow in Year N =
CF at Year N / (1 + R)^N

Present Value of Perpetuity Value =
$22,042 million / (1 + .09)^10 = $9,311 million

Step 5--Add It All Up

Now that we have the value of all the cash flows from Year 1 through 10 as well as those from Year 11 on, we add up these two values:

Discounted Free Cash Flow, Years 1-10: $5,870 million
+ Discounted Free Cash Flow, Years 11 on: $9,311 million

which equals $15,181 million.

So there we have it! We have estimated Charlie's Bicycles to be worth $15.2 billion. The final, simple step is to divide this $15.2 billion value by the number of shares Charlie's Bicycles has outstanding. If Charlie's has 100 million shares outstanding, then our estimate of Charlie's intrinsic value is $152 per share.

If Charlie's stock is trading at $100 per share, you should start to get interested in buying the shares. We can forget about what Charlie's P/E ratio is relative to its peers as well as what Wall Street analysts have recently said about the stock. The bottom line is the stock is trading below its estimated intrinsic value. If you have confidence in your free cash flow projections, you can have an equal amount of confidence in buying the stock.

The Bottom Line

As you may tell, this is merely a simple example of how to use a DCF model, but it's still not exactly "simple." Not many people put this much work into their investments. But if you're willing to go through the effort of creating a DCF model for a company you are interested in, you will be much more informed and confident than the vast majority of other investors.

There are numerous small twists that the other type of DCF model (cash flow to the firm) uses, but the output should be approximately the same no matter which DCF method you use for a given firm. Also keep in mind that a model does not need to be super-complex to get you most of the way there and help you clarify your thinking. Remember, using a similar DCF model can take you a long way in finding superior companies trading at a discount to their intrinsic value--the key to a profitable long-term investing strategy.

405: The Fat-Pitch Strategy

Introduction

In baseball, a batter who watches three pitches go past just inside the strike zone will be called out by the umpire. Also, as many baseball fans know, the strike zone from one umpire to the next can be a different size. Baseball players thus often have an incentive to swing at pitches they would rather not, out of fear of being called out.

Many investors, especially professional money managers, think about investing like it's a baseball game. Because they aim to beat the indexes they are being scored against, professional money managers feel a lot of pressure to get base hits, doubles, triples, and home runs in order to earn their keep. Out of fear of being "called out," they might swing at pitches that may be just inside the strike zone, even though they may prefer to watch those pitches go by. In other words, investors often forget their valuation discipline and think about investing like it's a baseball game--three called strikes and you're out. So they swing away.

But what if the rules of baseball were different? What if a batter could watch any number of pitches go by, waiting for the perfect "fat pitch" to come along before swinging? Baseball will never adopt this rule, of course--games would last too long and pitchers would bemoan their escalating eras. But as an investor, you can (and should) play by these rules.

You can significantly raise your investment batting average by waiting for the pitcher--Mr. Market--to throw you a nice fat pitch right down the middle of the strike zone. Unless the market throws a pitch that you're very confident in swinging at, you can stand by and watch strike after strike be thrown without worrying about being called out, because, unlike in baseball, there is no penalty for being patient in investing. With the market pitching, you can let as many curveballs, knuckleballs, and sliders go by as you like until you see the one you want to hit.

The fat-pitch strategy that we have developed here at Morningstar has five parts:

Look for Wide-Moat Companies

As we've described in previous lessons, companies with wide economic moats reside in profitable industries and have long-term structural advantages versus competitors. These companies are fat pitches with predictable earnings, returns on capital higher than the cost of capital, and long-term staying power.

The beauty of a wide-moat company is that the odds are pretty high that the actual intrinsic value of the firm will increase over time, leading to higher shareholder value. In other words, time is on your side with these companies. By contrast, companies with no economic moat generally destroy shareholder value over time--when you buy a no-moat company, you're making a speculative bet that the stock will bounce up just long enough for you to sell it. That's a very tough game to play, and generally only seasoned pros should attempt it.

Always Have a Margin of Safety

Instead of buying a stock based on what everyone else is doing, buy a stock only when it's selling at a decent margin of safety to your estimate of its fair value. Don't even think about the overall direction of the stock market, because that's impossible to predict with any consistency. By doing this, you'll need to exercise a lot of discipline and wrestle with the fear of missing out on a market rally. Patience is indeed a virtue when using this approach because oftentimes it may take many months, or longer, before a fat-pitch opportunity presents itself.

Although you may feel at times that the market is running away from you, and a fat pitch may never come around, rest assured that there will be opportunities in the future, and you'll be poised to swing away. Think only about individual wide-moat companies; if you find one where the price is irrationally low relative to its long-term intrinsic value, consider buying it. If not, hold off for a fatter pitch.

Obviously, to determine whether a particular stock is trading with a sufficient margin of safety, you must have some sort of an estimate of what you think the stock is worth. The lessons in this Investing Classroom series have given you enough information that you should start to be able to place a value on a stock. We encourage you to practice this repeatedly to hone your valuation skills.

Also, you must determine how much of a margin of safety you'll require before buying a stock. If the firm is not very risky, you could be content with a 15%-20% discount to its fair value. If the firm is riskier than average, you may demand a 30%-40% discount. Ultimately, it's your decision.

The beauty of fat-pitch investing is that it has two built-in factors that help offset the risk that your fair value estimate is wrong. First, by requiring a margin of safety, you've given yourself some "error cushion," just in case your estimate was too high. Second, by purchasing wide-moat companies, chances are high that the firm will increase in value over time. Thus, even if your estimates were way off, the firm--and its stock price--will likely appreciate in value, eventually catching up to your fair value estimate. In effect, by buying wide-moat companies, you have another margin of safety built into your investment.

Don't Be Afraid to Hold Cash

Holding cash is like holding an option--the option to take advantage of volatility in the market. The value of this option rises when market volatility rises. Thus, when the volatile stock market provides you an opportunity to buy wide-moat companies at bargain prices, you'll be ready with cash in hand to take advantage of the irrationality.

Many market participants often neglect this important aspect of investing and stay fully invested at all times. For instance, many professionals getting paid to invest other people's money feel they are actually required to stay fully invested even if there's a lack of fat-pitch opportunities. Thus, when the market drops, they often can't do anything but watch (or worse, sell out near the bottom).

Being fully invested at all times goes hand-in-hand with the professional's focus on relative returns--beating an index. For example, if the market drops by 10% in a year, but the fictional Relative Return Fund dropped only by 8%, Relative Return's manager has provided value because the fund had a better return relative to the market. However, had you invested in this fund, you'd still be 8% poorer, not exactly anything to cheer about.

We argue that individual investors should care more about absolute returns (how much money did you make) and less about relative returns (did you beat a benchmark). So if the market isn't throwing you fat pitches, just hold on to your cash and wait until it does, because fat-pitch investments are much more likely to provide strong absolute returns over time.

Don't Be Afraid to Hold Relatively Few Stocks

There are very few good ideas in any given year--Warren Buffett has said he's happy to have even one. For the rest of us (i.e., those without the need to invest several billion dollars to make a difference in their portfolios), there may be five or six good ideas a year. In any event, if you feel the need to hold more than 20 stocks, you probably aren't using the fat-pitch approach--more than likely you're speculating and trying to diversify away the risks of your speculations by holding lots of different names. Remember, it takes great patience to be a fat-pitch investor, but when opportunities present themselves (nice fat pitches right down the middle), you should buy boldly (swing away).

We caution you, however, that it's risky to hold a concentrated portfolio (few positions) unless you do three things:

1. Buy only wide-moat companies, which will increase in intrinsic value over time.
2. Buy them only at a significant discount to fair value (a margin of safety).
3. Have a time horizon of at least three years on each pick you make. It may take this long (or longer) for the market to recognize the value of a company.

If you aren't willing to follow these three rules on each and every stock you buy, then you probably need more diversification in your portfolio. (We'll talk much more about portfolio construction in Lesson 501.)

Don't Trade Very Often

If you're using the fat-pitch approach, you won't need to trade very often because you'll hold only wide-moat companies. By definition, a wide-moat company has long-term advantages and creates shareholder value year-in and year-out. Because a wide-moat firm creates value each year, its fair value tends to increase over time. These are the only types of stocks in which a buy-and-hold strategy works well, because the odds are in your favor that the actual underlying value will continue increasing over time. As we mentioned earlier, when you buy a company with no moat, you are making a bet that it will bounce up just long enough for you to sell it.

Think of it this way: Investing is nothing more than a game of probabilities. No matter how diligent you are, your fair value estimate for a stock will never be exactly right. It's really just an estimate of what a stock is worth under the most likely scenario for future earnings growth and profitability. Thus, there's always less than a 100% probability that you'll be right about a stock pick. Given that the odds are below 100%, there's little point in trading from one stock to another frequently; your odds of being "right" on the new pick are probably only a little higher than the odds of being wrong on the current pick.

Add to this the costs of trading--including taxes, bid-ask spreads, and commissions--and the odds of generating higher returns by trading frequently are worse than simply buying great stocks at good prices and holding them for three years or more.

The Bottom Line

By following the fat-pitch approach to stock investing, we think you can tremendously improve your odds of investment success. Although it requires plenty of discipline and patience, you should be able to earn strong returns over the long term by buying only those stocks that present a nice fat-pitch opportunity.

406: Using Morningstar's Rating for Stocks

Introduction

It's amazing how much attention some people pay to stock quotes, and how little they pay to the value of the underlying businesses they are buying.

At Morningstar, we evaluate stocks as pieces of a business and not as "little wiggling things with charts attached." We believe that purchasing shares of superior businesses at discounts to their fair values, and allowing those businesses to compound value over long periods of time, is the surest way to create wealth in the stock market.

The market may not always agree with our long-term investment philosophy, so sometimes our recommendations are out of step with consensus thinking. When stocks are high and richly valued, relatively few will receive the highest Morningstar Rating of 5 stars. But when the market tumbles, there will be many more 5-star stocks. We think good companies are more attractive when they are cheap than when they are expensive, so we find fewer opportunities when the market is overheating. If we wait to buy clothes and flat-panel televisions until they go on sale, why shouldn't we also purchase stocks at bargain prices?

Morningstar has been analyzing investment strategies for nearly 20 years, and we have become experts at separating successful styles from the mediocre majority. In this lesson, we will share our approach to rating stocks so that you have an opportunity to benefit from our investment strategy and build enduring wealth in the market.

What Is Fair Value?

Most any investment, whether it's buying a home or purchasing a stock, boils down to an initial outlay followed by (hopefully) a stream of future income. The trick is deciding on a fair price to pay for that expected stream of future income.

Let's say a stock trades at $20 per share. If you crunch the numbers--projected sales growth, future profit margins, and so on--you might estimate the stock's fair price per share to be $30. You pay $20 for the stock, and in return you receive a stream of income valued at $30. That's a great deal. If the stock was trading at $40, above the $30 fair value of the future income stream, you are looking at an expensive stock.

At Morningstar, our analysts estimate a company's fair value by determining how much we would pay today for all the streams of excess cash generated by the company in the future. We arrive at this value by forecasting a company's future financial performance using a detailed discounted cash-flow model (see Stocks 403) that factors in projections for the company's income statement, balance sheet, and cash-flow statement. The result is an analyst-driven estimate of the stock's fair value.

How Do We Assign Stars?

The Morningstar Rating for stocks is based on a stock's market price relative to its estimated fair value, adjusted for risk. Generally speaking, stocks trading at large discounts to our analysts' fair value estimates will receive higher (4 or 5) star ratings, and stocks trading at large premiums to their fair value estimates will receive lower (1 or 2) star ratings. Stocks that are trading very close to our analysts' fair value estimates will usually get 3-star ratings.

Not all companies are created equal. As such, the discount required to our fair value estimate to get to 5 stars increases as the quality of a company decreases. We require smaller discounts for high-quality businesses because we are more confident about our cash-flow projections and in their fair values. The future is inherently uncertain, and that uncertainty is greater for some companies than others. Accordingly, we require larger discounts to our fair value for riskier or uncertain businesses.

When investing in any asset, you should expect a return that adequately compensates you for the risks inherent in the investment. Assuming that the stock's market price and fair value eventually converge, 3-star stocks should offer a "fair return." A fair return is one that adequately compensates you for the riskiness of the stock. Put another way, 3-star stocks should offer investors a return that's roughly equal to the stock's cost of equity. The cost of equity is often called the "required return," because it represents the return an investor requires for taking on the risk of owning a stock.

On the other hand, 5-star stocks should offer an investor a return that's well above the company's cost of equity. High-risk, 5-star stocks should also offer a better expected return than low-risk, 5-star stocks. Conversely, low-rated stocks have significantly lower expected returns. If a stock drops to 1 star, that means we expect it to lose money for investors based on our assessment of the stock's fair value.

It is important to remember that if a stock's market price is significantly above our fair value estimate, it will receive a lower star rating, no matter how wonderful we think the business or its management is. Even the best company is a poor investment if an investor overpays for its shares.

What Causes a Star Rating to Change?

Morningstar's stock star ratings are updated daily, and therefore they can change daily. The ratings can change because of a move in the stock's price, a change in the analyst's estimate of the stock's fair value, a change in the analyst's assessment of a company's business risk, or a combination of any of these factors. The Morningstar Rating for stocks includes a small buffer around the cutoff between each rating to reduce the number of rating changes produced by random market "noise." If a $50 stock moves up and down by $0.25 each day over a few days, the buffer will prevent the star rating from changing each day based on this insignificant change.

It is important to note that our fair value estimates do not change very often, but the market prices do. Therefore, stocks often gain or lose stars based just on movement in the share price. If we think a stock's fair value is $50, and the shares decline to $40 without a change in the intrinsic value of the business, the star rating will go up. Our estimate of what the business is worth hasn't changed, but the shares are more attractive as an investment at $40 than they were at $50.

A Different Valuation Approach&

Morningstar's fair value estimate analysis is based on a different valuation methodology than ratio-based approaches. If you've ever talked about P/E or P/B (as we did in Stocks 108), you have valued stocks using ratios, also known as multiples. Investors like to use ratios because they are easy to calculate and readily available. The downside is that making sense of valuation ratios usually requires a bit of context. A company can have a high P/E or P/B but still be cheap based on fair value. If a computer company can grow fast enough, its stock will deserve a high P/E, and it might even be a bargain. Likewise, a company in a dying industry with negative growth may have a low P/E and still be overvalued.

We believe that looking at future profits allows for a more sophisticated approach to stock valuation. By determining a company's fair value based on a projection of a company's future cash flows, we can determine whether a stock is undervalued or overvalued. The advantage of this approach is that the result is easy to understand and does not require as much context as the basic ratios. While it takes more time and expertise to estimate future cash flows, we believe that valuing stocks in this way allows investors to spot bargains and make more intelligent investments.

The Bottom Line

Above all, keep in mind that true investing means buying a stake in a superior business at a discounted price and allowing that business to compound in value over a long period of time. It isn't hopping on the latest hot concept hoping for a quick profit. That's why the Morningstar Rating for stocks does not attempt to prognosticate short-term price movements or momentum. We believe that the long-term value of a stock is tied to how much value the company generates for its shareholders.

407: Psychology and Investing

Introduction

Successful investing is hard, but it doesn't require genius. In fact, Warren Buffett once quipped, "Success in investing doesn't correlate with I.Q. once you're above the level of 25. Once you have ordinary intelligence, what you need is the temperament to control the urges that get other people into trouble in investing." As much as anything else, successful investing requires something perhaps even more rare: the ability to identify and overcome one's own psychological weaknesses.

Over the past 20 years, psychology has permeated our culture in many ways. More recently its influences have taken hold in the field of behavioral finance, spawning an array of academic papers and learned tomes that attempt to explain why people make financial decisions that are contrary to their own interests.

Experts in the field of behavioral finance have a lot to offer in terms of understanding psychology and the behaviors of investors, particularly the mistakes that they make. Much of the field attempts to extrapolate larger, macro trends of influence, such as how human behavior might move the market.

In this lesson we'd prefer to focus on how the insights from the field of behavioral finance can benefit individual investors. Primarily, we're interested in how we can learn to spot and correct investing mistakes in order to yield greater profits.

Some insights behavioral finance has to offer read like common sense, but with more syllables.

Overconfidence

Overconfidence refers to our boundless ability as human beings to think that we're smarter or more capable than we really are. It's what leads 82% of people to say that they are in the top 30% of safe drivers, for example. Moreover, when people say that they're 90% sure of something, studies show that they're right only about 70% of the time. Such optimism isn't always bad. Certainly we'd have a difficult time dealing with life's many setbacks if we were die-hard pessimists.

However, overconfidence hurts us as investors when we believe that we're better able to spot the next Microsoft (MSFT) than another investor is. Odds are, we're not. (Nothing personal.)

Studies show that overconfident investors trade more rapidly because they think they know more than the person on the other side of the trade. Trading rapidly costs plenty, and rarely rewards the effort. We'll repeat yet again that trading costs in the form of commissions, taxes, and losses on the bid-ask spread have been shown to be a serious damper on annualized returns. These frictional costs will always drag returns down.

One of the things that drive rapid trading, in addition to overconfidence in our abilities, is the illusion of control. Greater participation in our investments can make us feel more in control of our finances, but there is a degree to which too much involvement can be detrimental, as studies of rapid trading have demonstrated.

Selective Memory

Another danger that overconfident behavior might lead to is selective memory. Few of us want to remember a painful event or experience in the past, particularly one that was of our own doing. In terms of investments, we certainly don't want to remember those stock calls that we missed (had I only bought Apple (AAPL) in 2005) much less those that proved to be mistakes that ended in losses.

The more confident we are, the more such memories threaten our self-image. How can we be such good investors if we made those mistakes in the past? Instead of remembering the past accurately, in fact, we will remember it selectively so that it suits our needs and preserves our self-image.

Incorporating information in this way is a form of correcting for cognitive dissonance, a well-known theory in psychology. Cognitive dissonance posits that we are uncomfortable holding two seemingly disparate ideas, opinions, beliefs, attitudes, or in this case, behaviors, at once, and our psyche will somehow need to correct for this.

Correcting for a poor investment choice of the past, particularly if we see ourselves as skilled traders now, warrants selectively adjusting our memory of that poor investment choice. "Perhaps it really wasn't such a bad decision selling that stock?" Or, "Perhaps we didn't lose as much money as we thought?" Over time our memory of the event will likely not be accurate but will be well integrated into a whole picture of how we need to see ourselves.

Another type of selective memory is representativeness, which is a mental shortcut that causes us to give too much weight to recent evidence--such as short-term performance numbers--and too little weight to the evidence from the more distant past. As a result, we'll give too little weight to the real odds of an event happening.

Self-Handicapping

Researchers have also observed a behavior that could be considered the opposite of overconfidence. Self-handicapping bias occurs when we try to explain any possible future poor performance with a reason that may or may not be true.

An example of self-handicapping is when we say we're not feeling good prior to a presentation, so if the presentation doesn't go well, we'll have an explanation. Or it's when we confess to our ankle being sore just before running on the field for a big game. If we don't quite play well, maybe it's because our ankle was hurting.

As investors, we may also succumb to self-handicapping, perhaps by admitting that we didn't spend as much time researching a stock as we normally had done in the past, just in case the investment doesn't turn out quite as well as expected. Both overconfidence and self-handicapping behaviors are common among investors, but they aren't the only negative tendencies that can impact our overall investing success.

Loss Aversion

It's no secret, for example, that many investors will focus obsessively on one investment that's losing money, even if the rest of their portfolio is in the black. This behavior is called loss aversion.

Investors have been shown to be more likely to sell winning stocks in an effort to "take some profits," while at the same time not wanting to accept defeat in the case of the losers. Philip Fisher wrote in his excellent book *Common Stocks and Uncommon Profits* that, "More money has probably been lost by investors holding a stock they really did not want until they could 'at least come out even' than from any other single reason."

Regret also comes into play with loss aversion. It may lead us to be unable to distinguish between a bad decision and a bad outcome. We regret a bad outcome, such as a stretch of weak performance from a given stock, even if we chose the investment for all the right reasons. In this case, regret can lead us to make a bad sell decision, such as selling a solid company at a bottom instead of buying more.

It also doesn't help that we tend to feel the pain of a loss more strongly than we do the pleasure of a gain. It's this unwillingness to accept the pain early that might cause us to "ride losers too long" in the vain hope that they'll turn around and won't make us face the consequences of our decisions.

Sunk Costs

Another factor driving loss aversion is the sunk cost fallacy. This theory states that we are unable to ignore the "sunk costs" of a decision, even when those costs are unlikely to be recovered.

One example of this would be if we purchased expensive theater tickets only to learn prior to attending the performance that the play was terrible. Since we paid for the tickets, we would be far more likely to attend the play than we would if those same tickets had been given to us by a friend. Rational behavior would suggest that regardless of whether or not we purchased the tickets, if we heard the play was terrible, we would choose to go or not go based on our interest. Instead, our inability to ignore the sunk costs of poor investments causes us to fail to evaluate a situation such as this on its own merits. Sunk costs may also prompt us to hold on to a stock even as the underlying business falters, rather than cutting our losses. Had the dropping stock been a gift, perhaps we wouldn't hang on quite so long.

Anchoring

Ask New Yorkers to estimate the population of Chicago, and they'll anchor on the number they know--the population of the Big Apple--and adjust down, but not enough. Ask people in Milwaukee to guess the number of people in Chicago and they'll anchor on the number they know and go up, but not enough. When estimating the unknown, we cleave to what we know.

Investors often fall prey to anchoring. They get anchored on their own estimates of a company's earnings, or on last year's earnings. For investors, anchoring behavior manifests itself in placing undue emphasis on recent performance since this may be what instigated the investment decision in the first place.

When an investment is lagging, we may hold on to it because we cling to the price we paid for it, or its strong performance just before its decline, in an effort to "break even" or get back to what we paid for it. We may cling to subpar companies for years, rather than dumping them and getting on with our investment life. It's costly to hold on to losers, though, and we may miss out on putting those invested funds to better use.

Confirmation Bias

Another risk that stems from both overconfidence and anchoring involves how we look at information. Too often we extrapolate our own beliefs without realizing it and engage in confirmation bias, or treating information that supports what we already believe, or want to believe, more favorably.

For instance, if we've had luck owning Honda (HMC) cars, we will likely be more inclined to believe information that supports our own good experience owning them, rather than information to the contrary. If we've purchased a mutual fund concentrated in health-care stocks, we may overemphasize positive information about the sector and discount whatever negative news we hear about how these stocks are expected to perform.

Hindsight bias also plays off of overconfidence and anchoring behavior. This is the tendency to re-evaluate our past behavior surrounding an event or decision knowing the actual outcome. Our judgment of a previous decision becomes biased to accommodate the new information. For example, knowing the outcome of a stock's performance, we may adjust our reasoning for purchasing it in the first place. This type of "knowledge updating" can keep us from viewing past decisions as objectively as we should.

Mental Accounting

If you've ever heard friends say that they can't spend a certain pool of money because they're planning to use it for their vacation, you've witnessed mental accounting in action. Most of us separate our money into buckets--this money is for the kids' college education, this money is for our retirement, this money is for the house. Heaven forbid that we spend the house money on a vacation.

Investors derive some benefits from this behavior. Earmarking money for retirement may prevent us from spending it frivolously. Mental accounting becomes a problem, though, when we categorize our funds without looking at the bigger picture. One example of this would be how we view a tax refund. While we might diligently place any extra money left over from our regular income into savings, we often view tax refunds as "found money" to be spent more frivolously. Since tax refunds are in fact our earned income, they should not be considered this way.

For gambling aficionados this effect can be referred to as "house money." We're much more likely to take risks with house money than with our own. For example, if we go to the roulette table with $100 and win another $200, we're more likely to take a bigger risk with that $200 in winnings than we would if the money was our own to begin with. There's a perception that the money isn't really ours and wasn't earned, so it's okay to take more risk with it. This is risk we'd be unlikely to take if we'd spent time working for that $200 ourselves.

Similarly, if our taxes were correctly adjusted so that we received that refund in portions all year long as part of our regular paycheck, we might be less inclined to go out and impulsively purchase that Caribbean cruise or flat-screen television.

In investing, just remember that money is money, no matter whether the funds in a brokerage account are derived from hard-earned savings, an inheritance, or realized capital gains.

Framing Effect

One other form of mental accounting is worth noting. The framing effect addresses how a reference point, oftentimes a meaningless benchmark, can affect our decision.

Let's assume, for example, that we decide to buy that television after all. But just before paying $500 for it, we realize it's $100 cheaper at a store down the street. In this case, we are quite likely to make that trip down the street and buy the less expensive television. If, however, we're buying a new set of living room furniture and the price tag is $5,000, we are unlikely to go down the street to the store selling it for $4,900. Why? Aren't we still saving $100?

Unfortunately, we tend to view the discount in relative, rather than absolute terms. When we were buying the television, we were saving 20% by going to the second shop, but when we were buying the living room furniture, we were saving only 2%. So it looks like $100 isn't always worth $100 depending on the situation.

The best way to avoid the negative aspects of mental accounting is to concentrate on the total return of your investments, and to take care not to think of your "budget buckets" so discretely that you fail to see how some seemingly small decisions can make a big impact.

Herding

There are thousands and thousands of stocks out there. Investors cannot know them all. In fact, it's a major endeavor to really know even a few of them. But people are bombarded with stock ideas from brokers, television, magazines, Web sites, and other places. Inevitably, some decide that the latest idea they've heard is a better idea than a stock they own (preferably one that's up, at least), and they make a trade.

Unfortunately, in many cases the stock has come to the public's attention because of its strong previous performance, not because of an improvement in the underlying business. Following a stock tip, under the assumption that others have more information, is a form of herding behavior.

This is not to say that investors should necessarily hold whatever investments they currently own. Some stocks should be sold, whether because the underlying businesses have declined or their stock prices simply exceed their intrinsic value. But it is clear that many individual (and institutional) investors hurt themselves by making too many buy and sell decisions for too many fallacious reasons. We can all be much better investors when we learn to select stocks carefully and for the right reasons, and then actively block out the noise. Any temporary comfort derived from investing with the crowd or following a market guru can lead to fading performance or inappropriate investments for your particular goals.

The Bottom Line

In this brief overview of behavioral finance, we've touched on the major tendencies that influence everyday investors. Being aware of these influences can make it less likely that you will succumb to them.

408: The Case for Dividends

Introduction

If you've made it this far in the Investing Classroom, you can't have escaped the following: A stock represents an ownership in a business. So let's say we are part owners as well as managers of a business, and when we closed the books on the year, our firm made a $10 million profit. Better yet, we collected all of it in cash. Now the rub--what to do with that cash?

Assuming we don't simply leave it in the corporate checkbook (though some companies certainly do), we've got four choices. We could:

1. Reinvest it in the business
2. Acquire another company
3. Pay down debt
4. Return the cash to shareholders

Real-life boards of directors face this decision in every quarter of every year. While the first three options can be productive uses for cash, the fourth--a reward to shareholders--is a critical part of the investment process. After all, why else would you want to own a stock if you never received a payback on your investment? Stocks are perpetual-life securities--there's no guaranteed payoff at some maturity date like there is with a bond.

In fact, the grandfather of security valuation (a little-known figure named John Burr Williams) defined a stock's value as the present value of future dividends. It's pretty easy to see why this is true. Even though capital gains loom large in most investors' minds, the ability to sell a stock tomorrow for more than was paid today is contingent on that stock eventually returning cash to its owner, whoever that owner might be at the time.

Dividends: The New Fad?

The two components to total return--dividends and capital gains--have two totally different tax treatments. Dividends are immediately taxable. Taxes on capital gains, on the other hand, aren't due until the stock is sold, creating a tax deferral that aids in wealth accumulation. In theory, if the dividend hadn't been declared, the value of that payment would have continued to compound tax-deferred within the company.

This natural, if not downright unavoidable, advantage that capital gains held over dividends was strengthened further by tax policies that favored capital gains over income. For years capital gains had been taxed at only half the rate of regular income, which included wages, bonuses, interest, and (sadly) dividends. For example, in a tax cut passed in 1997, the rate levied against capital gains was capped at 19.8%, while dividends continued to be taxed at rates up to 39.6%. Some wondered why a company would pay dividends at all.

In time, investors and corporate managers responded to the tax incentives and disincentives. With the birth of a new bull market in the early 1980s, dividends came to figure less and less in investors' selection of stocks. Growth, not stability and income, earned a premium valuation, so corporate managers' incentives were to grow earnings (by reinvesting) or, at the very least, buy back stock and thereby grow earnings per share. From August 1982 to August 2000, the S&P 500 rose at a 14.7% annual clip, but dividends gained at only 4.6%. The yield of the market collapsed from over 5% to just over 1%.

In pursuit of growth, however, a lot of businesses allocated capital poorly. The most profitable--and least risky--growth opportunities are those that are well protected by a company's economic moat. Lots of companies are capable of investing within their existing moats, nurturing their core competencies. But the area (size of the business) surrounded by the moat grows only so fast each year, and supporting this growth will typically absorb only a modest portion of annual earnings.

Relatively few managers prove to be as good at handling the cash left over. The CEO thinks: "If we're this smart when we invest $100 million a year, think how much smarter we'll look if we invest $1 billion!" Earth to CEO: No, you won't. The additional cash would be much better off with shareholders, who could then allocate their capital among all sorts of different businesses, not just whatever the company saw as worthy of investment. But with the tax policy stacked against the payment of dividends and investors demanding growth in any and all possible forms, earnings that should have been paid out were retained, and the money was inevitably wasted.

After the tech and housing bubbles, however, investors' attention has returned to capital allocation and the importance of dividends. Plus, today, the perverse incentive that double-taxing dividends (first as corporate income taxes, then as personal taxes) created for corporate managers is on hiatus due to tax-relief legislation. Dividend yields are still low by historical standards, but dividends seem fated to play a much larger role in market returns in the years to come.

Dividends and Total Returns

During the bull market, the pursuit of rapidly growing businesses obscured the real nature of equity returns. But growth isn't all there is to successful investing; it's just one piece of a larger puzzle.

Total return includes not only price appreciation, but income as well. And what causes price appreciation? In strictly theoretical terms, there's only one answer: anticipated dividends. Earnings are just a proxy for dividend-paying power. And dividend potential is not solely driven by growth of the underlying business--in fact, rapid growth in certain capital-intensive businesses can actually be a drag on dividend prospects.

Investors who focus only on sales or earnings growth--or even just the appreciation of the stock price--stand to miss the big picture. In fact, a company that isn't paying a healthy dividend may be setting its shareholders up for an unfortunate fate.

In Jeremy Siegel's *The Future for Investors*, the market's top professor analyzed the returns of the original S&P 500 companies from the formation of the index in 1957 through the end of 2003. What was the best-performing stock? Was it in color televisions (remember Zenith)? Telecommunications (AT&T)? Groundbreaking pharmaceuticals (Syntex/Roche)? Surely, it must have been a computer stock (IBM)?

None of the above. The best of the best hails not from a hot, rapidly growing industry, but instead from a field that was actually surrendering customers the entire time: cigarette maker Philip Morris, now known as Altria Group (MO). Over Siegel's 46-year time frame, Philip Morris posted total returns of an incredible 19.75% per year.

What was the secret? Credit a one-two punch of high dividends and profitable, moat-protected growth. Philip Morris made some acquisitions over the years, which were generally successful--but the overwhelming majority of its free cash flow was paid out as dividends or used to repurchase shares. As Marlboro gained market share and raised prices, Philip Morris grew the core business at a decent (if uninspiring) rate over the years. But what if the company--listening to the fans of growth and the foes of taxes--attempted to grow the entire business at 19.75% per year? At that rate it would have subsumed the entire U.S. economy by now.

The lesson is that no business can grow faster than the economy indefinitely, but that lack of growth doesn't cap investor returns. Amazingly, by maximizing boring old dividends and share buybacks, a low-growth business can turn out to be the highest total return investment of all time. As Siegel makes abundantly clear, "growth does not equal return." Only profitable growth--in businesses protected by an economic moat--can do that.

DRIPs

If you think dividend-paying stocks might be good for you, you may want to consider participating in a DRIP. DRIP is common shorthand for "dividend reinvestment plan." Not every investor needs dividends for income, so many dividend-paying companies offer the option of automatically reinvesting dividends in additional shares.

Signing up for DRIPs may help you focus on a company's long-term business prospects (because you will presumably participate in a DRIP for a long time), and it also allows investors to benefit from dollar-cost averaging. Many plans even offer a discount to the market price of the shares on the payment date.

You can find out more about a company's DRIP by visiting the investor relations section of its Web site; you can also find out whether a company offers a DRIP or not on Morningstar.com. Participating in a company's DRIP requires having the shares registered in your name (rather than "street name," where your broker is listed as the owner on your behalf), but before starting the paperwork to retitle your stock holdings, you'll want to find out if your broker offers a low-cost or free dividend reinvestment option as well--many of the larger firms do.

The Bottom Line

Traditional-minded investors like us are glad to see dividends making a comeback. Compared with retained earnings or buybacks, a solid dividend establishes a firm intrinsic value for the stock, helps reduce the stock's volatility, and acts as a check on management's capital-allocation practices. Simply put, it's the way things were meant to be.

409: The Dividend Drill

Introduction

In the last lesson, we learned about how dividends can establish a firm intrinsic value for a stock and act as a check on management's capital-allocation practices. In this lesson, we'll focus in more detail on how to identify high-quality stocks with good total return prospects.

Breaking total return into current yield and expected dividend growth, we should also sort the growth potential into two buckets--growth in the company's core business (assuming it's profitable growth, that is, or all bets are off) and the growth funded by any remaining free cash flows. We'll call this three-part process the Dividend Drill.

Consider the Current Dividend

If we can establish that a stock's current dividend is sustainable long term, we can take the stock's current yield and, voila, one chunk of our total return is accounted for. Taking a dividend for granted means establishing long-term sustainability. Nothing lasts forever--just ask the shareholders of once-venerable Goodyear Tire GT--although a few stocks, such as General Electric GE, have dividend records that come awfully close to immortality.

What establishes a secure dividend? Look for manageable debt levels. Remember, bondholders and banks are ahead of stockholders in the pay line. Next look for a reasonable payout ratio, or dividends as a percentage of profits. A payout ratio less than 80% is a good rule of thumb. Finally, look for steady cash flows. Also demand an economic moat: No-moat companies tend to be cyclical (think autos and chemicals) and lack the pricing power to maintain earnings during the inevitable industry downturns.

Coca-Cola KO is a good example. In mid-2005, the shares were changing hands at about $45 while paying a $1.10 annual dividend. At that time, the payout ratio was reasonable (52% over the previous 12 months), cash actually exceeded debt (no debt worries), and operating cash flows were consistent. Best of all, the firm's moat is very wide--Coke is arguably the most valuable brand name on earth, quite the achievement for what is, after all, caramel-colored sugar water.

Coke's yield at that point was 2.4% ($1.10 / $45), giving us the first building block of prospective total return. And based on current earnings power of roughly $2.00 per share, we'll have $0.90 in retained earnings to fund dividend growth, which, as noted earlier, takes two forms.

Assess the Company's Core Growth Potential

One key to this analysis is understanding how much investment is required to fund this growth. Few areas of the market are bursting at the seams, but most companies and industries have at least some growth potential over time as the U.S. economy expands (figure 3%-4% per year plus inflation) and emerging markets open up. Inflation can be a tailwind, too--though taking price increases for granted with manufacturing-oriented firms is not necessarily a good idea. Fortunately for most mature businesses, supporting this baseline level of growth is relatively inexpensive, and therefore high return.

Another and often simpler way to think about the cost of growth is to look at the company's free cash flow as a percent of net income. Since free cash flow includes the cost of capital investments that support growth initiatives, the difference between earnings and free cash gives us a sense of the cost of growth.

For example, let's say free cash flow consistently totals about 60% of net income, while sales and profit growth run about 6%. This suggests that only 40% of earnings will support this growth, leaving the other 60% of net income available for dividends, debt reduction, share buybacks, and other noncore investments.

This core growth gives us the second chunk of our total return equation. For Coca-Cola, let's assume 5.2% growth in operating income over the next five years, and that Coke's growth will fall significantly below that figure thereafter. Assuming that management maintains the current payout ratio, the firm's total dividend payout should rise at a similar clip. So we bolt on this 5.2% growth to our prospective total return, bringing our expectations (including the 2.4% yield noted above) to 7.6%.

But we've got one more task before moving on to the third and final step--how much will achieving this 5.2% growth cost? One of the simplest angles is to take the growth we expect (5.2%) and divide that by a representative return on equity (a nifty 30.8% for Coke in the past five years). The resulting ratio--call it "R-cubed" for "required retention ratio"--is the proportion of earnings used to fund core growth. For Coke, the R3 is 17% of income, or $0.34 per share.

Aftertax return on invested capital is also worth a look. ROIC is actually the purest way of analyzing the incremental cost of growth; in our formula ROIC replaces return on equity in the calculation of R3. However, ROIC is more complex to use, and it leaves out the company's capital structure (mix of additional borrowings and retained earnings) that is reflected in ROE. If the capital structure is stable and returns on equity are consistent--Coke checks out here on both counts--ROE is a good metric to use.

We'll stick with ROE R3, and estimate 5.2% annual growth will cost Coke $0.34 per share. Over time the absolute number will grow, but the proportion (17%) will remain the same as long as its two factors--growth and return on equity--stay the same.

Two thirds of the way through our analysis, we're up to a 7.6% return, and we still have $0.56 per share to spare ($2.00 in earnings less $1.10 for the dividend and $0.34 to fund core growth). So what's the final $0.56 per share worth?

Evaluate the "Excess" Earnings

After paying dividends and funding core growth, a company may have cash left over. It could opt to pay down debt, which would reduce interest expense and thus increase earnings. It might make an acquisition or some other investment, though the returns here could be spotty. Finally, it might opt to buy back stock.

Whatever the company decides to do with these excess funds, we put the result into the growth bucket of our prospective total return. In other words, we assume that any cash not used for a dividend is employed to create earnings and dividend growth. To get a proxy for the added growth potential of remaining earnings, we'll make an additional assumption that the path of least resistance is a share buyback.

This assumption is meant to err on the side of conservatism. The earnings yield (the inverse of P/E) on most stocks is generally much less than a company's return on equity, so we're not projecting much bang for this last slice of our buck. And acquisitions--returns of cash to someone else's shareholders--tend not to be priced for returns equal to existing investments.

Share buybacks boost earnings growth--EPS grows not only when the numerator (profit) expands, but also when the denominator (shares outstanding) shrinks. Dividing the excess earnings into the stock price gives us an "excess earnings yield," the third component of our total return calculation. So if Coke uses the last $0.56 of per-share earnings to repurchase stock, it will be able to retire 1.2% of its shares in the first year ($0.56 divided by a $45 share price). That, in turn, gives next year's earnings per share a 1.2% tailwind--even if earnings are flat, fewer shares outstanding mean higher earnings per share.

So What's It Worth?

Totaling Coke's yield (2.4%), profit growth (5.2%), and excess earnings yield (1.2%) produces an expected total return of 8.8%. It's important to note that this total return projection is contingent on the current stock price--we can expect an 8.8% annual return from Coke only if we acquire the shares at $45. If we pay less, our total return will be higher, and vice versa.

For example, let's say the market hits the proverbial banana peel, and Coke is offered at $35. Meanwhile our expectations (current earnings, dividend rate, future growth) haven't changed. Our core growth projection (5.2%) remains, but our two other factors are contingent on the stock price: At $35 the stock will yield 3.1% and our excess earnings quotient will rise to 1.6%. Our expected total return is now 9.9%, more than a full point higher. Conversely, if we wind up paying $55, our total return prospects are substantially reduced. Coke's yield will fall to 2%, the excess earnings quotient to 1.1%, and our expected return to 8.3%.

This analysis essentially calculates fair value in reverse--instead of using a required rate of return to yield a fair price for the stock, we use the stock price to calculate the shares' total return. Coke's fair value is the price at which its total return is equal to the return we would require for any stock of similar risk characteristics. Morningstar's fair value estimate in mid-2005 for Coke was $54, which was calculated using an 8.5% cost of equity--a return virtually identical to our total return projection if we use $54 as the stock's price.

What's the "right" required rate of return? Unfortunately there's more art than science to this, but we have two observations. First, over a very long period of time (200 years), the market has managed to return something around 10%. Lower-risk stocks would offer less, while higher-risk situations should require more. But most established, dividend-paying companies would fall in a range between 8% and 12%. Whatever you determine a "fair" return to be, demand more. This way you have a margin of safety between your assumptions and subsequent realities.

The Bottom Line

This analysis is not suited to every stock or situation. For one thing, even with the surge in the popularity of dividends in recent years, less than half of U.S. stocks pay a dividend. It's also not particularly well suited to deeply cyclical firms, whose earnings power and even dividend rates will vary widely from year to year. It's also not suited for emerging-growth stories. But for the ranks of relatively consistent, mature, moat-protected stocks--of which there are hundreds, if not thousands to pick from--we can use the dividend as a critical selection tool.

Stocks500

501: Constructing a Portfolio

Introduction

Now that you've learned how to analyze companies and pick stocks, it is time to focus on putting groups of stocks together to construct your stock portfolio. While Nobel prizes have been awarded and entire books written about this topic, we'll try to briefly summarize the academic theory and focus on some of the more important aspects of portfolio management.

Though we will supply some guidance, no one answer is right for everyone when it comes to portfolio construction. It's more art than science. And perhaps that's why many believe portfolio management may be the difference that separates a great investor from an average mutual fund manager. Famed international stock-picker John Templeton has often said that he's right about his stock picks only about 60% of the time. Nevertheless, he has accumulated one of the best track records in the business. That's because great managers have a tendency to have more money invested in their big winners and less in their losers.

While we don't own any secret recipe to be able to tell you which stocks will be the big winners in your portfolio, we can guide you in deciding how many stocks you may need to own and some other considerations.

The Fat-Pitch Approach

In Lesson 405, we introduced you to the concept of the fat-pitch approach. We noted that you should hold relatively few great companies, purchased at a large margin of safety, and that you shouldn't be afraid to hold cash when you can't find good stocks to buy. But why?

The more stocks you hold, the lower your chances of underperforming the market. Of course, the more stocks you hold, the lower your chances of outperforming the market, but your portfolio is less risky. So the key question to ask yourself is: "Why do I invest in individual stocks at all?"

If the answer is that you think you can do better than a mutual fund, then you should hold a fairly concentrated portfolio of stocks because that gives you the highest odds of outperforming the averages. By "fairly concentrated," we mean 12 to 20 stocks.

As we previously noted, most investors will discover only a few good ideas in any given year--maybe five or six, sometimes a few more. Investors who hold more than 20 stocks at a time are often buying shares of companies they don't know much about, and then diversifying away the risk by holding lots of different names. It's tough to stray very far from the average return when you hold that many stocks, unless you have wacky weightings like 10% of your portfolio in one stock and 2% in each of the other 45.

What Do the Academics Say?

While we as stock investors question many aspects of modern portfolio theory, we do believe it contains some important frameworks that may help you to feel comfortable when investing in a concentrated portfolio. One of them involves the two ways to define risk:

Unsystematic risk is the unique risk of the company or stock that can be offset through diversification. Think of this as risk specific to a company, such as poor management, eroding profits, or a product recall.

Systematic risk is the market risk that cannot be diversified. This is the risk that affects the valuation of all stocks

Academics have proved that of your total risk, you can diversify away your unsystematic risk. The larger the number of stocks you own, the more diversified you are, and the less unsystematic risk that you incur. For instance, if the profits of one of your companies are falling below expectations, and if you hold a large number of stocks, chances are another company in your portfolio is exceeding expectations.

There is some risk that you can't diversify away, the systematic risk. You cannot eliminate the risk from the macroeconomic factors that affect all stocks. So even if you own 1,000 stocks, you will not diversify away the inherent risk of owning stocks.

How Many Stocks Diversify Unsystematic Risk?

Once you own a certain number of stocks, you have eliminated all the unsystematic risk. When you have reached this point, there is no need to own any more stocks to diversify your risk of concentration, that is, the unique risks associated with any one stock. So how many stocks do you need to own to reach that point?

Let's hear from the experts. In their book *Investment Analysis and Portfolio Management*, Frank Reilly and Keith Brown reported that in one set of studies for randomly selected stocks, "...about 90% of the maximum benefit of diversification was derived from portfolios of 12 to 18 stocks." In other words, if you own about 12 to 18 stocks, you have obtained more than 90% of the benefits of diversification, assuming you own an equally weighted portfolio.

Essentially, the theory says that if you are properly diversified, on average, you will get the same return in the market as if you had bought a passive market index. So if you want to obtain a higher return than the markets, you increase your chances by being less diversified. At the same time, you also increase your risk.

It is also important to note that if you own more than 18 stocks, you will have achieved almost full diversification, but now you will just have to keep track of more stocks in your portfolio for not much marginal benefit.

While much of academia has focused on the risk of not being diversified enough, we believe that there's a practical risk to being too diversified. When you own too many companies, it becomes nearly impossible to know your companies really well. Instead of having a competitive insight, you begin to run the risk of missing things. You may miss something important in the 10-K, skip on investigating the firm's second competitor, and so on. When you lose your focus and move outside your circle of competence, you lose your competitive advantage as an investor. Instead of playing with weak opponents for big stakes, you begin to become the weak opponent.

Non-Market Risk and a Concentrated Portfolio

Interestingly, holding a concentrated portfolio is not as risky as one may think. Just holding two stocks instead of one eliminates 46% of your unsystematic risk. Using a twist on the 80/20 rule of thumb, holding only eight stocks will eliminate about 81% of your diversifiable risk.

What about range of returns? Joel Greenblatt in his book *You Can Be a Stock Market Genius*explains that during one period that he examined, the average return of the stock market was about 10% and statistically, the one-year range of returns for a market portfolio (holding scores of stocks) in this period was between negative 8% and positive 28% about two thirds of the time. That means that one third of the time, the returns fell outside this 36-point range.

Interestingly, Greenblatt noted that if your portfolio is limited to only five stocks, the expected return remains 10%, but your one-year range expands to between negative 11% and positive 31% about two thirds of the time. If there are eight stocks, the range is between negative 10% and positive 30%. In other words, it takes fewer stocks to diversify a portfolio than one might intuitively think.

Portfolio Weighting

In addition to knowing how many stocks to own in your portfolio and which stocks to buy, the percentage of your portfolio occupied by each stock is just as important. Unfortunately, the science and academics behind this important topic are scarce, and therefore, portfolio weighting is, again, more art than science.

We do know that the great money managers have a knack for having a greater percentage of their money in stocks that do well and a lesser amount in their bad picks. So how do they do it?

Essentially, a portfolio should be weighted in direct proportion to how much confidence you have in each pick. If you have a lot of confidence in the long-term outlook and the valuation of a stock, then it should be weighted more heavily than a stock you may be taking a flier on.

If a stock has a 10% weighting in your portfolio, then a 20% change in its price will move your overall portfolio 2%. If a stock has only a 3% weighting, a 20% price change has only a 0.6% effect on your portfolio. Weight your portfolio wisely. Don't be too afraid to have some big weightings, but be certain that the highest-weighted stocks are the ones you feel the most confident about. And of course, don't go off the deep end by having, for example, 50% of your portfolio in a single stock.

Portfolio Turnover

If you follow the fat-pitch method, you won't trade very often. Wide-moat companies selling at a discount are rare, so when you find one, you should pounce. Over the years, a wide-moat company will generate returns on capital higher than its cost of capital, creating value for shareholders. This shareholder value translates into a higher stock price over time.

If you sell after making a small profit, you might not get another chance to buy the stock, or a similar high-quality stock, for a long time. For this reason, it's irrational to quickly move in and out of wide-moat stocks and incur capital gains taxes and transaction costs. Your results, after taxes and trading expenses, likely won't be any better and may be worse. That's why many of the great long-term investors display low turnover in their portfolios. They've learned to let their winners run and to think like owners, not traders.

Circle of Competence and Sector Concentration

If you are investing within your circle of competence, then your stock selections will gravitate toward certain sectors and investment styles. Maybe you work in the medical field and thus are familiar with and own a number of pharmaceutical and biotechnology stocks. Or perhaps you've been educated in the Warren Buffett school of investing and cling to entrenched, easy-to-understand businesses such as Coca-Cola KO and Wrigley WWY.

Following the fat-pitch strategy, you will naturally be overweight in some areas you know well and have found an abundance of good businesses. Likewise, you may avoid other areas where you don't know much or find it difficult to locate good businesses.

However, if all your stocks are in one sector, you may want to think about the effects that could have on your portfolio. For instance, you probably wouldn't want all of your investments to be in unattractive areas such as the airline or auto industry.

Adding Mutual Funds to a Stock Portfolio

In-the-know investors buy stocks. Those less-in-the-know, or those who choose to know less, own mutual funds. At least that's the rap when it comes to the stocks versus funds issue.

But investing doesn't have to be a choice between investing directly in stocks or indirectly through mutual funds. Investors can--and many should--do both. The trick is determining how your portfolio can benefit most from each type of investment. Figuring out your appropriate stock/fund mix is (you knew this was coming) up to you.

Begin by looking for gaps in your portfolio and circle of competence. Do you have any foreign exposure? Do your assets cluster in particular sectors or style-box positions? Consider investing in mutual funds to gain exposure to countries and sectors that your portfolio currently lacks.

Some funds invest in micro-caps, others invest around the globe, still others focus on markets, such as real estate, that have their own quirks. Stock investors who turn over some of their dollars to an expert in these areas gain exposure to new opportunities without having to learn a whole new set of analytical skills.

For example, there are several ways to invest internationally:

- Purchase U.S. stocks like Wrigley and Coca-Cola that have extensive international operations.
- Purchase international stocks that have U.S. listings or ADRs such as Cadbury Schweppes CSG and Unilever UL.
- Purchase international stocks on a foreign exchange.
- Own an international equity mutual fund.

Ultimately, your choice depends on your circle of competence and comfort level. While many may feel comfortable with picking their own international stocks, others may prefer to own an international equity fund.

The Bottom Line

Modern portfolio theory has been built on the assumption that you can't beat the stock market. If you can't beat the market portfolio, then the best you can do is to match the market's performance. Therefore, academic theory revolves around how to build the most efficient portfolio to match the market.

We have taken a different approach. Our objective is to outperform the market. Therefore, we believe that our odds increase by holding (not actively trading) relatively concentrated portfolios of between 12 and 20 great companies purchased with a margin of safety. The circle of competence will be unique to every person; therefore, your stock portfolio will naturally have sector, style, and country biases. If lacking in any area such as international stocks, a good mutual fund can be used to balance your overall portfolio.

502: Introduction to Options

Introduction

The large sums of money that can be won or lost over a fairly short period with options make them both intriguing and frightening to many investors. Because of the broad array of esoteric terms and unfamiliar concepts associated with them, options can be a difficult subject for investors to understand. Frankly, we don't think options are for everyone. In fact, many investors have had quite successful investing careers without ever considering them.

Even if you never end up buying or selling an option, it's a large enough part of the equities market to merit being aware of. You will probably be tempted at some point in your investing career to "take the next step" and leverage your ideas. This lesson will teach you the basics so you know what you may be getting into.

Call and Put Options on Stocks

At the heart of all the spreads and strategies discussed about options is the call and put. A call gives its owner the option to buy a stock at a specific price, known as the strike price, over a given period of time. A put provides the owner the option to sell a stock at a specific price (also called the strike price), over a given period of time. Let's look at how options are typically represented for a particular stock:

JUN15 50c
This refers to a call option with a strike price of $50 that expires in June 2015. The owner of this call would have the option to purchase the stock for $50 anytime before the option expires in June 2015.

AUG14 75p
This refers to a put option with a strike price of $75 that expires in August 2014. The owner of this put would have the option to sell the stock for $75 anytime before the option expires in August 2014.

What Is an Option Contract?

Options are traded in units called contracts. Each contract entitles the option buyer/owner to 100 shares of the underlying stock upon expiration. Thus, if you purchase seven call option contracts, you are acquiring the right to purchase 700 shares.

For every buyer of an option contract, there is a seller (also referred to as the writer of the option). In exchange for the cash received upon creating the option, the option writer gives up the right to buy or sell the underlying stock to someone else for the duration of the option. For instance, if the owner of a call option exercises his or her right to buy the stock at a particular price, the option writer must deliver the stock at that price.

Understanding Option Pricing

Two key phrases from our definitions for a call and put are "option to buy" and "option to sell." The owner of a call or put is not obligated to take any action. Thus, a call or put never has a value less than $0 before it expires. Consider the following example:

You own a call that gives you the right to buy a stock for $50. However, at expiration, the stock is priced at $45. Why would you exercise your right to purchase the stock for $50 when you can buy it for less in the stock market? You wouldn't. So, your call is worth $0 anytime the stock finishes below your strike price, which is $50 in this example.

When talking about option prices, people often refer to intrinsic value and premium to intrinsic value. (This intrinsic value has nothing to do with the intrinsic value we refer to when talking about the discounted cash flow of a company.) An option's intrinsic value is the difference between its strike price and the underlying stock price, when it favors the owner of the option. People often refer to intrinsic value as the amount that the option is "in the money." Let's look at three examples, assuming we are in 2012:

1. FEB13 60c when the stock is trading at $75

In this case, you own a call option that allows you to purchase the stock for $60 when it is trading for $75. We would say this call option has an intrinsic value of $15 because it gives you the right to purchase the stock for $15 less than you could purchase it for in the stock market.

2. OCT14 80p when the stock is trading at $50

In this case, you own a put option that allows you to sell the stock for $80 when it is trading for $50. We would say this put option has an intrinsic value of $30 because it gives you the right to sell the stock for $30 more than you could sell it for in the stock market.

3. JUL13 50c when the stock is trading for $40

In this case, you own a call option that allows you to buy the stock for $50 when it is trading for $40. This option has no intrinsic value. It is considered "out of the money."

Let's take a closer look at the third example above. Although it has no intrinsic value, we discover that the option is trading for about $2 in the marketplace. Why is that? Although the option isn't in the money now, there is still some time left (before expiration) for the stock to move such that it could place the option in the money. This is referred to as time value or option value.

In the case of the second example, the option may be trading for $32 even though the intrinsic value is only $30. In this case the option is trading at a $2 premium to its intrinsic value. This premium is also known as the time value.

Drivers of Option Value

There are several key factors that influence the value of an option. First, the level of volatility in the underlying stock plays a key role. The higher the stock's volatility, the greater the value of the option. If the underlying stock is more volatile, it means the option has a greater chance of trading in the money before the option expires.

Second, the amount of time left until the option expires influences the option's value. The more time left until expiration, the greater the value of the option. Again, the longer until expiration, the more time for an option to trade or finish in the money.

Finally, the direction the underlying stock trades will affect the value of the option. If a stock appreciates, it will positively affect call options and negatively impact put options. If a stock falls, it will have the opposite effect.

Basic Option Strategy—Leaps

There are literally scores of option strategies. Straddles, strangles, and butterflies are just some of the main types of strategies where an investor can use options (or sets of options) to bet on any number of stock and market movements. Most of these are beyond the scope of this lesson, so we will just focus on two strategies most often used by value investors.

First, leaps are options with relatively long time horizons, typically lasting for a year or two. (The term "leaps" is an acronym for "long-term equity anticipation securities.") Some value-oriented investors like call option leaps because they have such long time horizons and typically require less capital than buying the underlying stock.

For example, a stock may be trading for about $60, but the call options with two years to expiration and a $70 strike price may trade for $10. If an investor thinks the stock is worth $100 and will appreciate to that price before the leap expires, he or she could find the leap very attractive. Rather than spending $6,000 to purchase 100 shares of the stock, he or she could buy one leap contract for $1,000 (1 contract x $10 x 100). If the stock closes at $100 at expiration two years from now, the leap position would return $2,000 (1 contract x ($30 – $10) x 100). This would mark a $2,000 profit on a $1,000 investment (200%). However, if he or she had just purchased the stock, it would have marked a $4,000 profit on a $6,000 investment (67%).

As we see above, leaps can offer investors better returns. However, this bigger bang for the buck does not come without some additional risks. If the stock had finished at $70, the leap investor would have lost his/her $1,000 while the stock investor would have made $1,000. Also, the leap investor doesn't get to collect dividends, unlike the stock investor.

Let's also consider a case where this stock trades at $70 at the leap's expiration, but then goes up to $110 soon after expiration. The owner of the stock enjoys the appreciation to $110, but the option holder in our example is out of luck.

This latest example highlights perhaps the reason why options are a tough nut to crack for most investors. To be successful with options, you not only have to be correct about the direction of a stock's movement, you also have to be correct about the timing and magnitude of that movement. Deciding whether or not a company's stock is undervalued is difficult enough, and betting on when "Mr. Market" is going to be in one mood or the other adds great complexity.

Another Strategy--Baby Puts

"Baby puts" refer to put options that are far out of the money, and therefore trade cheaply. Investors will sell these baby puts on stocks that they are comfortable purchasing at a specific price, which will be the strike price of the put they are selling. Typically, this is the price that builds in a margin of safety to their estimate of the stock's fair value.

For example, say an investor would be happy to purchase Coca-Cola (KO) for $35 per share, but the stock is trading at $45. It's currently January, and the investor notices that the May $35 put options are trading for $1. The investor decides to sell (write) the May $35 put options for $1. This means the investor collects $1 for selling the right to someone else to sell the investor the stock for $35 anytime before the option's May expiration date. So, if Coca-Cola stock doesn't fall below $35 by the May expiration, the investor pockets the $1. However, if the stock falls below $35 before May, the investor will probably be required to purchase Coca-Cola stock for $35, because the person to whom he or she sold the put option will exercise his or her right to sell the stock for $35.

Value investors might be willing to partake in this strategy because they decided in advance that $35 was a good price to purchase Coca-Cola stock. And, if the stock doesn't fall below $35, they get to collect $1 (by selling the baby put) as they wait for Coke's stock to trade cheaper.

This strategy is not without some fairly large risks. If the investor doesn't have enough cash in his or her account to purchase the stock, the investor's broker may require additional funds be deposited. We'd recommend considering this strategy only if an investor has plenty of cash on hand. Also, a fresh piece of news could surface (between the time the investor sells the put and the put expires) that might change the investor's opinion of the fair value of the stock.

The Bottom Line

Some investors like options because they require less capital and thereby offer potentially greater returns. Others like to use them to execute strategies like the "baby put" example above. However, options also possess risks that will repel many investors, and rightfully so, in our opinion. Like we mentioned earlier, one can have a very successful investing career without spending a moment thinking about options.

503: Unconventional Equities

Introduction

Our discussion of the stock market would not be complete without an examination of what we might refer to as "unconventional equities." We lump three types of securities into this category: real estate investment trusts (REITs), master limited partnerships (MLPs), and royalty trusts. These securities trade like stocks but carry important differences, particularly with regard to tax treatment. Let's take a look at the benefits and drawbacks of each security type.

Benefits of REITs

A real estate investment trust (REIT) is a company that owns and manages income-producing real estate. REITs were created by an act of Congress in 1960 to enable large and small investors alike to enjoy the rental income from commercial property. REITs are governed by many regulations, the most important being that they must distribute at least 90% of their taxable income to shareholders each year as dividends; the REIT is permitted to deduct dividends paid to shareholders from its taxable income. Other important regulations include:

- Asset requirements: at least 75% of assets must be real estate, cash, and government securities.
- Income requirements: at least 75% of gross income must come from rents, interest from mortgages, or other real estate investments.
- Stock ownership requirements: shares in the REIT must be held by a minimum of 100 shareholders.

REITs specialize by property type. They invest in most major property types with nearly two thirds of investment being in offices, apartments, shopping centers, regional malls, and industrial facilities. The rest is divided among hotels, self-storage facilities, health-care properties, and some specialty REITs that own anything from prisons, theatres, and golf courses to timberlands.

Some benefits of REITs include:

High Yields. For many investors, the main attraction of REITs has been their dividend yield. The average dividend yield for REITs was about 4.3% in September 2012, well more than the yield of the S&P 500 Index, but pretty far below the longer-term average for REITs, which had been trending in the 7%-8% range (recent REIT popularity has pushed stock prices up and yields down). Also, REIT dividends are secured by stable rents from long-term leases, and many REIT managers employ conservative leverage on the balance sheet.

Simple Tax Treatment. Unlike most partnerships, tax issues for REIT investors are fairly straightforward. Each year, REITs send Form 1099-DIV to their shareholders, containing a breakdown of the dividend distributions. For tax purposes, dividends are allocated to ordinary income, capital gains, and return of capital. As REITs do not pay taxes at the corporate level, investors are taxed at their individual tax rate for the ordinary income portion of the dividend. The portion of the dividend taxed as capital gains arises if the REIT sells assets. Return of capital, or net distributions in excess of the REIT's earnings and profits, are not taxed as ordinary income, but instead applied to reduce the shareholder's cost basis in the stock. When the shares are eventually sold, the difference between the share price and reduced tax basis is taxed as a capital gain.

Liquidity of REIT Shares. REIT shares are bought and sold on a stock exchange. By contrast, buying and selling property directly involves higher expenses and requires a great deal of effort.

Diversification. Studies have shown that adding REITs to a diversified investment portfolio increases returns and reduces risk since REITs have little correlation with the

S&P 500.

Drawbacks of REITs

REITs also have some drawbacks, including:

Sensitive to Demand for Other High-Yield Assets. Generally, rising interest rates could make Treasury securities more attractive, drawing funds away from REITs and lowering their share prices.

Property Taxes. REITs must pay property taxes, which can make up as much as 25% of total operating expenses. State and municipal authorities could increase property taxes to make up for budget shortfalls, reducing cash flows to shareholders.

Tax Rates. One of the downsides to the high yield of REITs is that taxes are due on dividends, and the tax rates are typically higher than the 15% most dividends are currently taxed at. This is because a large chunk of a REIT's dividends (typically about three quarters, though it varies widely by REIT) is considered ordinary income, which is usually taxed at a higher rate.

Benefits of MLPs

In recent years, many U.S. energy firms have reorganized their slow-growing, yet stable businesses, such as pipelines and storage terminals, into master limited partnerships, or MLPs. There are some important differences between buying shares of a corporation and buying a stake in an MLP. With MLPs, investors buy units of the partnership, rather than shares of stock, and are referred to as "unitholders."

There are two classes of MLP owner: general partners and limited partners. General partners manage the day-to-day operations of the partnership. An MLP technically has no employees, so all services, from management to bookkeeping, are provided by the general partner. All other investors are limited partners and have no involvement in the partnership's operations. Limited-partner units are publicly traded, while general-partner units usually are not. The general partner stake is often 2% of the partnership, though the general partner can also own limited-partner units to increase its percentage of ownership.

Companies that use the MLP format tend to operate in very stable, slow-growing industries, such as pipelines. These types of firms usually offer dim prospects for unit price appreciation, but the stability of the industries that use the MLP format means below-average risk for investors. Cash distributions usually stay relatively steady over time (growing at little more than overall inflation), causing MLP units to trade somewhat like bonds, rising when interest rates fall and vice versa.

Some benefits of MLPs include:

High Yield. Most MLPs offer very attractive yields, generally falling in the 6%-7% range.

Consistent Distributions Over Time. The businesses operated as MLPs tend to be very stable and produce consistent cash flows year after year, making the cash distributions on MLP units very predictable.

Capital Gains. Firms primarily switch to the MLP structure to avoid taxes. While shareholders in a corporation face double taxation--paying taxes first at the corporate level, and then at the personal level when those earnings are received as dividends--owners of a partnership are taxed only once: when they receive distributions. There is no partnership equivalent of corporate income tax. Cash distributions to owners often exceed partnership income, and when they do, the difference is counted as a return of capital to the limited partner and taxed at the capital gains rate when the unitholder sells. Not only are capital gains deferred until an owner decides to sell, but capital gains tax rates are lower than income tax rates. In fact, we're particularly fond of pipeline MLPs, which have ample growth opportunities thanks to shifting sources of supplies of crude oil and natural gas. However, unlike other energy companies, MLPs tend not to take on commodity exposures, reducing risk and cash flow volatility. With distributions typically yielding 6-8% (and growing by 5-10% annually) and offering the opportunity for capital gains, MLPs could provide a compelling total return to investors.

Lower Cost of Capital. The absence of taxes at the company level gives MLPs a lower cost of capital than is typically available to corporations, allowing the MLPs to pursue projects that might not be feasible for a taxable entity.

General Partner Compensation Aligned with Limited Partners' Interest. Most general partners are paid on a sliding scale, receiving a greater share of each dollar of cash flow as the limited partners' cash distributions rise, giving the general partner an incentive to increase limited-partner distributions.

Drawbacks of MLPs

Investors should also consider the downsides to MLPs, which include:

Personal Tax Liability. Each unitholder is responsible for paying his or her share of the partnership's income taxes, which can make filing taxes more complicated. This is particularly true for larger unitholders, who may have to pay taxes in the various states in which the partnership operates. Moreover, limited partners might owe taxes on partnership income even if the units are held in a retirement account.

Limited Pool of Investors. MLPs face a smaller pool of potential investors than traditional equities because institutional investors, such as pension funds, are not allowed to hold MLP units without incurring tax liability. These large investors do not ordinarily pay taxes, so they tend to shy away from MLPs.

Institutional investors represent the majority of investor dollars in the market, so eliminating them reduces the potential demand for MLP units. Congress recently approved a provision allowing mutual funds to buy MLPs, which should dramatically increase the number of potential investors.

Benefits of Royalty Trusts

Royalty trusts, like MLPs, generally invest in energy sector assets. Unlike the steady cash flows at MLPs, royalty trusts generate income from the production of natural resources such as coal, oil, and natural gas. These cash flows are subject to swings in commodity prices and production levels, which can cause them to be very inconsistent from year to year. The trusts have no physical operations of their own and have no management or employees. Rather, they are merely financing vehicles that are run by banks, and they trade like stocks. Other companies mine the resources and pay royalties on those resources to the trust. For example, Burlington Resources, an oil exploration and production company, is the operator for the assets that the largest U.S. royalty trust, San Juan Basin Royalty Trust (SJT), owns the royalties on.

Royalty trusts end up on most investors' radar screens because of the incredibly high yields some of them offer, many in excess of 10%. In a low-interest-rate environment, it's easy to understand why such an income-producing investment might be garnering more attention.

Many of the positive and negative attributes of owning a royalty trust are similar to those faced by MLP unitholders. The benefits are:

High Yield. Trusts are required to pay out essentially all of their cash flow as distributions. Because of this, nearly all royalty trusts have above-average yields, many wildly above average.

Tax-Advantaged Yield. Due to depreciation and depletion, distributions from most trusts are not considered income in the eyes of the IRS. Rather, these nonincome distributions are used to reduce an owner's cost basis in the stock, which is then taxed at the lower capital gains rate and is deferred until an owner sells.

No Corporate Income Tax. Trusts are merely "pass-through" investment vehicles. The issues surrounding double taxation of dividends do not apply.

Peculiar Tax Credits. Have you ever received a tax credit for producing fuels from nonconventional sources? If you own a royalty trust, you might qualify for such credits. The laws on this issue are in flux, and the credits are generally small, but it's still a nice potential perk.

"Pure" Bets on Commodities. Want to bet on the future price appreciation of natural gas but don't want to get involved with the futures market? An excellent way to do that would be to buy a royalty trust that owns gas. The value of any given trust and the distributions it pays are directly tied to the prices of the underlying commodity. Just remember the sword cuts both ways here. The trust's income (and therefore probably the trust's stock price) could end up falling if commodity prices go down instead of up.

Drawbacks of Royalty Trusts

The downsides to royalty trusts include the following:

Depletion, Depletion, Depletion. Royalty trusts own royalties on a finite amount of resources. Once those resources are gone, they're gone. As the resources deplete, royalties and distributions will fall and will, eventually, go to zero. In financial terms, there is no terminal value. Granted, most trusts won't hit this point for two or three decades (or more), but it's still incredibly important to consider that distributions will eventually contract and disappear.

Volatile Distributions. Trusts typically pay out their distributions on a quarterly or monthly basis. If royalties fall in that period due to the underlying commodity price tanking, distributions will also fall. It's entirely conceivable that a trust that yielded 15% in the last 12 months could yield 3% in the next 12.

Tax-Filing Complexity. Owners of royalty trusts are required to report the pro rata portion of a trust's total income and expenses on their tax returns. This typically means filing Schedules E and B as well as having additional work with Form 1040.

State Income Taxes. Owners of trusts are liable for paying income taxes in the states in which the trust generates its royalties. Different states have different thresholds for when taxes have to actually be filed and paid, and the likelihood of owing income tax in multiple states increases with the size of a given ownership position.

The Bottom Line

Though they require a bit of work to understand and may increase tax complexity, investing in REITs, MLPs, and royalty trusts can boost the income-producing power of most portfolios.

504: Great Investors: Benjamin Graham

Introduction

Benjamin Graham taught an investment class at the Columbia University business school for 28 years. If you had been a student in Graham's classes during the early 1950s, your textbook, *Security Analysis*, would have been written by Graham himself, along with David Dodd.

You may have also met a few interesting students by the name of Warren Buffett, Bill Ruane, Tom Knapp, and Walter Schloss. Each of these men would go on to manage investments in one form or another. Buffett and Schloss both started investment partnerships. Buffett folded his partnership in 1969, but his partners were given the opportunity to receive shares of a struggling textile manufacturer named Berkshire Hathaway BRK.B. Ruane and Knapp started firms that manage public mutual funds.

In 1984, Buffett returned to Columbia to give a speech commemorating the 50th anniversary of the publication of *Security Analysis*. During that speech, he presented his own investment record as well as those of Ruane, Knapp, and Schloss. In short, each of these men posted investment results that blew away the returns of the overall market. Buffett noted that each of the portfolios varied greatly in the number and type of stocks, but what did not vary was the managers' adherence to Graham's investment principles. The investment principles taught by Graham at Columbia served his students exceptionally well, and it is difficult to overstate the influence Graham had on the field of professional stock analysis. The good news is that Graham made the same principles easily accessible for ordinary investors by writing the classic book *The Intelligent Investor*.

The Principles of Value Investing

Multibillion dollar casinos have been built in the desert because of the insatiable human desire to speculate. However, when speculation is confused with investment, trouble inevitably follows. The Internet bubble of the late 1990s is merely one example of the speculative frenzies that occasionally occur in financial markets. In *The Intelligent Investor*, Graham set forth the principles that form the foundation of value investing. Value investors seek to purchase assets at prices that are substantially below the assets' true, or intrinsic, value. Graham's timeless principles provide a map that all value investors can follow to stock market success. According to Graham, investing consists of three elements:

1. Thorough Analysis
Stocks are not merely pieces of paper or electronic quotations on a computer screen, but partial ownership interests in real businesses. Therefore, you must thoroughly analyze the underlying business and its prospects before purchasing a stock. Equally important--given the endless amount of data that flows from the stock market on a daily basis--is recognizing the information you must ignore or discard. For example, the average price of a stock over the past 50 days may be important to so-called chartists or technical analysts, but does that have any effect on the safety or value of the underlying business? As Graham wrote, you must study "the facts in light of established standards of safety and value."

2. Safety of Principal
Warren Buffett is fond of saying that his two rules of investing are Rule #1: Don't Lose Money, and Rule #2: Don't Forget Rule #1. Buffett undoubtedly inherited his strong aversion to permanent capital loss from Graham. To succeed over an investment lifetime, you do not have to find the next Microsoft MSFT, but it is necessary that you avoid significant losses.

3. Adequate Return
For Graham, an "adequate" or "satisfactory" return meant "any rate or amount of return, however low, which the investor is willing to accept, provided he acts with reasonable intelligence." Many investors will find that the best way to own common stocks is through a low-cost mutual fund or ETF (exchange-traded fund) that tracks a broad market index such as the S&P 500. Index funds allow investors to participate in the growth of American business, which has been very satisfactory over the last century. In addition, very few active managers have outperformed S&P 500 index funds over long periods of time. Therefore, if you decide to construct your own portfolio of stocks or to purchase shares of an actively managed mutual fund, your investment return must exceed that of a low-cost index fund over the long term to be "adequate." Otherwise, "reasonable intelligence" should dictate that you own an index fund.

Intrinsic Value

How much should you pay for a business? Every day the stock market offers prices for thousands of businesses, but how do you know if the price for any particular business is too low or too high? To succeed as an investor, you must be able to estimate a business's true worth, or "intrinsic value," which may be entirely separate from its stock market price.

For Graham, a business's intrinsic value could be estimated from its financial statements, namely the balance sheet and income statement. For example, in 1926 Graham discovered that Northern Pipe Line, an oil transport company, owned a collection of railroad bonds that were worth $95 for each of its shares. However, Northern's stock was selling for only $65 per share. It does not take a genius of Graham's caliber to see from Northern's balance sheet that its intrinsic value was at least $95 per share since the company also owned valuable pipeline assets. Although it took a proxy fight, Graham eventually brought Northern's management to his way of thinking: Northern sold the bonds and paid a $70 per share dividend.

Mr. Market

If all investors based their investment decisions on rational and conservative estimates of intrinsic value, it would be very difficult to make money in the stock market. Fortunately, the participants in the stock market are humans subject to the corroding influence of emotions. Investors are frequently given to bouts of over-optimism and greed, which causes stock prices to be bid up to very high levels. These same investors are also vulnerable to excessive pessimism and fear, in which case, stock prices are driven down substantially below intrinsic value.

Graham offers intelligent investors an escape from the swift tides of greed and fear. He wrote, "Basically, price fluctuations have only one significant meaning for the true investor. They provide him with an opportunity to buy wisely when prices fall sharply and sell wisely when they advance a great deal. At other times he will do better if he forgets about the stock market."

Graham's attitude toward market fluctuations, of course, makes perfect sense. Can you imagine waiting to purchase a television until its price went up, but refusing to buy the same television when it went on sale? Strange as it seems, behavior that is blatantly irrational in most aspects of life is commonplace in the stock market.

Graham succinctly captured his liberating philosophy toward market fluctuations in the famous parable of Mr. Market. Graham said to imagine you had a partner in a private business named Mr. Market. Mr. Market, the obliging fellow that he is, shows up daily to tell you what he thinks your interest in the business is worth.

On most days, the price he quotes is reasonable and justified by the business's prospects. However, Mr. Market suffers from some rather incurable emotional problems; you see, he is very temperamental. When Mr. Market is overcome by boundless optimism or bottomless pessimism, he will quote you a price that, as Graham noted, "seems to you a little short of silly." As an intelligent investor, you should not fall under Mr. Market's influence, but rather you should learn to take advantage of him.

The value of your interest should be determined by rationally appraising the business's prospects, and you can happily sell when Mr. Market quotes you a ridiculously high price and buy when he quotes you an absurdly low price. The best part of your association with Mr. Market is that he does not care how many times you take advantage of him. No matter how many times you saddle him with losses or rob him of gains, he will arrive the next day ready to do business with you again.

The lesson behind Graham's Mr. Market parable is obvious. Every day the stock market offers investors quotes on thousands of businesses, and you are free either to ignore or take advantage of those prices. You must always remember that it is not Mr. Market's guidance you are interested in, but rather his wallet.

Margin of Safety

If you had asked Graham to distill the secret of sound investing into three words, he might have replied, "margin of safety." Those are still the right three words and will remain so for as long as humans are unable to accurately predict the future.

As Graham repeatedly warned, any estimate of intrinsic value is based on numerous assumptions about the future, which are unlikely to be completely accurate. By allowing yourself a margin of safety--paying only $60 for a stock you think is worth $100, for example--you provide for errors in your forecasts and unforeseeable events that may alter the business landscape.

Just think, if you were asked to build a bridge over which 10,000-pound trucks were to pass, would you build it to hold exactly 10,000 pounds? Of course not--you'd build the bridge to hold 15,000 or 20,000 pounds. That is your margin of safety.

The Bottom Line

When Benjamin Graham passed away in 1976, Warren Buffett wrote this about Graham's teachings: "In an area where much looks foolish within weeks or months after publication, Ben's principles have remained sound--their value often enhanced and better understood in the wake of financial storms that demolished flimsier intellectual structures. His counsel of soundness brought unfailing rewards to his followers--even to those with natural abilities inferior to more gifted practitioners who stumbled while following counsels of brilliance or fashion." Buffett's words remain undeniably true today. Investing is most intelligent when it is most businesslike, and investors who follow Graham's principles will continue to reap rewards in the stock market.

505: Great Investors: Philip Fisher

Introduction

The late Phil Fisher was one of the great investors of all time and the author of the classic book *Common Stocks and Uncommon Profits*. Fisher started his money management firm, Fisher & Co., in 1931 and over the next seven decades made tremendous amounts of money for his clients. For example, he was an early investor in semiconductor giant Texas Instruments TXN, whose market capitalization recently stood at well over $40 billion. Fisher also purchased Motorola MOT in 1955, and in a testament to long-term investing, held the stock until his death in 2004.

Fisher's Investment Philosophy

Fisher's investment philosophy can be summarized in a single sentence: Purchase and hold for the long term a concentrated portfolio of outstanding companies with compelling growth prospects that you understand very well. This sentence is clear on its face, but let us parse it carefully to understand the advantages of Fisher's approach. The question that every investor faces is, of course, what to buy? Fisher's answer is to purchase the shares of superbly managed growth companies, and he devoted an entire chapter in *Common Stocks and Uncommon Profits* to this topic. The chapter begins with a comparison of "statistical bargains," or stocks that appear cheap based solely on accounting figures, and growth stocks, or stocks with excellent growth prospects based on an intelligent appraisal of the underlying business's characteristics.

The problem with statistical bargains, Fisher noted, is that while there may be some genuine bargains to be found, in many cases the businesses face daunting headwinds that cannot be discerned from accounting figures, such that in a few years the current "bargain" prices will have proved to be very high. Furthermore, Fisher stated that over a period of many years, a well-selected growth stock will substantially outperform a statistical bargain. The reason for this disparity, Fisher wrote, is that a growth stock, whose intrinsic value grows steadily over time, will tend to appreciate "hundreds of per cent each decade," while it is unusual for a statistical bargain to be "as much as 50 per cent undervalued."

Fisher divided the universe of growth stocks into large and small companies. On one end of the spectrum are large financially strong companies with solid growth prospects. At the time, these included IBM IBM, Dow Chemical DOW, and DuPont DD, all of which increased fivefold in the 10-year period from 1946 to 1956.

Although such returns are quite satisfactory, the real home runs are to be found in "small and frequently young companies... [with] products that might bring a sensational future." Of these companies, Fisher wrote, "the young growth stock offers by far the greatest possibility of gain. Sometimes this can mount up to several thousand per cent in a decade." Fisher's answer to the question of what to buy is clear: All else equal, investors with the time and inclination should concentrate their efforts on uncovering young companies with outstanding growth prospects.

Fisher's 15 Points

All good principles are timeless, and Fisher's famous "Fifteen Points to Look for in a Common Stock" from *Common Stocks and Uncommon Profits* remain as relevant today as when they were first published. The 15 points are a qualitative guide to finding superbly managed companies with excellent growth prospects. According to Fisher, a company must qualify on most of these 15 points to be considered a worthwhile investment:

1. Does the company have products or services with sufficient market potential to make possible a sizable increase in sales for at least several years? A company seeking a sustained period of spectacular growth must have products that address large and expanding markets.

2. Does the management have a determination to continue to develop products or processes that will still further increase total sales potentials when the growth potentials of currently attractive product lines have largely been exploited? All markets eventually mature, and to maintain above-average growth over a period of decades, a company must continually develop new products to either expand existing markets or enter new ones.

3. How effective are the company's research-and-development efforts in relation to its size? To develop new products, a company's research-and-development (R&D) effort must be both efficient and effective.

4. Does the company have an above-average sales organization? Fisher wrote that in a competitive environment, few products or services are so compelling that they will sell to their maximum potential without expert merchandising.

5. Does the company have a worthwhile profit margin? Berkshire Hathaway's BRK.B vice-chairman Charlie Munger is fond of saying that if something is not worth doing, it is not worth doing well. Similarly, a company can show tremendous growth, but the growth must bring worthwhile profits to reward investors.

6. What is the company doing to maintain or improve profit margins? Fisher stated, "It is not the profit margin of the past but those of the future that are basically important to the investor." Because inflation increases a company's expenses and competitors will pressure profit margins, you should pay attention to a company's strategy for reducing costs and improving profit margins over the long haul. This is where the moat framework we've spoken about throughout the Investing Classroom series can be a big help.

7. Does the company have outstanding labor and personnel relations? According to Fisher, a company with good labor relations tends to be more profitable than one with mediocre relations because happy employees are likely to be more productive. There is no single yardstick to measure the state of a company's labor relations, but there are a few items investors should investigate. First, companies with good labor relations usually make every effort to settle employee grievances quickly. In addition, a company that makes above-average profits, even while paying above-average wages to its employees is likely to have good labor relations. Finally, investors should pay attention to the attitude of top management toward employees.

8. Does the company have outstanding executive relations? Just as having good employee relations is important, a company must also cultivate the right atmosphere in its executive suite. Fisher noted that in companies where the founding family retains control, family members should not be promoted ahead of more able executives. In addition, executive salaries should be at least in line with industry norms. Salaries should also be reviewed regularly so that merited pay increases are given without having to be demanded.

9. Does the company have depth to its management? As a company continues to grow over a span of decades, it is vital that a deep pool of management talent be properly developed. Fisher warned investors to avoid companies where top management is reluctant to delegate significant authority to lower-level managers.

10. How good are the company's cost analysis and accounting controls? A company cannot deliver outstanding results over the long term if it is unable to closely track costs in each step of its operations. Fisher stated that getting a precise handle on a company's cost analysis is difficult, but an investor can discern which companies are exceptionally deficient--these are the companies to avoid.

11. Are there other aspects of the business, somewhat peculiar to the industry involved, which will give the investor important clues as to how outstanding the company may be in relation to its competition? Fisher described this point as a catch-all because the "important clues" will vary widely among industries. The skill with which a retailer, like Wal-Mart WMT or Costco COST, handles its merchandising and inventory is of paramount importance. However, in an industry such as insurance, a completely different set of business factors is important. It is critical for an investor to understand which industry factors determine the success of a company and how that company stacks up in relation to its rivals.

12. Does the company have a short-range or long-range outlook in regard to profits? Fisher argued that investors should take a long-range view, and thus should favor companies that take a long-range view on profits. In addition, companies focused on meeting Wall Street's quarterly earnings estimates may forgo beneficial long-term actions if they cause a short-term hit to earnings. Even worse, management may be tempted to make aggressive accounting assumptions in order to report an acceptable quarterly profit number.

13. In the foreseeable future will the growth of the company require sufficient equity financing so that the larger number of shares then outstanding will largely cancel the existing stockholders' benefit from this anticipated growth? As an investor, you should seek companies with sufficient cash or borrowing capacity to fund growth without diluting the interests of its current owners with follow-on equity offerings.

14. Does management talk freely to investors about its affairs when things are going well but "clam up" when troubles and disappointments occur? Every business, no matter how wonderful, will occasionally face disappointments. Investors should seek out management that reports candidly to shareholders all aspects of the business, good or bad.

15. Does the company have a management of unquestionable integrity? The accounting scandals that led to the bankruptcies of Enron and WorldCom should highlight the importance of investing only with management teams of unquestionable integrity. Investors will be well-served by following Fisher's warning that regardless of how highly a company rates on the other 14 points, "If there is a serious question of the lack of a strong management sense of trusteeship for shareholders, the investor should never seriously consider participating in such an enterprise."

Important Don'ts for Investors

In investing, the actions you don't take are as important as the actions you do take. Here is some of Fisher's advice on what you should not do.

1. Don't overstress diversification.

Investment advisors and the financial media constantly expound the virtues of diversification with the help of a catchy cliche: "Don't put all your eggs in one basket." However, as Fisher noted, once you start putting your eggs in a multitude of baskets, not all of them end up in attractive places, and it becomes difficult to keep track of all your eggs.

Fisher, who owned at most only 30 stocks at any point in his career, had a better solution. Spend time thoroughly researching and understanding a company, and if it clearly meets the 15 points he set forth, you should make a meaningful investment. Fisher would agree with Mark Twain when he said, "Put all your eggs in one basket, and watch that basket!"

2. Don't follow the crowd.

Following the crowds into investment fads, such as the "Nifty Fifty" in the early 1970s or tech stocks in the late 1990s, can be dangerous to your financial health. On the flip side, searching in areas the crowd has left behind can be extremely profitable. Sir Isaac Newton once lamented that he could calculate the motion of heavenly bodies, but not the madness of crowds. Fisher would heartily agree.

3. Don't quibble over eighths and quarters.

After extensive research, you've found a company that you think will prosper in the decades ahead, and the stock is currently selling at a reasonable price. Should you delay or forgo your investment to wait for a price a few pennies below the current price?

Fisher told the story of a skilled investor who wanted to purchase shares in a particular company whose stock closed that day at $35.50 per share. However, the investor refused to pay more than $35. The stock never again sold at $35 and over the next 25 years, increased in value to more than $500 per share. The investor missed out on a tremendous gain in a vain attempt to save 50 cents per share.

Even Warren Buffett is prone to this type of mental error. Buffett began purchasing Wal-Mart many years ago, but stopped buying when the price moved up a little. Buffett admits that this mistake cost Berkshire Hathaway shareholders about $10 billion. Even the Oracle of Omaha could have benefited from Fisher's advice not to quibble over eighths and quarters.

The Bottom Line

Philip Fisher compiled a sterling record during his seven-decade career by investing in young companies with bright growth prospects. By applying Fisher's methods, you, too, can uncover tomorrow's dominant companies.

506: Great Investors: Warren Buffett

Introduction

Warren Buffett is widely regarded as the world's most successful investor, and it is no mistake we have repeatedly echoed his wisdom throughout this Investing Classroom series. The book value of his company, Berkshire Hathaway BRK.B, compounded at 21.9% per year between 1965 and 2004. That is more than double the 10.4% pretax return to the S&P 500 over the same period. According to Forbes, Buffett is the world's second-richest man with a net worth of about $44 billion at this writing. But he didn't stumble across a giant oil field, develop software, or inherit wealth. Rather, he built his fortune solely through astute investing. Aspiring investors, then, will certainly benefit by studying his methods. Fortunately, Buffett has been forthcoming.

In Berkshire's 1977 annual report, Buffett described the central principles of his investment strategy:

"We select our marketable equity securities in much the way we would evaluate a business for acquisition in its entirety. We want the business to be one (a) that we can understand; (b) with favorable long-term prospects; (c) operated by honest and competent people; and (d) available at a very attractive price."

Determining Fair Value

Buffett determines the attractiveness of a company's price by comparing it with his estimate of the company's value. To determine value, he estimates the company's future cash flows and discounts them at an appropriate rate. Discounting is necessary because $1,000 today is worth more than $1,000 received after one year. If an investor can earn 6%

interest on his or her money, then $1,000 today is worth $1,060 in one year. Conversely, an expected $1,000 cash flow one year from now is worth only $943.40 today, because $943.40 earning 6% grows to $1,000 in one year. (For more on discounted cash flow and the time value of money, see Lesson 403.)

This discounted cash-flow valuation method was described by John Burr Williams in his 1938 book, *The Theory of Investment Value*. It is used by countless investment professionals, so Buffett's approach to valuation is not a competitive advantage. However, his ability to estimate future cash flows more accurately than other investors is an advantage.

Another part of his edge may be due to his sharp mind, but Buffett insists that successful investing doesn't require a high IQ; it depends more on a successful framework and having the proper temperament. Buffett succeeds largely because he focuses his efforts on companies with durable competitive advantages that fall within his circle of competence. These are key features of his investing framework.

Understanding Your Circle of Competence

If Buffett cannot understand a company's business, then it lies beyond his circle of competence, and he won't attempt to value it. He famously avoided technology stocks in the late 1990s in part because he had no expertise in technology. On the other hand, Buffett continued to buy and hold what he knew. For instance, he was willing to purchase a large stake in Coca-Cola KO because he understood the company's products and its business model.

Although it might seem obvious that investors should stick to what they know, the temptation to step outside one's circle of competence can be strong. During the technology stock mania of 1999, Berkshire's return badly trailed the market's return, and a number of observers commented that Buffett was hopelessly behind the times for eschewing technology stocks. However, Buffett has written that he isn't bothered when he misses out on big returns in areas he doesn't understand, because investors can do very well (as he has) by simply avoiding big mistakes. He believes that what counts most for investors is not so much what they know but how realistically they can define what they don't know.

Sustainable Competitive Advantages

Even if a business is easy to understand, Buffett won't attempt to value it if its future cash flows are unpredictable. He wants to own simple, stable businesses that possess sustainable competitive advantages. Companies with these characteristics are highly likely to generate materially higher cash flows with the passage of time. Without these characteristics, valuation estimates become very uncertain.

His large stake in Coca-Cola provides us with an example of the type of company he favors. Coca-Cola is more than 100 years old, and it has been selling essentially the same product during its entire existence. Coke was the leading soft drink in 1896 just as it is today. It seems unlikely that customers will ever lose their taste for it. Buffett believes that the product and the Coca-Cola brand are durable competitive advantages that will enable the company to earn economic profits for shareholders for many years to come.
On the other hand, technology is a fast-changing industry where the leading company of today can be driven out of business tomorrow by more innovative rivals. Market-leading products are always vulnerable to obsolescence. Thus, even if Buffett had technological expertise, he would be reluctant to invest in the industry because he couldn't be confident that a technology company's cash flows would be materially higher in 10 or 20 years, or even that the company would still exist.

Partnering with Admirable Managers

Buffett seeks businesses with talented, likeable managers already in place. Although he has the ability to change the management at Berkshire's wholly owned subsidiaries, Buffett believes that power is "somewhat illusory" because "management changes, like marital changes, are painful, time-consuming, and chancy." He has written that good managers are unlikely to triumph over a bad business, but given a business with decent economic characteristics--the only type that interests him--good managers make a significant difference. He looks for individuals who are more passionate about their work than their compensation and who exhibit energy, intelligence, and integrity. That last quality is especially important to him. He believes that he has never made a good deal with a bad person.

An Approach to Market Prices

Once Buffett has decided that he is competent to evaluate a company, that the company has sustainable advantages, and that it is run by commendable managers, then he still has to decide whether or not to buy it. This step is the most crucial part of the process so it deserves the most attention.
The decision process seems simple enough: If the market price is below the discounted cash-flow calculation of fair value, then the security is a candidate for purchase. The available securities that offer the greatest discounts to fair value estimates are the ones to buy.
However, what seems simple in theory is difficult in practice. A company's stock price typically drops when investors shun it because of bad news, so a buyer of cheap securities is constantly swimming against the tide of popular sentiment. Even investments that generate excellent long-term returns can perform poorly for years. In fact, Buffett wrote an article in 1979 explaining that stocks were undervalued, yet the undervaluation only worsened for another three years. Most investors find it difficult to

buy when it seems that everyone is selling, and difficult to remain steadfast when returns are poor for several consecutive years.

Buffett credits his late friend and mentor, Benjamin Graham, with teaching him the appropriate attitude toward market prices. You may remember Graham's parable in which he said to imagine daily quotations as coming from Mr. Market, your very temperamental partner in a private business. Each day he offers you a price for which he will buy your share of the business, or for which you can buy his share of the business. On some days he is euphoric and offers you a very high price for your share. On other days he is despondent and offers a very low price. Mr. Market doesn't mind if you abuse or ignore him--he'll be back with another price tomorrow.

The most important thing to remember about Mr. Market is that he offers you the potential to make a profit, but he does not offer useful guidance. If an investor can't evaluate his business better than Mr. Market, then the investor doesn't belong in that business. Thus, Buffett invests only in predictable businesses that he understands, and he ignores the judgment of Mr. Market (the daily market price) except to take advantage of Mr. Market's mistakes.

Requiring a Margin of Safety

Although Buffett believes the market is frequently wrong about the fair value of stocks, he doesn't believe himself to be infallible. If he estimates a company's fair value at $80 per share, and the company's stock sells for $77, he will refrain from buying despite the apparent undervaluation. That small discrepancy does not provide an adequate margin of safety, another concept borrowed from Ben Graham. No one can predict cash flows into the distant future with precision, not even for stable businesses with durable competitive advantages. Therefore, any estimate of fair value must include substantial room for error.

For instance, if a stock's estimated value is $80 per share, then a purchase at $60 allows an investor to be wrong by 25% but still achieve a satisfactory result. The $20 difference between estimated fair value and purchase price is what Graham called the margin of safety. Buffett considers this margin-of-safety principle to be the cornerstone of investment success.

Concentrating on Your Best Ideas

Buffett has difficulty finding understandable businesses with sustainable competitive advantages and excellent managers that also sell at discounts to their estimated fair values. Therefore, his investment portfolio has often been concentrated in relatively few companies. This practice is at odds with the Modern Portfolio Theory taught in business schools, but Buffett rejects the idea that diversification is helpful to informed investors. On the contrary, he thinks the addition of an investor's 20th favorite holding is likely to lower returns and increase risk compared with simply adding the same amount of money to the investor's top choices.

The Bottom Line

Buffett's thinking permeates Morningstar's philosophy and valuation framework. We fully believe that you can greatly boost your investment returns if you invest like Buffett. This means staying within your circle of competence, focusing on companies with wide economic moats, paying attention to company valuation and not market prices, and finally requiring a margin of safety before buying.

507: Great Investors: Peter Lynch

Introduction

Peter Lynch is one of the greatest money managers and most famous investors of all time. He drew acclaim for his success as the portfolio manager of Fidelity Magellan FMAGX, the mutual fund he ran from 1977 to 1990. When Lynch became Magellan's manager in 1977, the fund had $20 million in assets. Lynch's strong track record at Magellan drew investors at a rapid rate, and by 1983 the fund's assets topped $1 billion. During the 13 years Lynch ran the fund, Magellan outperformed the annual return of the S&P 500 stock index 11 years. Lynch achieved this performance even after Magellan was the nation's largest mutual fund with $13 billion in assets. The sheer size of Magellan was part of Lynch's aura. No one else had managed such a big fund with so much success.

Despite his uncanny talent as a portfolio manager, Lynch's mantra is that average investors have an edge over Wall Street experts. He says that professional investors usually don't find a stock genuinely attractive until a number of large institutions have recognized its suitability and an equal number of respected Wall Street analysts have put it on the recommended list. This "Street lag" gives average investors many advantages, because they can find promising investments largely ahead of the professional investors. Lynch stated, "If you stay half-alert, you can pick the spectacular performers right from your place of business or out of the neighborhood shopping mall, and long before Wall Street discovers them." Therefore, individual investors can outperform the experts and the market in general by looking around for investment ideas in their everyday lives.

Lynch's seminal book, *One Up on Wall Street*, articulates his investment philosophy. The Lynch stock-picking approach has several key principles: First, you should invest only in what you understand. Second, you should do your homework and research an investment thoroughly. Third, you should focus more on a company's fundamentals and not the market as a whole. Last, you should invest only for the long run and discard short-term market gyrations. If you adhere to the basic principles of this investment philosophy, Lynch believes that you will be well on your way to "beating the street."

Stick to What You Know

Investing in what you know about and understand is at the core of Lynch's stock-picking approach. This particular investment principle served Lynch very well in practice. Lynch invested only in industries he had a firm grasp on, such as the auto industry. That's what led him to Chrysler (today part of DaimlerChrysler DCX) back in the early 1980s. Chrysler was getting beat up by the competition and was near bankruptcy--it seemed the carmaker would never regain its footing. But after seeing prototypes of a new thing called a minivan, Lynch made Chrysler one of Magellan's top holdings. It paid off, and Chrysler more than tripled in price while Magellan owned it.

Moreover, Lynch has pointed out that you will find your best investment ideas close to home. He claimed, "An amateur investor can pick tomorrow's big winners by paying attention to new developments at the workplace, the mall, the auto showrooms, the restaurants, or anywhere a promising new enterprise makes its debut." For example, Lynch said that after his wife raved over the fact that Hanes Co. (now owned by Sara Lee SLE) conveniently sold its L'eggs pantyhose in grocery stores, he figured the company was on to something good. His hunch was right. Hanes' stock rose sixfold while Magellan held it. Lynch's main point here is to look around you, because that's where you are most likely to find your winners.

Do Your Research and Set Reasonable Expectations

The second key principle in Lynch's investment philosophy is that you should do your homework and research the company thoroughly. Lynch remarked, "Investing without research is like playing stud poker and never looking at the cards." He recommends reading all prospectuses, quarterly reports (Form 10-Q), and annual reports (Form 10-K) that companies are required to file with the Securities and Exchange Commission. If any pertinent information is unavailable in the annual report, Lynch says that you will be able to find it by asking your broker, calling the company, visiting the company, or doing some grassroots research, also known as "kicking the tires." After completing the research process, you should be familiar with the company's business and have developed some sense of its future potential.

Once you have done your research on a company, Lynch believes that it is important to set some realistic expectations about each stock's potential. He usually ranks the companies by size and then places them into one of six categories: slow growers, stalwarts, fast growers, cyclicals, turnarounds, and asset plays.

Slow Growers. Large and aging companies that are expected to grow slightly faster than the gross national product but generally pay a large and regular dividend. Lynch doesn't invest much in slow growers, because companies that aren't growing fast will not see rapid appreciation in their stock price.

Stalwarts. Large companies that grow at a faster rate than slow growers, with annual earnings growth rates of about 10%-12%. Lynch believes that stalwarts offer sizable profits when you buy them cheap, but he doesn't expect to make more than a 30%-50% return on them.

Fast Growers. Small, aggressive, new companies that grow at 20%-25% a year. These companies don't have to be in fast-growing industries per se, and Lynch favors those that are not. Lynch thinks that fast growers are the big winners in the stock market, but they also have a considerable amount of risk.

Cyclicals. Companies whose sales and profits rise and fall in a regular fashion. Lynch states that cyclicals are the most misunderstood stocks, and they are often confused for stalwarts by inexperienced investors. Investing in cyclicals requires a keen sense of timing and the ability to detect the early signs in a cycle.

Turnarounds. Companies that have been battered and depressed, and are often close to bankruptcy. Lynch notes that such "no growers" can make up lost ground very quickly, and their upswings are generally tied to the overall market.

Asset Plays. Companies with valuable assets that Wall Street analysts have missed. While Lynch says that asset opportunities are everywhere, he points out that you will need a working knowledge of the company and a healthy dose of patience.

Know the Fundamentals

The third main principle of Lynch's stock-picking approach is to focus only on the company's fundamentals and not the market as a whole. Lynch doesn't believe in predicting markets, but he believes in buying great companies--especially companies that are undervalued and/or underappreciated. One might say Lynch advocates looking at companies one at a time using a "bottom up" approach rather trying to make difficult macroeconomic calls using a "top down" approach.

Lynch believes that investors can separate good companies from mediocre ones by sticking to the fundamentals and combing through financial statements to find profitable firms with solid business models. He suggests looking at some of the following famous numbers, which happen to be many of the same numbers that stock analysts at Morningstar look for.

Percent of Sales. If your interest in a company stems from a specific product, be sure to find out if it represents a meaningful percent of sales. It doesn't make sense to remain interested if this number is inconsequential.

Year-Over-Year Earnings. Look for stability and consistency in year-over-year earnings. In the long run, a stock's earnings and price will move in tandem, so look for companies with earnings that consistently go up.

Earnings Growth. Make sure a company's earnings growth reflects its true prospects. High levels of earnings growth are rarely sustainable, but high growth could be factored into a stock's price.

The P/E Ratio (Lynch's favorite metric). Think of the P/E ratio as the number of years it will take the company to earn back your initial investment (assuming constant earnings). Keep in mind that slow growers will have low P/E ratios and fast growers high ones. It is particularly useful to look at a company's P/E ratio relative to its earnings growth rate (PEG ratio). Generally speaking, a P/E ratio that's half the growth rate is very attractive, and one that's twice the growth rate is very unattractive. Avoid excessively high P/E ratios and remember that P/E ratios are not comparable across industries. However, comparing a company's current P/E ratio with benchmarks such as its historical P/E average, industry P/E average, and the market's P/E can help you determine if the stock is cheap, fully valued, or overpriced.

The Cash Position. Look for a company's cash position on the balance sheet. A strong cash position affords a company financial stability and can represent a built-in discount for investors in the stock.

The Debt Factor. Check to see if the company has significant long-term debt on its balance sheet. If it does, this could be a considerable disadvantage when business is good (can't grow) or bad (can't pay the interest expense).

Dividends. If you are interested in dividend-paying firms, look for those that have the ability to pay out dividends during recessions and a long track record of regularly raising dividends.

Book Value. Remember that the stated book value often bears little relationship to the actual worth of the company, because it often understates or overstates reality by a large margin.

Cash Flow. Always look for companies that throw off lots of free cash flow, which is the cash that's left over after normal capital spending.

Inventories. Make sure that inventories are growing in line with sales. If inventories are piling up and sales stagnating, this could be an important red flag. Inventories are particularly important numbers for cyclical firms.

Pension Plans. If a company has a pension plan, make sure that plan assets exceed vested benefit liabilities.

Ignoring Mr. Market

The last key principle of Lynch's investment philosophy is that you should only invest for the long run and discard short-term market gyrations. Lynch has said, "Absent a lot of surprises, stocks are relatively predictable over ten to twenty years. As to whether they're going to be higher or lower in two or three years, you might as well flip a coin to decide." It might seem surprising to hear Lynch make this argument, because portfolio managers are typically evaluated based on short-term performance metrics. Nonetheless, Lynch sticks with his philosophy, adding: "When it comes to the market, the important skill here is not listening, it's snoring. The trick is not to learn to trust your gut feelings, but rather to discipline yourself to ignore them. Stand by your stocks as long as the fundamental story has not changed."

The Bottom Line

Lynch firmly believes that average investors can beat Wall Street professionals. He recommends investing only in what you understand and doing your research. By finding great companies with strong fundamentals at bargain prices, he argues that you will have the next big winners in hand before the professional investors. Lynch encapsulated this point well when he said, "The basic story remains simple and never-ending. Stocks aren't lottery tickets. There's a company attached to every share. Companies do better or they do worse. If a company does worse than before, its stock will fall. If a company does better, its stock will rise. If you own good companies that continue to increase their earnings, you'll do well."

508: Great Investors: Others in the Hall of Fame

Introduction

Most successful investors take a few ideas from several others and spin those ideas into their own. In the previous lessons, we've highlighted some of the greatest investors of our era, however there are certainly many more. In this lesson, we'll introduce you to a few more money managers we think deserve a spot in the "Investing Hall of Fame." Make sure to look for the common investing themes across these superb stock-pickers.

Charlie Munger

Charlie Munger, vice chairman of Berkshire Hathaway, is often overshadowed by his colleague Warren Buffett. However, much of the investment philosophy employed by Buffett and Berkshire can be attributed to Munger's influence.

Like Buffett, Munger is from Nebraska. He started his career as a lawyer, but through his friendship with Buffett, Munger eventually left his successful law career to join Buffett in running Berkshire Hathaway BRK.B. Over the years, the two have developed a great rapport, often highlighted during Berkshire Hathaway's annual meetings. When shareholders pepper the two with queries during question-and-answer sessions, Buffett will give his usual insightful thoughts, while Munger answers with his dry witty remarks, often leaving listeners in stitches.

Here's one gem from the 2005 shareholder meeting, where Buffett and Munger discussed the compensation committees of many boards of directors:

Buffett: I've been on 19 boards, and I've never seen a director to whom fees were important object to an acquisition or a CEO's compensation--members of compensation committees act like Chihuahuas, not Great Danes or Dobermans. [Pause] I hope I'm not insulting any of my friends who are on compensation committees.

Munger: You're insulting the dogs.

Munger helped Buffett develop his knack for not only finding undervalued stocks, but for investing in strong businesses with strong competitive advantages. In other words, business quality truly matters to Munger, not just how cheap a stock is.

Munger also urges investors to gain worldly wisdom to become successful at stock-picking. This means that investors should not just focus on a few narrow topics but expand their horizons to understand many different subjects. For example, an engineer should learn accounting to understand how a business can make a profit. Likewise, a good financial analyst shouldn't just crunch numbers but also learn how the machines in a factory work. This worldly wisdom helps investors gain knowledge about the way things work in a broad sense, which in turn helps them to better understand the economics of a certain business. With worldly wisdom, investors can stay focused on what matters while others are running for the doors due to a short-term blip. In other words, the worldly wisdom Munger preaches can help savvy investors profit from others' shortsightedness.

Bill Miller

Few investors have melded the growth and value schools of investing better than Bill Miller, manager of the Legg Mason Value Trust LMVTX mutual fund. Some value-investing enthusiasts disagree that Miller is one of their own. While his practice of valuing stocks on the underlying businesses is acceptable, Miller has made some questionable "value" plays. Some famous examples include America Online (which later became part of Time Warner TWX), Dell Computer DELL, and Amazon.com AMZN. Though none were of the traditional "value" mold, all these stocks made substantial price gains after Miller bought them.

Critics characterize Miller as a growth investor in a value investor's clothing, but a look into his thought process reveals Miller's knack for seeing value where others don't. This ability has allowed the Legg Mason Value Fund to beat the S&P 500 for over a dozen consecutive years--a remarkable feat.

Like any value investor, Miller looks for businesses with strong competitive advantages that are trading below his estimates of the firms' worth. He uses a discounted cash-flow model to determine intrinsic value. Unlike many value managers, however, Miller is willing to make fairly optimistic assumptions about growth, and he doesn't shy away from owning companies in traditional growth sectors. In his fund, pricey Internet stocks rub elbows with bargain-priced financials and turnaround plays. Miller will also let favored names run, allowing top positions to soak up a large percentage of assets. This portfolio concentration may fly in the face of modern portfolio theory, but Miller isn't one to accept the conventional wisdom.

A more recent example of Miller's value/growth mix is his purchase of Google GOOG, a rapidly growing Internet search engine. While many investors shied away from this stock due to valuation concerns, Miller scooped up shares during its IPO. The stock doubled quickly after the company went public. While it's still too early to tell where Google will be five or 10 years down the road, this purchase was done in classic Bill Miller fashion--investing in a wildly profitable company that few investors understand or appreciate.

Marty Whitman

Marty Whitman is a vulture of a value investor. Whitman, manager of the Third Avenue Value Fund TAVFX, can usually be found rummaging through the rubble of distressed stocks--those of beaten-down companies, some on the brink of insolvency. But most of Whitman's depressed stock plays eventually turn around for the better. The key to Whitmanesque stock-picking: Buy companies that are cheap (presumably because of some temporary issue) and safe, and hold on to them.

Whitman is a value investor after Benjamin Graham's own heart. Like Graham, Whitman looks for stocks that are dirt cheap, but the two investors use different measuring sticks. Graham used a company's price/book ratio to determine whether its stock was cheap. He generally wouldn't buy a company unless its stock was trading for less than 1.2 times book value per share.

Whitman takes a different approach. He focuses on a company's takeover value, or how much he thinks a buyer would pay to buy the whole company. Whitman doesn't like to use book value because he says it overlooks too many intangibles. For instance, a money-management firm can use its reputation and relationships to gain additional business. Its reputation and relationships are assets, so to speak, but they don't appear as such on a company's balance sheet. According to Whitman, takeover value accounts for such intangibles.

Whitman combs through a company's financial statements to figure out what he thinks the business is worth. He then checks to see whether the company's balance sheet has remained strong in spite of setbacks in the business. He will generally pay no more than 50% of what he thinks a buyer would pay to acquire the whole firm.

It can take a long time to unlock the value of a beaten-up stock. As long as a company is safe and cheap, Whitman is willing to wait.

Bill Nygren

Bill Nygren is the manager of the Oakmark Select OAKLX mutual fund. He joined Harris Associates, advisor to the Oakmark funds, in 1983. After a stint as director of research for Harris Associates for most of the 1990s, Nygren began managing the Select fund in early 2000, near the height of the technology bubble. Value investing is always tough, but even tougher when a bubble exists in stock prices. During these times, the undervalued stocks usually stay cheap for a long time, while the expensive "hot stocks" of the moment keep going up. When Nygren took over, Oakmark's investors were jumping ship trying to take advantage of ever-increasing Internet and other technology stocks. By sticking to his guns, however, Nygren eventually proved that his methodology of buying growing, but undervalued firms pays off in the long run.

Nygren buys stocks that are trading at discounts to their estimated private market values. To estimate a company's intrinsic value, Nygren and his colleagues use discounted cash-flow analysis and look at comparable transactions, among many other factors. When picking stocks, Nygren likes to look for companies he believes the market underappreciates, perhaps because of a short-term difficulty. In a speech given in early 2005, Nygren described his investing philosophy using a variation of the 80/20 rule, a strategy made famous by his former portfolio holding, Illinois Tool Works ITW. Nygren said he looks for stocks where 80% of the commentary about a company revolves around a piece of business that contributes only about 20% of the profits. When he finds a situation like this, it is likely the market is undervaluing the firm.

Such is the case with Nygren's largest holding (at the time of this writing), Washington Mutual WM. Much of the news about WaMu is about the company's troubled mortgage business, while most of the firm's profits come from the highly profitable and growing retail banking business. Nygren believes that once the market realizes its misplaced focus, WaMu's stock should appreciate. Only time will tell if Nygren is correct, but as a long-term buy-and-hold investor, Nygren can wait.

Ralph Wanger

Ralph Wanger, semi-retired manager of Columbia Acorn Fund LACAX, searches for smaller stocks he believes have yet to be uncovered by Wall Street. Before investing in a company, Wanger looks for companies that are financially strong and have significant growth opportunities ahead of them. These are obvious criteria that most investors look for. However, while many small-cap growth investors are willing to overlook valuation for the upside potential of a stock, Wanger believes that growth should only be purchased at a reasonable price.

Markets often overvalue growth stocks, so this is an important point. On the plus side, however, the small companies Wanger looks for have often largely been ignored by the Wall Street analysts, thus many investors are not aware of potential opportunities. Since fewer investors are paying attention to smaller companies, the chance of finding an undervalued stock is more likely.

Rather than employ a top-down approach to investing, where investors first analyze macroeconomic trends such as GDP growth in a certain country, Wanger employs the ideas of investing according to themes. For example, if Wanger believes the population in China is becoming increasingly wealthy, he may look for consumer-goods makers that sell high-end items in the country.

Wanger isn't afraid to go against the trend either. In the late 1990s, many of his small-growth peers posted huge returns by betting that already high stock prices would be carried higher still by a wave of investor enthusiasm for technology stocks. (This is the so-called "greater fool" strategy.) That tactic, of course, was laden with risk, and many funds paid a huge price.

Amid it all, Wanger did what he always has: He sought out sound businesses with strong earnings and cash flows that appeared cheap. That tactic held Wanger's fund back in 1999, but he was eventually proved correct. From March 2000 through April 30, 2001, the fund gained 16.8% on a cumulative basis, while his typical small-growth peer lost a cumulative 31%. However, Wanger isn't in our Hall of Fame just for a few years of performance. A $10,000 investment in the fund in June 1970 would have grown to just less than $1.3 million if held through May 2003, around the time he stepped down from day-to-day duties. In contrast, the same money invested in the S&P 500 Index would have grown to just more than $400,000.

Bill Ruane

The late Bill Ruane, who passed away in October 2005, kept his head when most others lost theirs. Ruane had been managing the Sequoia Fund SEQUX since 1970, and with great success. A $10,000 investment in the fund back in 1970 would have been worth $1.7 million at the end of 2004. At many times, Ruane's investing strategy mirrored Warren Buffett's, and not by coincidence. Both of these great investors studied under Ben Graham at Columbia University, and even worked for him for a while. That's why such terms as "intrinsic value" and "margin of safety" often showed up in Ruane's vocabulary. Given this, it's clear to see why, at the time of this writing, Berkshire Hathaway was the largest holding in the Sequoia Fund.

Ruane looked for companies with sound finances and strong franchises, buying only the few whose stocks traded below their intrinsic values. Further, Ruane wasn't afraid to buck traditional money management trends when necessary. For example, while many managers were scrambling to chase hot stocks to fend off underperformance, Ruane's fund would often sit on a pile of cash when he believed stock prices were too high. This strategy certainly served shareholders well over time.

Ruane may have sat on the sidelines when stocks were overheated, but when he believed strongly in a stock, he was willing to bet big. For example, Berkshire Hathaway at times made up around 30% of the fund's assets. Other companies also often made up a big piece of the Sequoia pie. Ruane was usually comfortable with these large positions because of the wide margin of safety he required before investing. Even if things turned bad temporarily, the margin usually acted as a cushion, preventing any significant losses--this is value investing at its best.

The Bottom Line

There are certainly other investors who deserve a spot in the Investor's Hall of Fame; however, the common threads remain the same. Each of the investors we've mentioned, and several others, are not afraid to challenge the conventional wisdoms of investing. Each looks for solid companies that have strong competitive advantages and looks to invest in these companies for a long period of time. And of course, the price they pay for their investments matters. In our opinion, these stock-pickers are on to something.

509: 20 Stock-Investing Tips

Introduction

Here at Morningstar, our stock analyst staff has nearly a thousand years of collective investment experience. In this final lesson of the stocks Investing Classroom, we've boiled down some of our most salient observations into 20 suggestions we think will make you a better stock investor.

Tips 1-5

1. Keep It Simple.

Keeping it simple in investing is not stupid. Seventeenth-century philosopher Blaise Pascal once said, "All man's miseries derive from not being able to sit quietly in a room alone." This aptly describes the investing process.

Those who trade too often, focus on irrelevant data points, or try to predict the unpredictable are likely to encounter some unpleasant surprises when investing. By keeping it simple--focusing on companies with economic moats, requiring a margin of safety when buying, and investing with a long-term horizon--you can greatly enhance your odds of success.

2. Have the Proper Expectations.

Are you getting into stocks with the expectation that quick riches soon await? Hate to be a wet blanket, but unless you are extremely lucky, you will not double your money in the next year investing in stocks. Such returns generally cannot be achieved unless you take on a great deal of risk by, for instance, buying extensively on margin or taking a flier on a chancy security. At this point, you have crossed the line from investing into speculating.

Though stocks have historically been the highest-return asset class, this still means returns in the 10%-12% range. These returns have also come with a great deal of volatility. (See Lesson 103 for more.) If you don't have the proper expectations for the returns and volatility you will experience when investing in stocks, irrational behavior--taking on exorbitant risk in get-rich-quick strategies, trading too much, swearing off stocks forever because of a short-term loss--may ensue.

3. Be Prepared to Hold for a Long Time.

In the short term, stocks tend to be volatile, bouncing around every which way on the back of Mr. Market's knee-jerk reactions to news as it hits. Trying to predict the market's short-term movements is not only impossible, it's maddening. It is helpful to remember what Benjamin Graham said: In the short run, the market is like a voting machine--tallying up which firms are popular and unpopular. But in the long run, the market is like a weighing machine--assessing the substance of a company.

Yet all too many investors are still focused on the popularity contests that happen every day, and then grow frustrated as the stocks of their companies--which may have sound and growing businesses--do not move. Be patient, and keep your focus on a company's fundamental performance. In time, the market will recognize and properly value the cash flows that your businesses produce.

4. Tune Out the Noise.

There are many media outlets competing for investors' attention, and most of them center on presenting and justifying daily price movements of various markets. This means lots of prices--stock prices, oil prices, money prices, frozen orange juice concentrate prices--accompanied by lots of guesses about why prices changed.

Unfortunately, the price changes rarely represent any real change in value. Rather, they merely represent volatility, which is inherent to any open market. Tuning out this noise will not only give you more time, it will help you focus on what's important to your investing success--the performance of the companies you own.
Likewise, just as you won't become a better baseball player by just staring at statistical sheets, your investing skills will not improve by only looking at stock prices or charts. Athletes improve by practicing and hitting the gym; investors improve by getting to know more about their companies and the world around them.

5. Behave Like an Owner.

We'll say it again--stocks are not merely things to be traded, they represent ownership interests in companies. If you are buying businesses, it makes sense to act like a business owner. This means reading and analyzing financial statements on a regular basis, weighing the competitive strengths of businesses, making predictions about future trends, as well as having conviction and not acting impulsively.

Tips 6-10

6. Buy Low, Sell High.

If you let stock prices alone guide your buy and sell decisions, you are letting the tail wag the dog. It's frightening how many people will buy stocks just because they've recently risen, and those same people will sell when stocks have recently performed poorly. Wakeup call: When stocks have fallen, they are low, and that is generally the time to buy! Similarly, when they have skyrocketed, they are high, and that is generally the time to sell! Don't let fear (when stocks have fallen) or greed (when stocks have risen) take over your decision making.

7. Watch Where You Anchor.

If you read Lesson 407 on behavioral finance, you are familiar with the concept of anchoring, or mentally clinging to a specific reference point. Unfortunately, many people anchor on the price they paid for a stock, and gauge their own performance (and that of their companies) relative to this number.
Remember, stocks are priced and eventually weighed on the estimated value of future cash flows businesses will produce. Focus on this. If you focus on what you paid for a stock, you are focused on an irrelevant data point from the past. Be careful where you place your anchors.

8. Remember that Economics Usually Trumps Management Competence.

You can be a great racecar driver, but if your car only has half the horsepower as the rest of the field, you are not going to win. Likewise, the best skipper in the world will not be able to effectively guide a ship across the ocean if the hull has a hole and the rudder is broken.
Also keep in mind that management can (for better or for worse) change quickly, while the economics of a business are usually much more static. Given the choice between a wide-moat, cash-cow business with mediocre management and a no-moat, terrible-return businesses with bright management, take the former.

9. Be Careful of Snakes.

Though the economics of a business is key, the stewards of a company's capital are still important. Even wide-moat businesses can be poor investments if snakes are in control. If you find a company that has management practices or compensation that makes your stomach turn, watch out.

When weighing management, it is helpful to remember the parable of the snake. Late one winter evening, a man came across a snake on the path. The snake asked, "Will you please help me, sir? I am cold, hungry and will surely die if left alone." The man replied, "But you are a snake, and you will surely bite me!" The snake replied, "Please, I am desperate, and I promise not to bite you."

So the man thought about it, and decided to take the snake home. The man warmed the snake up by the fire and prepared some food for the snake. After they enjoyed a meal together, the snake suddenly bit the man. The man asked, "Why did you bite me? I saved your life and showed you much generosity!" The snake simply replied, "You knew I was a snake when you picked me up."

10. Bear in Mind that Past Trends Often Continue.

One of the most often heard disclaimers in the financial world is, "Past performance is no guarantee of future results." While this is indeed true, past performance is still a pretty darn good indicator of how people will perform again in the future. This applies not just to investment managers, but company managers as well. Great managers often find new business opportunities in unexpected places. If a company has a strong record of entering and profitably expanding new lines of business, make sure to consider this when valuing the firm. Don't be afraid to stick with winning managers.

Tips 11-15

11. Prepare for the Situation to Proceed Faster than You Think.

Most deteriorating businesses will do so faster than you anticipate. Be very wary of value traps, or companies that look cheap but are generating little or no economic value. On the other hand, strong businesses with solid competitive advantages will often exceed your expectations. Have a very wide margin of safety with a troubled business, but do not be afraid to have a much smaller margin of safety for a wonderful business with a shareholder-friendly management team.

12. Expect Surprises to Repeat.

The first big positive surprise from a company is unlikely to be the last. Ditto the first big negative surprise. Remember the "cockroach theory." Namely, the first cockroach you see is probably not the only one around; there are likely scores more that you can't see.

13. Don't Be Stubborn.

David St. Hubbins memorably said in the movie This is Spinal Tap, "It's such a fine line between stupid and clever." In investing, the line between being patient and being stubborn is even finer, unfortunately.

Patience comes from watching companies rather than stock prices, and letting your investment theses play out. If a stock you recently bought has fallen, but nothing has changed with the company, patience will likely pay off. However, if you find yourself constantly discounting bad news or downplaying the importance of deteriorating financials, you might be crossing that fine line into stubborn territory. Being stubborn in investing can be expensive.

Always ask yourself, "What is this business worth now? If I didn't already own it, would I buy it today?" Honestly and correctly answering these questions will not only help you be patient when patience is needed, but it will also greatly help you with your selling decisions.

14. Listen to Your Gut.

Any valuation model you may create for a company is only as good as the assumptions about the future that are put into it. If the output of a model does not make sense, then it's worthwhile to double-check your projections and calculations. Use DCF valuation models (or any other valuation models) as guides, not oracles.

15. Know Your Friends, and Your Enemies.

What's the short interest in a stock you are interested in? What mutual funds own the company, and what is the record of those fund managers? Does company management have "skin in the game" via a meaningful ownership stake? Have company insiders been selling or buying? At the margin, these are valuable pieces of collateral evidence for your investment thesis on a company.

Tips 16-20

16. Recognize the Signs of a Top.

Whether it is tulip bulbs in 17th century Holland, gold in 1849, or Beanie Babies and Internet stocks in the 1990s, any time a crowd has unanimously agreed that a certain investment is a "can't lose" opportunity, you are probably best off to avoid that investment. The tide is likely to soon turn. Also, when you see people making investments that they have no business making (think bellboys giving tips on bonds, auto mechanics day-trading stocks in their shops, or successful doctors giving up medicine to "flip" real estate), that's also a sign to search for the exits.

17. Look for Quality.

If you focus your attention on companies that have wide economic moats, you will find firms that are virtually certain to have higher earnings five or 10 years from now. You want to make sure that you focus your attention on companies that increase the intrinsic value of their shares over time. These afford you the luxury of being patient and holding for a long time. Otherwise, you are just playing a game of chicken with the stock market.

18. Don't Buy Without Value.

The difference between a great company and a great investment is the price you pay. There were many fantastic businesses around in 2000, but very few of them were attractively priced at the time. Finding great companies is only half the equation in picking stocks; figuring out an appropriate price to pay is just as important to your investment success.

19. Always Have a Margin of Safety.
Unless you unlock the secret to time-travel, you will never escape the inherent unpredictability of the future. This is why it is key to always have a margin of safety built in to any stock purchase you may make--you will be partially protected if your projections about the future don't exactly pan out the way you expected.
As you have seen in recent lessons, having a margin of safety is a recurring theme among several great investors. This is no accident; margin of safety really is that important.
20. Think Independently.
Another common characteristic you will find in the next section is that great investors are willing to go against the grain. You should find zero comfort in relying on the advice of others and putting your money where everyone else is investing. Quite simply, it pays to go against the crowd, because the crowd is often wrong.
Also remember that successful investing is more about having the proper temperament than it is about having exceptional intelligence. If you can keep your head while everyone else is losing theirs, you will be well ahead of the game--able to buy at the bottom, and sell at the top.

The Bottom Line

We've distilled a lot of information and collective wisdom into these 20 tips, most of which we have touched on in greater depth elsewhere in this Investing Classroom series. We firmly believe that if you heed the advice contained here, you will make better decisions when buying and selling your stocks.

Funds Curriculum

Funds100

101: What Is a Mutual Fund?

Introduction

Buying a mutual fund is a lot like going in on a group gift or joining a co-op--with people you'll never meet. Mutual funds allow a group of investors to combine their cash and invest it. By pooling their money together, mutual fund investors can sample a broader range of stocks or bonds than they could if they were trying to buy the stocks and bonds on their own.

The Mechanics

Many people think of mutual funds as "products." But when you buy a mutual fund, you're actually buying an ownership stake in a corporation that in turn hires a money manager to invest its money. The price of a single ownership stake in a fund is called its net asset value, or NAV. Invest $1,000 in a fund with an NAV of $118.74, for example, and you will get 8.42 shares. ($1,000 / $118.74 = 8.42.)

The fund manager combines your money with that of other investors. Taken altogether, those investments are called the fund's assets. The fund manager invests the fund's assets, typically by buying stocks, bonds, or a combination of the two. (Some funds buy more complicated security types.) These stocks or bonds are often referred to as a fund's "holdings" and all of a fund's holdings together are its "portfolio."

A fund's type depends on the kinds of securities it holds. For example, a small-company stock fund invests in the stocks of small companies. What you get as an investor or shareholder is a portion of that portfolio. Regardless of how much or how little you invest, your shares are the portfolio in miniature.

For example, Vanguard 500 Index's three largest holdings are ExxonMobil XOM (3.45% of its portfolio as of March 31, 2011), Apple AAPL (2.65%), and Chevron CVX (1.78%). A $1,000 investment in that fund means that you own about $34.50 of ExxonMobil, $26.50 of Apple, and $17.80 of Chevron. In fact, you own all 500 stocks in the fund's portfolio.

The Benefits

Mutual funds offer some notable benefits to investors.

1. They don't demand large up-front investments.

If you had just $1,000 to invest, it would be difficult for you to assemble a varied basket of stocks or bonds on your own. For example, with $1,000, you could buy one share of stock from the largest U.S. company, then one from the next largest, and so on, but it's likely that you'd run out of money sometime before purchasing your 20th stock.

If you bought a mutual fund, though, you would be able to sample many more types of stocks or bonds with that same $1,000. You can make an initial investment in several funds with just $1,000 in hand; $2,500 will get you into many more funds. If you invest through an Individual Retirement Account, you can often get your foot in the door with even less than $1,000. You can even buy some funds for as little as $50 per month if you agree to invest a certain dollar amount each month. (We'll cover different investment methods in an upcoming lesson.)

2. They're easy to buy and sell.

Whether you're investing on your own or hiring a broker or financial planner to do it for you, funds are easy to buy. Once a fund company has your money, it often takes just a phone call or mouse click to buy shares in a fund. Of course, there are exceptions: Closed funds, for example, no longer accept money from new shareholders.

By the same token, it's also easy to sell a fund. Unlike many other security types, such as individual stocks, you don't need to find a buyer when it's time to unload your shares. Instead, the vast majority of mutual funds offer daily redemptions, meaning that the fund company will give you cash whenever you're ready to sell. Investors who own closed funds can also sell at any time.

3. They're regulated.

Mutual fund managers can't take your money and head for some remote island somewhere. Security exists through regulation set by the Investment Company Act of 1940. After the stock-market madness of the two decades prior to 1940, which revealed some big investors' tendencies to take advantage of small investors (to put it nicely), the government stepped in to put safeguards in place.

Thanks to the Investment Company Act of 1940 (often called "the '40 Act"), your mutual fund is actually regulated investment company (regulated by the Securities & Exchange Commission) and you, as a mutual fund investor, are an owner of that company. As with other types of companies, mutual funds have boards of directors that represent the fund's shareholders. Among other duties, the board is charged with ensuring that the best available managers are running the fund and that shareholders aren't overpaying for the managers' services. For example, the board of directors at Fidelity Magellan FMAGX has hired Fidelity to run the fund on behalf of shareholders.

The fact that mutual funds are regulated shouldn't give investors a false sense of security, however. Mutual funds are not insured or guaranteed. You can lose money in a mutual fund, because a fund's value is based on the value of all of its portfolio holdings. If the holdings lose value, so will the fund. The odds that you will lose all of your money in a mutual fund are very slim, though--all of the stocks or bonds in the portfolio would have to go belly-up for that to happen. And history suggests that such a mass implosion is unlikely in the vast majority of fund types.

4. They're professionally managed.

If you plan to buy individual stocks and bonds, you need to know how to read a company's cash-flow statement or assess the likelihood that a given company will fail to meet its debt obligations. Such in-depth financial knowledge is not required to invest in a mutual fund, however. While mutual fund investors should have a basic understanding of how the stock and bond markets work, you pay your fund managers to select individual securities for you.

Still, mutual funds are not fairy-tale investments. As you will learn in later sessions, some funds are expensive and others perform poorly. But overall, mutual funds are good investments for those who don't have the money, time, or interest necessary to compile a collection of securities on their own.

102: Mutual Funds and NAVs

Introduction

In the previous lesson, we examined the mutual fund's NAV, its net asset value (or price per share). NAVs seem similar to stock prices; after all, both represent the price of one share of an investment. Both appear in newspapers and on financial Web sites. But that's where the similarities between NAVs and stock prices end.

Calculating the NAV

A mutual fund calculates its NAV by adding up the current value of all the stocks, bonds, and other securities (including cash) in its portfolio, subtracting the manager's salary and other operating expenses, and then dividing that figure by the fund's total number of shares. For example, a fund with 500,000 shares that owns $9 million in stocks and $1 million in cash has an NAV of $20.

So Alike but So Very Different

NAVs and stock prices differ in five important ways.

Difference One. Stock prices change throughout the trading day, but mutual fund NAVs are calculated only once each day, based on the value of their stocks or bonds at the time the market closes. When you purchase a mutual fund, you buy shares at the NAV as of that day's close. As a result, you don't necessarily know the exact NAV of the fund at the time you put in your order to buy or sell. If you place an order early in a given day, you're likely to get that day's closing price for the fund. If you make your order later in the day or after trading has ended, you'll get the following day's closing price.

Difference Two. Stock investors typically specify how many shares they'd like to buy, and buy shares of a given stock in even lots, such as 50 shares of Coca-Cola or 100 shares of Microsoft. By contrast, most fund investors purchase funds in dollar amounts rather than share amounts. As we noted in Lesson 101, fund companies willingly issue fractional shares. For example, if you have $1,250 that you'd like to put into a fund with an NAV of $14, you'll get exactly 89.286 shares.

Difference Three. Stocks have a fixed number of shares available. To change its number of shares, a company can either issue new shares or buy back its own shares in the market. By contrast, mutual funds generally have an unlimited number of shares, and the number changes on a daily basis, depending on how many shares investors buy and sell that day.

Difference Four. You can determine whether a stock is a bargain or not by its current price relative to a "fair value" price, based on such information as earnings estimates or cash flows. (This process is known as "valuing" a stock.) With mutual funds, however, NAV is tied to the current value of the fund's underlying holdings. Calculating a fair price for an entire mutual fund's portfolio, while theoretically possible, would be a cumbersome process, particularly when you consider that many funds hold well more than 100 stocks or bonds.

Difference Five. You can often use changes in a stock's price to gauge how well a stock is performing. Mutual funds, however, distribute any income or capital gains they realize to shareholders as dividends, which, in turn, causes their NAVs to fluctuate. Unless you account for such distributions, you could be underestimating a fund's actual performance by looking solely at its NAV. To accurately gauge a fund's performance, you need to examine its total return, which takes into account both the appreciation of the fund's holdings as well as any distributions the fund has paid out. (We'll explore this topic in our next lesson.)

Uses of NAV

After learning a bit more about NAVs, you may be thinking, "What the heck *can* I use NAV for?" Well, NAVs do provide you with some idea of what your investment is worth each day. And because funds calculate daily NAVs, investors can buy and sell each day. Daily access to NAVs also reassures you that your investment is being watched over, valued, and reported on.

103: Understanding Total Return

Introduction

There's a relationship between net asset value (NAV), yield, and total return, but it's complicated. Did you know that a fund's NAV can fall and you can still make money? Or that a fund can yield less than 1%—in fact, it can yield nothing at all—and yet its returns can still be at the top of the charts?

Before we go further, though, let's review the two key components of total return. You can earn money from your investment in two ways: income (often called yield) and capital appreciation.

Income and Capital Appreciation

Income. A fund's income payout, or yield, tends to interest those investors who need regular income, because they don't necessarily have to tap into their principal for their day-to-day living expenses. Savings accounts and cds pay income, but so do most bonds and some stocks. If you own a mutual fund that buys income-paying stocks or bonds, the manager passes on any income to shareholders (after taking expenses off the top, of course).

Yield can be calculated in a variety of ways. Morningstar calculates this figure by summing the income distributions over the trailing 12 months and dividing that by the sum of the last month's ending NAV plus any capital gains distributed over the 12-month period. (See more on capital gains distributions later in this lesson.)

Capital Appreciation. The second key way you can gain from a fund is through capital appreciation—that is, if one or more of your fund's holdings is selling for a higher price than it was when the manager purchased it. If the manager sells the new, pricier stock or bond, the fund realizes what is called a capital gain. And even if the manager simply hangs on to the stock or bond that has gained in value, the fund will enjoy capital appreciation; in other words, its NAV will increase. That's because the NAV is a reflection of the value of all of the securities in a fund at a given point in time.

Distributions

As counterintuitive as it may seem, looking at a fund's NAV in isolation isn't always the best way to check up on its performance. That's because the NAV is vulnerable to changes that don't necessarily affect the true value of the fund.

For example, a fund's NAV will change whenever a fund makes a payment to its shareholders, otherwise known as a distribution. By law, mutual funds must distribute any income they have received from their stocks or bonds, as well as any capital gains they have realized from their holdings. (A fund "realizes" a capital gain when it sells a stock or bond for a higher price than when it was purchased.) But whenever a fund passes along either income or capital gains to shareholders, its NAV drops. If a fund with an NAV of $10 makes a $4 distribution, its NAV slips to $6.

Despite the shrunken NAV, shareholders are none the poorer. They still have $10: $6 in the fund and another $4 in cash. Unless they need the $4 in income to spend, most investors will reinvest their distributions back into the fund; in other words, they instruct the fund company to use that cash to buy new shares of the fund. Most total-return numbers reported in newspapers or on the Web, including those used by Morningstar, assume that you reinvest your distributions.

Back to Total Return

Total return encompasses everything we have discussed thus far: changes in NAV caused by appreciation or depreciation of the underlying portfolio, payment of any income (yield) or capital-gains distributions, and reinvestment of those distributions.

Here's how it works. Say you buy 10 shares of Fund A at $9 per share. After a few months, the fund's NAV rises to $12. The fund sells some of its winning stocks and makes a $2 per-share capital-gains distribution. It makes no income distributions. As a result, the fund's NAV falls to $10. Your distribution of $20 ($2 x 10 shares) is used to buy two more shares at the new $10 price. Finally, say the fund's NAV rises again, this time to $11 share.

So what is the yield on this investment? Zero, because it has not paid out any income. What about your overall return? Well, if you used only your NAV to calculate return, your shares would be worth the fund's final $11 NAV times your initial 10 shares, or $110. That's an NAV return of 22% on your original investment.

But that figure would be inaccurate, because you need to factor in the capital-gains distribution that you reinvested. Add that back in and you'll find your investment is actually worth that $110 plus the $22 your two new shares are worth, for a grand total of $132. Your total return is really 47%. Not too shabby.

104: Mutual Funds and Taxes

Introduction

Thus far, we have lauded mutual funds' virtues. They don't require a large up-front investment. They're professionally managed. They're easy to buy and sell. And if you shop carefully, you can limit how much you have to pay to own them.

But there is one thing that mutual funds may not be: tax-friendly. In the following section, we'll explore reasons for this weakness and examine the ways in which you can minimize its impact on your bottom line.

Funds, Capital Gains, and Income

As we've already noted, mutual funds must pass along to their shareholders any realized capital gains that are not offset by realized losses by the end of their accounting year. Mutual fund managers "realize" a capital gain whenever they sell a security for more money than they paid for it. Conversely, they realize a loss when they sell a security for less than the purchase price. If gains outweigh losses, the managers must distribute the difference to fund shareholders.

Fund managers must also distribute any income that their securities generate. Bond funds typically pay out yields, but so do some stock funds if the stocks they own pay dividends.

As you may recall, when paying out capital gains or income, funds multiply the number of shares you own by the per-share distribution amount. You'll receive a check in the mail for the total amount of the distribution. Or, if you choose to reinvest all distributions, the fund will instead use the money to buy more shares of the fund for you. After the distribution is made, the fund's NAV will drop by the same amount as the distribution. Fund companies often make capital-gains distributions in December, but they can happen any time during the year.

Distributions and Taxes

Unless you own your mutual fund through a 401(k) plan, an IRA, or some other type of tax-deferred account, you'll owe taxes on that distribution, even if you reinvested it (used the distribution to buy more shares of the fund). That is particularly painful if you have just purchased the fund, because you are paying taxes for gains you didn't get.

Let's use an example to illustrate. Suppose you invest $250 in Fund D on Monday. The fund's NAV is $25, so you are able to buy 10 shares. If the fund makes a $5-per-share distribution on Tuesday (which means you have been handed a $50 distribution), and you reinvest, your investment is still worth the same $250:

Monday 10.0 shares @ $25 = $250

Tuesday 12.5 shares @ $20 = $250

The trouble is, you now owe capital-gains taxes on that $50 distribution. The current long-term capital-gains tax rate is 15% for anyone in the 25% or higher bracket and 5% for those in 10% to 15% brackets. If you're in the higher tax bracket, you'd have to pay $7.50 in taxes on that long-term capital gain. (Shorter-term capital gains are taxed at a higher rate.)

If you immediately sold the fund, the whole thing would be a wash, as the capital gains would be offset by a capital loss. The distribution lowers the NAV, so the amount of taxes you would pay would be lower than if you sold the fund years from now. Still, most investors would rather pay taxes later than sooner. And we're guessing that if you just invested in the fund, you weren't planning to turn around and sell it right away.

Funds occasionally can add insult to injury by paying out a large capital-gains distribution in a year in which the fund lost money. In other words, you can lose money in a fund and still have to pay taxes. In 2000, for example, many technology funds made big capital-gains distributions, even though almost all of them were in the red for the year. Although the funds lost money during the year, they sold some stocks bought at lower prices and had to pay out capital-gains as a result. Technology-fund investors lost money to both the market and Uncle Sam that year.

The same thing happened to some funds in 2008. If a fund sold stocks that year (particularly earlier in the year before the market freefall) that had been purchased at lower prices, and could not offset those gains with any realized losses, then investors would have been on the hook for fund capital gains taxes in 2008--one of the worst years for the market in recent history.

Avoiding Overtaxation

Alleviate tax headaches by following these tips:

Tip One. Ask a fund company if a distribution is imminent before buying a fund, especially if you are investing late in the calendar year. (Funds often make capital-gains distributions in December.) Find out if the fund has tax-loss carryforwards, that is, if it has booked capital losses in previous years that can be used to offset capital gains in future years. That means the fund could be tax-friendly in the future.

Tip Two. Place tax-inefficient funds in tax-deferred accounts, such as IRAs or 401(k)s. If a fund has a turnover rate of 100% or more, it's a good indication that limiting the tax collector's cut isn't one of the manager's objectives.

Tip Three. Search for extremely low-turnover funds, in other words, funds in which the manager isn't doing a lot of buying and selling and therefore isn't realizing a lot of taxable capital gains. A fund with a turnover rate of 50% isn't four times more tax-efficient than a fund with a 200% turnover rate. But funds with turnover ratios below 10% tend to be tax-efficient. You can find turnover rates on Morningstar.com, as well as in your fund's annual report.

Tip Four. Favor funds run by managers who have their own wealth invested in their funds, such as Dodge & Cox Stock DODGX and American Funds Growth Fund of America AGTHX. These managers are likely to be tax conscious because at least some of the money they have invested in their funds is in taxable accounts.

Fund companies now have to report to the SEC annually how much managers have invested in their funds. Morningstar tracks and reports on this data in our mutual fund Stewardship Grades, available on Morningstar.com.

Tip Five. If you want to buy a bond fund and are in a higher tax bracket, consider municipal-bond funds. Income from these funds is usually tax-exempt.

Tip Six. Consider tax-managed funds. These funds use a series of strategies to limit their taxable distributions. Vanguard, Fidelity, and T. Rowe Price all offer tax-managed funds.

Even following these tips, it can be difficult to find a fund that's consistently tax-efficient. But don't get so caught up in tax considerations that you overlook good performance. After all, a tax-efficient fund that returns 7% after taxes is no match for a tax-inefficient fund that nets 15% after Uncle Sam takes his share. (You can find after-tax returns in our Fund Reports on Morningstar.com.) In the end, it is what you keep, not what you give away, that counts.

105: How to Purchase a Fund

Introduction

Investing in a mutual fund may seem tremendously overwhelming at first. Instead of choosing just one company and one stock (one price, one ticker, one exchange, etc.), you're suddenly charged with committing to a whole portfolio, choosing an investment approach, monitoring someone else's record, and getting to know a whole new vocabulary. Before you get mired in those details, you need to decide whether you want some help choosing your funds or whether you'd rather do it on your own. Like most everything in life, both paths have benefits and drawbacks.

Want Some Help?

Maybe you don't have the time or interest to design your own mutual fund portfolio. Fine! All sorts of financial advisors, from planners to brokers, can help you pull together a financial plan and a basket of funds that can help you achieve your goals.

Of course, this service isn't free. If you work with an advisor, you might pay an up-front fee of some sort, perhaps a percentage of your investment money. Or your advisor may forgo a fee and earn a commission by investing your money in what are called load funds. A load, or sales charge, is deducted from your investment when you buy or sell shares, depending on the fee structure. This load is used to compensate the advisor for selling you the fund. (Note that the load does not go to the fund manager; he or she receives another fee, called the management fee, which we discussed in Lesson 107.) Some advisors are fee- and commission-based, which means they'll charge you some combination of the two.

The advantages of working with an advisor are clear: You have someone helping you make financial decisions, taking care of paperwork for you, monitoring fund performance, and forcing you to stick to your investment plan for tomorrow instead of cashing in for an around-the-world jaunt today.

The drawbacks include cost, of course. There's also the challenge of finding an advisor with whom you work well, someone you can trust to put your interests before his or her own, and who will turn your financial dreams into realities, not nightmares. Further, you want to find an advisor who is willing to take the time to teach you about investing and about what he or she is doing with your portfolio. It's your money, after all, and you need to understand why it's invested the way it is.

Go-It-Alone, Version 1

Those with the time and interest to learn about investing and to monitor their own portfolios can invest in funds without the help of an advisor. If you choose to invest on your own, focus on no-load funds, which do not charge any sales commissions. Why pay a commission if you're not getting any investment advice in return?

Go-it-alone types can buy funds directly from no-load fund groups (also called fund families) such as Fidelity, Vanguard, and T. Rowe Price. (Fidelity runs load funds, too.) To buy a fund from a fund family, request an application from the fund group by calling its 800 number. You can find these numbers on Morningstar.com's fund data reports. Most fund families provide prospectuses and applications on their Web sites, as well.

New investors who plan to buy more than one fund might choose one of the larger no-load families. Why? Because these families are diversified: They offer stock and bond funds, domestic and international funds, and large- and small-company funds. Take it from us: Most fund investors eventually own more than one fund because of the need for diversification; by investing with one of the major fund families, you can easily transfer assets from one fund to another.

Investing with a single fund family—even a large one—can be limiting, though. For example, some families don't offer a wide array of funds. Take PIMCO, for example. The group specializes in fixed-income investing, but the company offers few stock funds.

Another way to diversify, then, is to invest with several fund families, a series of specialists who do one thing particularly well. You could buy a large-company growth fund from, say, Jensen, a small-company fund from Royce Funds, a bond fund from PIMCO, and an international fund from Tweedy, Browne. But that would mean a lot of paperwork; each family would send you separate account and tax statements. If you own more than a few funds, the paperwork can become maddening.

Go-It-Alone, Version 2

Do-it-yourselfers who hate paperwork but want a lot of choices shouldn't despair: No-transaction fee networks, also known as "supermarkets," are a popular solution. If you invest through a major supermarket, you can choose from thousands of funds offered by dozens of fund families—and there's no direct cost to you. So you could buy one fund from, say, Jensen, another from Royce, yet another from PIMCO, and one from Tweedy, Browne and receive all of your information about performance, taxes, etc., on one consolidated statement.

There are a number of fund supermarkets today, and more and more fund families are getting into the act with supermarkets that include funds outside of their own families.

What could the drawbacks here possibly be? Surprisingly, one drawback is cost. While it is true that fund supermarkets do not charge you when you invest in a fund through their programs, they charge the fund companies to be included in their programs. That charge ranges from 0.25% to 0.40% of assets per year. As any student of economics knows, that fee acts a whole lot like a tax and it's passed right along to shareholders—that's right, to you—as part of a fund's expense ratio, the fee the fund charges you each year for managing your money. The real kicker is that shareholders are paying these fees whether they buy the funds through the fund supermarket or directly from the fund family.

Some observers, including Vanguard founder Jack Bogle, also suggest that fund supermarkets encourage rapid trading among funds. Most supermarkets offer online trading, and with so many funds from so many families investing in so many different things to choose from, the temptation is great. But trading too much can hurt your portfolio's overall performance. (We'll tackle that subject in depth in a later lesson.)

106: Methods for Investing in Mutual Funds

Introduction

It's hard enough to decide whether or not to invest with an advisor and to commit to a mutual fund style or portfolio goal. In addition, you have to decide how much you want to invest in a fund, and when.

If you're fortunate enough to have money to invest, you'll need to choose one of the following approaches:
1. Wait to invest your jackpot until your favorite fund cools off or heats up.
2. Invest the entire wad immediately.
3. Put a little bit to work at a time.

You should be aware that the route you choose can have a profound impact on your return.

Waiting, or Market-Timing

Let's start with the first route, holding off on an investment until you sense the time is right. That can mean when the fund's performance falls, when it rises, or when the moon is full on an odd-numbered day of the week in a month beginning with *J*. Such a strategy is often called market-timing.

As you can probably sense, we're not keen on market-timing. Evidence suggests that it just doesn't work. Predicting the future has never been easy—just ask anyone who has had his or her fortune told. Further, studies from Morningstar have shown that investors' timing often leaves something to be desired—they buy in when a fund is ready to cool off and sell when its performance is ready to pick up. And even if you make the "right" market call, the mutual fund world usually doesn't reward you in a dramatic enough way to make the risk worth it.

Chalk it up to the cruelty of mathematics, as illustrated in an experiment conducted by Morningstar. We went back 20 years and assumed that in each quarter, an investor chose to own all stocks (represented by the S&P 500) or all cash (in our experiment, Treasury bills). A market-timer who picked the better performer half the time still ended up way behind the market after two decades. We found that not until the timer's hit rate reached 65% did he beat the S&P 500. In other words, the market-timer had to be right two out of three times to justify the effort.

This is largely because over time, the stock market has notched higher gains than holding cash. Botching a market-timing decision usually means sacrificing good performance. Worse still, missing a period of strong returns means giving up the chance to make even more on those gains, thanks to the effects of compounding. (That is, each year you earn returns on the returns you earned in prior years, as well as on your initial investment.)

Investing All At Once, or Lump-Sum Investing

If market-timing is a losing strategy, what about the opposite: putting all the money to work at once? Many financial advisors recommend this approach above the others, because the market goes up more often than it goes down.

Here's an example. Say you decide to invest an amount of $10,000 all at once in one fund while your friend, who also happens to have $10,000 to invest, instead places $2,000 per month in the same fund over the next five months. The fund consistently rises in value during that time. The chart below illustrates what would happen to the two investments.

Fund Value Increases

Month	Your Investment	Your Friend's Investment
1	5,556 shares at $1.80 per share	1,111 shares at $1.80 per share
2	N/A	1,099 shares at $1.82 per share
3	N/A	1,081 shares at $1.85 per share
4	N/A	1,070 shares at $1.87 per share
5	N/A	1,053 shares at $1.90 per share

Total Shares	5,556	5,414
Ending Value	$10,556	$10,287

You would end up ahead, because you own more shares at the end of the five-month period. And you own more shares because, due to the consistently rising value of the fund, your friend couldn't afford to purchase as many shares as you had purchased originally. But what happens if the value of your fund fluctuates dramatically during those five months?

Fund Value Fluctuates

Month	Your Investment	Your Friend's Investment
1	5,556 shares at $1.80 per share	1,111 shares at $1.80 per share
2	N/A	1,667 shares at $1.20 per share
3	N/A	1,081 shares at $1.85 per share
4	N/A	1,481 shares at $1.35 per share
5	N/A	1,053 shares at $1.90 per share
Total Shares	5,556	6,393
Ending Value	$10,556	$12,147

In this case, your friend ends up in the lead. By investing a fixed dollar amount in the fund every month, your friend bought more shares when the price was low, fewer shares when the price was high, and ended up with more shares after five months.

To be sure, such drastic fluctuations in NAV are rare. Because the stock market generally goes up more often than it goes down, most investors will receive the best long-term results by lump-sum investing.

Why Dollar-Cost Average?

Investing in dribs and drabs may not be the path to greater return, but we still think dollar-cost averaging, or investing a set amount on a regular basis, is a great method of investing. Incidentally, if you contribute to a 401(k) plan at work, you're already investing this way. Our argument for dollar-cost averaging has a couple of dimensions. First, dollar-cost averaging can reduce risk. If your mutual fund declines in value, the worth of your investment is less, even though you still own the same number of shares. In the same way that dollar-cost averaging will net you more shares in a declining market, it can curtail your losses as the fund goes down. The chart below illustrates this point.

Fund Value Decreases

Month	Your Investment	Your Friend's Investment
1	5,556 shares at $1.80 per share	1,111 shares at $1.80 per share
2	N/A	1,250 shares at $1.60 per share
3	N/A	1,379 shares at $1.45 per share
4	N/A	1,538 shares at $1.30 per share
5	N/A	1,667 shares at $1.20 per share
Total Shares	5,556	6,945
Ending Value	$6,667	$8,334

In this example, both you and your friend lost money (remember, you each started with $10,000), but your friend lost less by dollar-cost averaging. She had cash sitting on the sidelines that did not lose value. And when the fund rebounds, your friend also will be in better shape because she owns more shares of the fund than you do.

The second reason we like dollar-cost averaging is that it instills discipline. Investors often chase past returns, buying funds after a hot performance streak. And they'll sell funds when returns slow or decline. Bad idea: That's a form of market-timing. But dollar-cost averaging prevents you from market-timing, because you're buying all the time. Heck, you may even forget that you're investing if you set up an automatic-investment plan with a mutual fund family.

Which leads us to the final reason we love dollar-cost averaging: It's a crafty way to invest in some great mutual funds that might be inaccessible otherwise. Many fund companies will waive their minimum initial investment requirement if you agree to set up an automatic-investment plan and invest a little each month or quarter.

Decision Time

While market-timing is out of the question for all investors (but some still try), whether you invest all at once or a little at a time depends on how much time you have to invest and whether your primary goal is maximizing return or minimizing risk.

The shorter your time horizon, the greater chance you take of losing money with a lump-sum investment. However, if you had $20,000 to invest, it probably wouldn't make much sense to invest $1,000 per year for the next 20 years. Over long time frames, funds go up more often than they go down, and when they go down, they eventually bounce back. It is almost certain that the NAV you would pay 10 years from now would be higher than the NAV you would pay today.

We suggest combining the two strategies: Invest as much as you can today and vow to invest a little more each month or quarter. That'll keep you disciplined and have you investing right away.

107: Fund Costs

Introduction

These days, every time you purchase something, you get a detailed receipt. With a receipt, you know exactly where your money is going and just how smart—or ridiculous—your spending decisions have been.

Not so with mutual funds. As a mutual fund investor, you'll never write a check to a mutual fund for its services. That means you'll never know exactly where your money is going unless you're very, very vigilant. Any service charges for mutual funds come right off the top of your investment or straight out of your returns. Because costs are deducted this way, many investors aren't even aware of how much they're paying for their mutual funds.

Mutual fund fees can be broken down into two main categories: one-time fees and ongoing annual expenses. Not all funds charge one-time fees, but all funds charge ongoing annual fees of some sort. Return figures that you see for mutual funds in newspapers, annual reports, and financial Web sites typically don't reflect one-time fees, but ongoing expenses are almost always deducted from return figures that you see in public sources.

One-Time Fees

There are three types of one-time fees that you may pay, all of which are usually charged when you buy or sell a fund. Remember, not all funds charge these fees; to find out if a particular fund does, consult its prospectus or its Web site or call the fund's toll-free number.

1. Sales Commissions. Commissions are commonly called loads. If you have to pay a sales charge, or commission, when you purchase shares in the fund, that's known as a front-end load; a sales charge when you sell is a back-end load. (Some back-end loads phase out if you hold the fund for a certain number of years.) You might also pay a level load, or a percentage of your return each year for a series of five or so years.

Loads come directly out of your investment, effectively reducing the amount of money that you're putting to work. For example, if you made a $10,000 investment in a fund that carried a 4.5% front-end load, only $9,550 would be invested in the fund. The remaining $450 would go to the advisor or broker who sold you the fund.

Basically, loads are payment to the advisor who sells you the investment; it's his or her compensation for doling out financial advice. So if you're buying a load fund, be sure you're getting solid investment advice in return.

Front-end charges can't be more than 8.5%, and they're generally no higher than about 6%. Back-end loads often start at about 5% or 6%, and many funds reduce them each year that you leave your money in the fund. You might find that when you buy a fund, the exit fee is 5%. If you wait to sell it for four years, the fee could fall by a few percentage points. If this is the case with your fund, your broker will probably call it a contingent deferred sales fee or something like that.

2. Redemption Fees. Redemption fees differ from loads in that they are usually paid directly to the fund—in other words, they go back into the pot rather than to the broker or advisor. You may have to pay a redemption fee if you hold a fund for only a short period of time. In most cases, this time frame is less than 90 days, but it can be as long as a few years.

These fees are an attempt to discourage short-term traders from moving in and out of a fund. The fees are put in place for the protection of the shareholders and the fund managers. Why are these short-term traders (often called market-timers) bad for everyone else? Market-timers may attempt to cash out of their investments all at once. A rash of sales can force fund managers to sell securities that they don't really want to sell; after all, they have to get the cash from somewhere to meet the redemption calls. And if management has to sell securities that have gained in value, it may also pass along a taxable capital-gains distribution to shareholders who remain behind. So in a sense, redemption fees are the friend of long-term investors, because they'll never have to pay them, and the fees (in theory, at least) keep timers at arm's length.

3. Account-Maintenance Fees. Some fund companies charge account-maintenance fees, but such fees are usually for smaller accounts. Some Vanguard funds, for example, charge shareholders a $10 account-maintenance fee if their account balances dip below $10,000. Shareholders pay this fee each year until their account values rise above $10,000.

Ongoing Expenses

While the fees we've discussed so far are levied by only certain types of funds, all funds annually charge—and deduct from your return—the following fees.

1. Expense Ratio. Most fund costs are bundled into the expense ratio, which is listed in a fund's prospectus and annual report as a percentage of assets. For example, if ABC Fund has assets of $200 million and charges $2 million in expenses, it will report an expense ratio of 1%.

The expense ratio has several parts. The largest element is usually the management fee, which goes to the fund family overseeing the portfolio. There are also administrative fees, which pay for things such as mailing out all those prospectuses, annual reports, and account statements. These fees are periodically deducted from the fund's overall assets. These deductions reduce the fund's portfolio value.

The 12b-1 fee can be another large component of the expense ratio; Such fees are levied by roughly half of all funds. These fees are named after an SEC rule that allows fund companies to use portfolio assets to cover a fund's distribution and advertising costs. These expenses can be as high as 1% of assets. Fees that fund families pay to no-transaction-fee networks, which we'll learn about in a later lesson, often get charged to fund shareholders via 12b-1 fees.

2. Brokerage Costs. These costs are incurred by a fund as it buys and sells securities, in much the same way you might pay brokerage fees if you were trading stocks online. These costs are not included in the expense ratio, but instead are listed separately in a fund's annual report or statement of additional information.

This figure excludes some hard-to-pin-down expenses. For example, when a fund invests in over-the-counter stocks (typically stocks traded on the Nasdaq exchange), it doesn't pay the broker a set fee. Rather, the cost of the transaction is built into the stock price. It is a trading expense that comes out of your return but fund companies don't report it separately.

3. Interest Expense. If a fund borrows money to buy securities—not a very common practice among mutual funds—it incurs interest costs. This is particularly common in mutual funds that engage in long/short strategies. Such expenses are also taken out of the shareholders' annual return.

What's Reasonable?

As you can see, mutual funds are far from a free lunch. But you can keep more of what you earn by sticking with low-cost funds. What qualifies as low cost? That depends on how long you plan to own an investment, and what type of fund you're talking about.

When it comes to bond funds, no-load offerings with the lowest possible expense ratios are best for most investors. That's because the difference between the best- and worst-performing bond fund is pretty slim; bond-fund returns differ by just small amounts, so every dollar that goes to expenses really hurts your return. Our advice: Avoid bond funds with expense ratios above 0.60%.

On the stock side, a load fund may make a perfectly fine investment, if you're a long-term investor. But load-fund investors should look for funds with fairly low annual costs, such as those sponsored by American Funds. Their total costs (including sales fees) over a period of years are actually more moderate than those of many no-load funds.

You can find plenty of good funds investing in large-company stocks that charge less than 1% per year in expenses. As with bond funds, the range of returns doesn't vary much, so lower expenses (preferably less than 0.85%) give a fund a decided edge on the competition.

With small-company and foreign-stock funds, expect to pay closer to 1.2% annually. Fund companies contend that it takes portfolio managers and their research teams more effort—and more money—to research tiny companies and foreign firms because there isn't as much readily available information about them. Not surprisingly, these funds pass a portion of their extra costs on to you, their shareholders.

At Morningstar, we put a good deal of emphasis on mutual fund costs, not only because they're often hidden, but because we think favoring lower-cost funds is an easy way to improve your long-term results. We've found that over long time periods, lower-cost funds tend to outperform higher-cost funds. And costs are the only thing about a fund that are absolutely predictable, year in and year out.

108: Important Fund Documents, Part 1

Introduction

You've seen the advertisements in the papers ("Five Stars!") and the pundits on TV, identifying their hot new pick of the month. And you probably know one or two lucky coworkers who made a mint at some point after taking a chance on some fund or another. But you can't have missed the recent tales about the downfalls of yesterday's favorite fund shops, the management scandals, and the huge, risky bets that cost many investors their retirement dreams.

Clearly, the experience of the last five years suggests that investors need more than performance numbers and hot tips to judge a fund. Before parting with your money, you need to be able to answer questions such as: What is the fund's investment strategy? What are that strategy's risks? How much does the fund cost? How does this fit in with my goals? And who runs the thing, anyway?

In order to answer these questions you need three valuable fund documents, produced by the company running your mutual fund: the prospectus, the Statement of Additional Information, and the annual report. When you request an information kit from a fund family, you'll usually receive the prospectus and the most recent shareholder report. (Many fund companies also make these documents available on their Web sites.) These documents are packed with legal jargon, convoluted sentences, and boilerplate information in order to fulfill the Securities and Exchange Commission's disclosure requirements and to protect the funds from legal liability. The language can be tremendously intimidating and reading it is dull work. But these documents are vital for mutual fund investors.

Here's how to get what you need from the prospectus and the Statement of Additional Information. (We'll cover the annual shareholder report in our next lesson.)

The Prospectus

The prospectus tells you how to open an account (including minimum-investment requirements), how to purchase or redeem shares, and how to contact shareholder services.

It also details six aspects of the fund that you need to know about before you decide to buy shares.

1. Investment Objective. The investment objective is the mutual fund's purpose. Is the fund seeking to make money over a long-term period? Or is it trying to provide its shareholders regular income each month? If you're investing for your young child's education, you'll want the former. If you're looking for a monthly dividend check, you'll want the latter. But investment objectives are often vague. That's why you'll want to check out the next section.

2. Strategy. The prospectus also describes the types of stocks, bonds, or other securities in which the fund plans to invest. (It does *not* list the exact stocks that the fund owns, though.) Stock funds spell out what kinds of companies they look for, such as small, fast-growing firms or big, well-established corporations. Bond funds specify what sorts of bonds they generally hold, such as Treasury or corporate bonds. If the fund can invest in foreign securities, the prospectus says so. Most (but not all) restrictions placed on the fund are also mentioned here, including references to short selling, leveraged purchases, and so on.

3. Risks. This section may be the most important part of the prospectus, but it's generally written in very broad language. Every investment has risks associated with it, and a prospectus must explain these risks. For instance, a prospectus for a fund that invests in emerging markets will reveal that the fund is likely to be riskier than a fund that invests in developed countries. Bond-fund prospectuses typically discuss the credit quality of the bonds in the fund's portfolio, as well as how a change in interest rates might affect the value of its holdings.

4. Expenses. It costs money to invest in a mutual fund, and different funds have different fees. A table at the front of every prospectus makes it easy to compare the cost of one fund with another. Here, you'll find the sales commission the fund charges, if any, for buying or selling shares. The prospectus also tells you, in percentage terms, the amount deducted from the fund's return each year to pay for things such as management fees and operational costs.

5. Past Performance. We all know the fund world's catch-all phrase: "Past performance is no guarantee of future results." But a fund's record can give you an idea of how consistent its performance has been. A chart known as the "Financial Highlights" or "Per-Share Data Table" provides the fund's total return for each of the past 10 years, along with some other useful information. It also breaks out the fund's income distributions and provides the year-end NAV.

Some prospectuses include additional return information in the form of a bar chart, which illustrates the fund's calendar-year returns for the past 10 years. This chart is a good way to get a handle on the magnitude of a fund's ups and downs over time. The prospectus may also use a growth of $10,000 graph (also known as a mountain graph, because the peaks and valleys resemble the cross section of a mountain) or a table comparing the fund's performance to indexes or other benchmarks to present return information. (Unless otherwise stated, total return numbers do not take sales charges into account, but they do take into account a fund's annual expense ratio.)

6. Management. The Management section profiles the folks who will be putting your money to work. As of March 2005 funds are required to list all of their team members in their prospectuses. Consider the fund manager's tenure if it's relatively short, the fund's past record may have been achieved under someone else. Find out whether the manager has run other funds in the past. A peek at those funds could give you some clues about the manager's investment style and past success.

Statement of Additional Information

While the prospectus is packed with great information, it shouldn't be your sole source of data on a fund. A fund's Statement of Additional Information (SAI) contains more great tidbits about the fund's inner workings. You'll generally have to request this document by calling the fund company: Funds send out prospectuses and annual reports as a matter of routine, but SAIs are often considered second-tier documents

Fund families may consider SAIs secondary, but these statements usually provide far more detail than the prospectus about what the fund can and cannot invest in. Further, this document usually identifies just who represents your interests on the fund's board of directors and just how much you pay them for their efforts and how much these directors own of the fund.

Finally, you can find more details about your fund's expenses here. Shareholders in CGM Focus CGMFX wouldn't know they shelled out $24.2 million in brokerage fees in 2010 unless they had read the fund's SAI. SAIs also break down where 12b-1 fees go, if the fund charges them. (These are fees that the fund can use for marketing, rewarding brokers, and attracting more investors.) For example, Legg Mason Value Trust C (LMVTX) spent $25.3 million in connection with "share distribution and shareholder services," including broker compensation. It's your money; you should know where it's going.

109: Important Fund Documents, Part 2

Introduction

A mutual fund's shareholder report is part biography, part blueprint, and part ledger book.
A good shareholder report is like a biography in that it sets out what happened to the fund over

the past quarter, six months, or year, and why. It's like a blueprint because it sets before you all the investments stocks, bonds, and other securities that the fund has made. And it's like a ledger book because it discloses a fund's costs, profits, and many other financial facts. Mutual funds are required by the SEC to release a shareholder report at least twice a year, though some fund families publish them quarterly.

Not all of the following items are required by law to appear in a mutual fund's shareholder report. The SEC allows some of the information to be included in other documents, such as a fund's prospectus or Statement of Additional Information. However, a good report will contain all of the elements discussed below.

Letter from the President

Typically, the first item you'll find in a shareholder report is a letter from the president of the company that advises or manages your fund. The best letters will contain straightforward, useful discussions of the economic trends that have affected the markets during the past six or 12 months and provides some context for evaluating your fund. Poor letters, in contrast, will discuss anything but the current financial climate and the performance of the fund family's offerings.

Letter from the Portfolio Manager

This is a fund-specific examination of the recent performance and therefore much more important to you as a fund shareholder. Well-written shareholder letters discuss individual stocks that the fund owns and the industries in which the fund invested. A good manager letter will also explain what broad market trends might have fueled or hindered your fund's performance. Finally, most managers will give you an indication of what you can expect from the fund in the future, given an unchanged strategy.

Investors should demand a lot from shareholder letters, particularly in times of declining performance. If shareholder reports leave your questions unanswered, let your mutual fund company know. (Note: Many fund companies have begun sending out portfolio-manager letters that are separate from their shareholder reports, rather than bundling them together.)

Recent Fund Performance

The portfolio manager's report is generally followed by a discussion of recent performance. The report should compare your fund's performance to both a benchmark, such as the S&P 500 Index (the standard benchmark for large-company stock funds) or the Russell 2000 Index (for small-company funds), as well as to the average performance of funds with similar investment strategies.

When evaluating your fund's performance, be sure that the benchmark the fund chooses is appropriate for its style. For example, a technology fund shouldn't compare itself to the S&P 500 and nothing else; it should measure its performance against a technology benchmark.

In addition to benchmark comparison, the report should give you an idea of how the fund has performed over various time frames, both short and long term.

Portfolio Holdings

Funds often list the portfolio's largest holdings and provide some information about what these companies do or why the manager owns them. Some reports will also indicate, via a pie chart or table, the sectors in which the fund is heavily invested.

This general overview is complemented by a complete list of the fund's portfolio holdings including stocks, bonds, and cash as of the date of the report. These holdings are usually segmented by industry. (Foreign funds may segment by country.) While you might not recognize all the names of the stocks in the portfolio, this listing is useful if you're wondering whether the fund is holding many names in one industry or making a few large selected bets.

Footnotes

Don't forget to read the fine print. In the footnotes, you can find out if fund managers are practicing such strategies as shorting stocks or hedging exposure to foreign currency, which can significantly affect the fund's performance.

Footnotes can also provide insights into particular portfolio holdings. For instance, they may designate certain holdings as illiquid securities and 144a securities, which means they're more difficult to trade than plain common stocks.

Financial Statements

A fund's annual report concludes with its financial statements. Brace yourself: There's a lot of data here. In fact, this is where we get a lot of the data for the fund data reports shown on Morningstar.com and, if we do say so ourselves, we do a pretty good job of clarifying that data and putting it into context.

However, if raw numbers are your thing, you should take a look at the following: First, examine what's known as the fund's Selected Per-Share Data. This is usually the last page of actual information, located just before the legal discussion of accounting practices. Here you'll find the fund's NAVs, expense ratios, and portfolio turnover ratios for each of the past five years (or more). Check to see if the fund's expense ratio has gone down over time (we hope it has) and whether its turnover rate has changed much (if so, you may want to find out why).

Cost-conscious investors can check out the breakdown of fund's expenses, including management fees, under the Statement of Operations. In addition, you can find out how much in unrealized or undistributed capital gains you're facing, using the Statement of Assets and Liabilities. (A gain is unrealized when a stock has gone up but the fund hasn't sold it. As soon as the fund sells the stock, it becomes a "realized" gain, which has to be distributed to shareholders. We explored this concept in Lesson 104.)

What To Do Next

You can request a prospectus, SAI, or annual report by phone, by direct mail, and sometimes by e-mail. Many funds also make this literature available for download at their Web sites. All mutual funds file their prospectuses, shareholder reports, and SAIs with the SEC. You can view these at the SEC's Web site: www.sec.gov.

While we suggest that you begin your fund evaluation with these documents, we don't think you should stop there. Seek out third-party sources, such as Morningstar, to help put your fund into context. Compare it with other funds that have similar investment approaches. You should evaluate how its costs stack up, if its performance is competitive, and if it compensates for the risks it is taking on.

Funds200

201: Five Questions to Ask Before Buying a Mutual Fund

Introduction

You may feel intimidated by the task of picking a mutual fund. With more than 25,000 funds to choose from, it's tempting to buy a magazine or visit a Web site that will tell you exactly which funds you should buy, or to just pick the fund that's topping the performance charts.

These aren't the best ways to find the fund that will meet your goals or suit your investment personality, however. The next section will give you a better idea of how to approach the vast marketplace for mutual funds and will introduce five questions that you need to ask and answer before buying any stock fund.

1. How has it performed?
2. How risky has it been?
3. What does it own?
4. Who runs it?
5. What does it cost?

These questions form the foundation of Morningstar's approach to fund selection. We'll address these questions in depth in subsequent lessons, but here's a taste of what's to come.

How Has It Performed?

Many would say that a fund that produced returns of 22% per year for the past five years has a better manager than a fund that returned 20% per year over the same period. That's sometimes the case but not always. The fund that gained 20% may have beaten competing funds that follow the same investment style by six percentage points, while the 22% gainer may have lagged its competitors by a mile.

To really know how well a fund is doing, put a fund's returns into context. Compare the fund's returns to appropriate benchmarks—to indexes and to other funds that invest in the same types of securities.

How Risky Has It Been?

Of course, the very act of investing involves an element of risk. After all, you're choosing to give your money to a portfolio manager rather than socking it away under the bed or putting it into a savings account at your local bank.

Generally, the greater the return of an investment, the greater the risk—and therefore the greater potential for loss. Investors who take on a lot of risk expect a greater return from their investments, but they don't always get it. Other investors are willing to give up the potential for large gains in return for a more probable return. Consider a fund's volatility in conjunction with the returns it produces. Two funds with equal returns might not be equally attractive investments; one could be far more volatile than the other.

There are a number of ways to measure how volatile a fund is. There are four main risk measurements that appear in mutual fund shareholder reports, in the financial media, and on Morningstar.com. These include standard deviation, beta, Morningstar risk ratings, and Morningstar bear market rankings. It's also helpful to check out a fund's quarterly and annual returns in different market conditions to get a sense for its potential volatility.

What Does It Own?

To set realistic expectations for what a fund can do for you, it's important to know what kinds of securities a fund's manager buys: Stocks? Bonds? Both? These broad asset classes have different characteristics, so you shouldn't expect them to perform in a similar manner. For example, most investors wouldn't hope for a 10% gain from a bond fund, but that kind of return may not be an unrealistic expectation for certain stock funds.

Unfortunately, you can't rely on a fund's name to tell you what it owns. Fidelity Magellan FMAGX is a giant in the fund industry, but its moniker gives you very little idea of the types of securities its manager buys.

As we mentioned earlier, fund managers can buy just stocks, just bonds, or a combination of the two. They can stick with U.S. companies or venture abroad. They can hold popular big companies, such as Coca-Cola KO or Procter & Gamble PG, or focus on small companies most of us have never heard of. They can load up on high-priced companies that are growing quickly, or they can favor value stocks with lower earnings prospects but cheap prices. Finally, managers can own 20 or 200 stocks. How a manager chooses to invest your money is one of the most important factors that will drive performance.

To get a feel for how a manager invests, examine a fund's portfolio. The financial statements published by the mutual fund company always disclose this information. You can also access portfolio data, including top holdings, sector breakdowns, and the Morningstar style box (which we'll explore in later lessons) on Morningstar.com and other Web sites.

Who Runs It?

Mutual funds are only as good as the people behind them: the fund managers who make the investment decisions. Because the fund manager is the person most responsible for a fund's performance, it's important to know who calls the shots for your mutual fund—as well as how long he or she has been doing it. Make sure that the manager who built the majority of the fund's record is still the one in charge. Otherwise, you may be in for an unpleasant surprise. We'll return to the issue of fund management later.

What Does It Cost?

As we pointed out in Lesson 107, mutual funds aren't free. You should pay for professional money management if you need it, but paying enormous expenses to invest is like giving money away. That's because every penny that you give to fund management or to brokerage commissions is a penny you take away from your own return. Further, costs are one of the few constants in investing: They'll remain pretty stable year in and year out while the returns of stocks and bonds will fluctuate. You can't control the whims of the market, but you can control how much you pay for your mutual funds.

Unfortunately, fund costs are somewhat invisible, buried in shareholder reports and taken right off the top of your fund data. Morningstar provides a detailed breakdown of a fund's costs in the Expense section of all fund reports on Morningstar.com.

202: Benchmarks

Introduction

Weightlifter Matthias Steiner hoisted more than 1,000 pounds in two lifts to claim the gold medal at the 2008 Beijing Olympics. He didn't lift perfectly at the event, the 310-pound athlete was nonetheless able to best his peers that day to take the top honors.

The maximum weight that you can lift is often regarded as the definitive statement of your strength. Yet what actually constitutes a "good" bench-press depends on the person:

A 5'5" man or woman who can bench-press 150 pounds may have a superior strength-to-bodyweight ratio compared with a 6'2" man or woman who can bench-press 250 pounds.

The same relativity holds true when examining a mutual fund's performance. What constitutes a "good" return depends on your needs and the type of fund. That's where benchmarks come in to play.

Your Personal Benchmark

Start by determining your personal benchmark. In fitness terms, that might mean getting strong enough to carry your 3-year-old around town without getting winded, or it might mean building up enough endurance to climb a mountain. In investment terms, it means setting a benchmark for the returns required to reach your investment goal, whether it is a long-term goal (retirement) or a short-term goal (buying a new house in two years).

Say you want to retire in 30 years. You may know how much money you have to invest today, you can anticipate how much you'll be able to invest in the future, and you have a rough idea how much you'll need in retirement. After crunching the numbers, let's say you find that you need an 6% return per year to meet your goal. That's your personal benchmark.

By knowing that benchmark, you can immediately rule out funds that rarely meet that hurdle each year, such as most bond funds. You can also rule out funds that can sometimes return much more than your personal benchmark, because they probably present an added risk. That would include volatile fund types, such as emerging-markets funds or technology sector funds. Why take on all that extra, unnecessary risk?

Indexes as Benchmarks

The most common type of performance benchmark is a market index a preselected group of securities. Such indexes are usually tracked by the media and the investing community as indicators of the health of national and international stock and bond markets. Of course, there's no consensus on the single best index to use for investing purposes. The Dow Jones Industrial Average (DJIA) may be the index that heads the stock market report on the evening news, but it's rarely used as a performance benchmark for stock mutual funds. Why? Because it's so narrow: It includes just 30 large-company stocks, so it isn't all that indicative of the health of the overall stock market.

The index you'll hear about most often in mutual fund circles is the Standard & Poor's 500 Index, which includes 500 major U.S. companies. The larger the company, the greater its position in the index. Because the stocks in the S&P 500 are chosen to cover a range of industry sectors, the index often paints a clearer picture of the overall market than the Dow Jones Industrial Average.

Yet despite its widespread appeal, the S&P 500's focus on large companies means it's not representative of the entire market and smaller stocks' performance in particular. It's therefore inappropriate to measure a fund that doesn't buy large companies, such as Fidelity Low-Priced Stock (FLPSX) or T. Rowe Price Small-Cap Stock (OTCFX), against this benchmark only. Nor should you compare a foreign-stock fund like Vanguard International Growth (VWIGX) with the S&P 500; that fund doesn't even own any U.S. stocks. And don't try to stack bond funds up against a stock-fund index like the S&P 500. This advice sounds like common sense, but investors make inappropriate comparisons all the time.

So what indexes can you use to make appropriate comparisons? The Russell 2000 Index, which tracks smaller U.S. companies, is a good tool to evaluate many small-company funds, while the MSCI EAFE (Europe Australia Far East) Index, which follows international stocks, is a good measuring stick for foreign funds. The Barclays Aggregate Bond Index is a good gauge for most taxable-bond funds. There are dozens of other indexes that segment the market even more, focusing on inexpensive large-company stocks or pricey small-company stocks, regions of the world such as Europe or the Pacific Rim, or even particular areas of the bond market. We include appropriate indexes for each fund on Morningstar.com.

Peer Groups as Benchmarks

The second type of benchmark you can use is peer groups, or funds that buy the same types of securities as your fund. Compare funds that buy large, undervalued companies with others with the same style so-called large-value funds. Or compare those that buy only Latin America stocks with other funds that only buy Latin America stocks. That way, you're comparing apples to apples.

Morningstar categories are suitable peer-group benchmarks for most mutual funds. Depending on what a fund owns, it can land in one of more than 40 Morningstar categories. If a fund's portfolio features large-company stocks with high earnings growth, the fund is categorized as a large-growth fund. If the fund brims with smaller companies that are inexpensive, it lands in the small-cap value category. If U.S. government bonds with comparatively short maturities populate the portfolio, the fund qualifies as a short-term government-bond fund.

What's so great about peer-group comparisons? They give you another way to examine a fund's performance. Consider Fidelity Blue Chip Growth (FBGRX). The fund's returns lagged the S&P 500 in the early 2000s. Against that benchmark, the fund looked like a dog. But against its peers, the fund looked pretty good, especially in 2001 and 2002, when it lost less than its rivals. Of course, losing less than other funds is cold comfort for investors, but the fact that Fidelity Blue Chip Growth trailed the S&P 500 in the early 2000s isn't so much a reflection on the fund as it is on the relatively weak performance of large-growth stocks. After all, the S&P follows more than growth stocks; it has a hefty dose of value stocks, too. Fast forward to more recent time: Over the trailing five years through May 2011, large-growth funds have outperformed large-value, and this fund has beaten both the S&P 500 and more than 85% of its peers.

Our Approach

When evaluating funds, select several benchmarks. Begin with your personal benchmark, and be sure that any investment you're considering can match your needs. Then compare the fund with a widely accepted index, such as the S&P 500, to get a sense of its performance on the broadest level. Finally, look to peer-group benchmarks to see if the fund is good at what it does.

203: Looking at Historical Risk, Part 1

Introduction

Most natural risk-takers mountain climbers, extreme athletes, motorcycle daredevils tend to talk about the high of a job well done, an adventure completed, a successful free fall, and so on. They're less likely to dwell on bones broken, damaged equipment, and the heavy insurance costs that surely dog them.

Investors tend to behave a little like these extreme athletes, at least when they're starting out: They would much rather talk about the returns their funds generated than the risks they took to achieve those returns or the losses they've incurred. Take the large-cap Cambiar Opportunity Fund for example. This fairly concentrated fund landed in the top 10% of its category in 2001-2004, but reversed course in 2007 and 2008, landing in the category's worst 5% and 25% respectively, before returning to its winning ways in 2009 and 2010. Tremendous gains are won only through tremendous risk taking, which often means many ups and downs in short-term returns. That's called volatility.

While no single risk measure can predict with 100% accuracy how volatile a fund will be in the future, studies have shown that past risk is a pretty good indicator of future risk. In other words, if a fund has been volatile in the past, it's likely to be volatile in the future.

In this lesson, we'll tackle two common yardsticks for measuring a mutual fund's risk: standard deviation and beta. Both of these measures appear on a fund's Morningstar fund report page.

Standard Deviation

Standard deviation is probably used more often than any other measure to gauge a fund's risk. Standard deviation simply quantifies how much a series of numbers, such as fund returns, varies around its mean, or average. Investors like using standard deviation because it provides a precise measure of how varied a fund's returns have been over a particular time frame both on the upside and the downside. With this information, you can judge the range of returns your fund is likely to generate in the future. Morningstar calculates standard deviations for the most recent 36 months of a fund's life. The more a fund's returns fluctuate from month to month, the greater its standard deviation.

For instance, a mutual fund that gained 1% each and every month over the past 36 months would have a standard deviation of zero, because its monthly returns didn't change from one month to the next. But here's where it gets tricky: A mutual fund that lost 1% each and every month would also have a standard deviation of zero. Why? Because, again, its returns didn't vary. Meanwhile, a fund that gained 5% one month, 25% the next, and that lost 7% the next would have a much higher standard deviation; its returns have been more varied.

Standard deviation allows a fund's performance swings to be captured into a single number. For most funds, future monthly returns will fall within one standard deviation of its average return 68% of the time and within two standard deviations 95% of the time.

Let's translate. Say a fund has a standard deviation of four and an average return of 10% per year. Most of the time (or, more precisely, 68% of the time), we can expect the fund's future returns to range between 6% and 14% or its 10% average plus or minus its standard deviation of four. Almost all of the time (95% of the time), its returns will fall between 2% and 18%, or within two standard deviations of its mean.

Using standard deviation as a measure of risk can have its drawbacks. It's possible to own a fund with a low standard deviation and still lose money. In reality, that's rare. Funds with modest standard deviations tend to lose less money over short time frames than those with high standard deviations. For example, the one-year average standard deviation among ultrashort-term bond funds, which are among the lowest-risk funds around (other than money market funds), is a mere 0.64%.

The bigger flaw with standard deviation is that it isn't intuitive. Sure, a standard deviation of seven is obviously higher than a standard deviation of five, but are those high or low figures? Because a fund's standard deviation is not a relative measure which means it's not compared with other funds or with a benchmark it is not very useful to you without some context.

So it's up to you to find an appropriate context for standard deviation. To help determine if your fund's standard deviation is high or low, we suggest you start by looking at the standard deviations of similar funds, those in the same category as the fund you're examining. In May 2011, for example, the average mid-cap growth fund carried a standard deviation of 26.4, while the typical large-value fund's standard deviation was 22.5. You can also compare a fund's standard deviation with that of a relevant index. The S&P 500, a common benchmark for large-cap funds, for example, had a standard deviation of 21.7 in May 2011.

Beta

Beta, meanwhile, is a relative risk measurement, because it depicts a fund's volatility against a benchmark. Morningstar calculates betas for stock funds using the S&P 500 Index as the benchmark. We also calculate betas using what we call a fund's best-fit index, which is the benchmark whose performance most resembles that of the fund. For bond funds, for example, we use the Barclays Capital Aggregate Bond Index and best-fit indexes.

Beta is fairly easy to interpret. The higher a fund's beta, the more volatile it has been relative to its benchmark. A beta that is greater than 1.0 means that the fund is more volatile than the benchmark index. A beta of less than 1.0 means that the fund is less volatile than the index.

In theory, if the market goes up 10%, a fund with a beta of 1.0 should go up 10%; if the market drops 10%, the fund should drop by an equal amount. A fund with a beta of 1.1 would be expected to gain 11% if the market rises by 10%, while a 10% drop in the market should result in an 11% drop by the fund. Conversely, a fund with a beta of 0.9 should return 9% when the market goes up 10%, but it should lose only 9% when the market drops 10%. The biggest drawback of beta is that it's really only useful when calculated against a relevant benchmark. If a fund is being compared with an inappropriate benchmark, its beta is meaningless.

There's another statistic that is often overlooked in this discussion of volatility: R-squared, which you can find under the Ratings & Risk tab of a fund's report on Morningstar.com. The lower the R-squared, the less reliable beta is as a measure of the fund's volatility. The closer to 100 the R-squared is, the more meaningful the beta is. Gold funds, for example, have an average R-squared of just 0.26 with the S&P 500, indicating that their betas relative to the S&P 500 are pretty useless as risk measures. Unless a fund's R-squared against the index is 75 or higher, disregard the beta.

204: Looking at Historical Risk, Part 2

Introduction

Until now, we've focused on risk measurements that you can find on most Web sites or in print publications. In this lesson, we'll discuss some only-from-Morningstar yardsticks you can use to get a handle on a fund's risk.

Why does Morningstar offer its own risk statistics when standard deviation and beta already exist as reliable statistics? Those figures give you an idea of how risky a fund is on an absolute level and as compared with an index. But as we pointed out in our last session, no single risk measurement can give you a full idea of a fund's volatility. If you approach risk from various angles—as Morningstar's measures do—you can get a much better picture of how a fund should behave. You can find all of these measures in a Morningstar fund report.

Morningstar Risk

Morningstar Risk score describes the variation in a fund's month-to-month returns. But unlike standard deviation, which treats upside and downside variability equally, the risk score places greater emphasis on downward variation, or losses.

The theoretical foundation for Morningstar Risk (and Morningstar's risk-adjusted return measure, also called the star rating) is relatively straightforward: The typical investor is risk-averse. Morningstar adjusts for risk by calculating a risk penalty for each fund based on that risk aversion. The risk penalty is the difference between a fund's raw return and its risk-adjusted return based on "expected utility theory," a commonly used method of economic analysis. Although the math is complex, the assumption is that investors prefer higher returns to lower returns, and—more importantly—prefer a more certain outcome to a less certain outcome. In other words, investors are willing to forego a small portion of a fund's expected return in exchange for greater certainty. Essentially, the theory rests on the assumption that investors are more concerned about a probable loss than an unexpectedly high gain.

Like beta, Morningstar's risk score is a relative measure. It compares the risk of funds in each Morningstar category. For example, a fund in the large-cap growth category is compared only with other funds in the same category. Likewise, a municipal-national short-term fund is compared only with offerings in the same category. This apples-to-apples comparison allows investors to evaluate the historical risk of funds that are likely to be considered for the same role in a broader portfolio.

Within each category, we rank each fund's risk penalty—the difference between its raw and risk-adjusted returns—from highest to lowest. A fund with greater variation in its month-to-month returns would be assessed a larger penalty than a fund with lesser variation. The level of risk is assigned based on the ranking for funds in the category: The top 10% of funds are High risk, the next 22.5% are Above Average risk, the middle 35% are Average risk, the next 22.5% are Below Average risk, and the bottom 10% are Low risk.

When using Morningstar Risk, remember that we set a fund's score based on its risk level relative to its category peers. You can't compare the Morningstar Risk score of funds from different categories, as you can their standard deviations. For example, an intermediate-term bond fund with High Morningstar Risk may be more volatile than other intermediate-term bond funds, but it could be—and, due to the nature of stock funds, probably is—less risky than a small-cap value fund with Below Average Morningstar Risk.

Bear-Market Rankings

Bear-market rankings compare how funds have held up during market downturns over the past five years. This measure is unlike the others presented thus far, because it examines performance only during the times in which investors may face the largest potential for losses—during downturns, or corrections, in the market.

A bear market is officially defined as a sustained market correction, but for the purpose of these rankings, Morningstar identifies "bear-market months" that have occurred in the past five years. For stock funds, we consider any month in which the S&P 500 Index lost more than 3% to be a bear-market month. For bond funds, we count any month in which the Barclays Aggregate Bond Index lost more than 1%.

To generate our current bear-market rankings, we simply total each fund's performance during bear-market months over the past five years and separate them into percentiles. The highest (or most favorable) percentile rank is 1 and the lowest (or least favorable) percentile rank is 100. The top-performing fund in a category will always receive a rank of 1. These scores can help predict which funds will hold up well should the market undergo another correction.

Bear-market rankings have two major drawbacks. First, these measures let you know how a fund performed only during certain time periods. Although it's helpful to know how your fund performed during these market downturns, the fund could certainly lose money—lots of it—during a market upturn, too. Gold funds, for instance, often earn decent bear-market ranks, but they lose money at other times and are not considered low-risk investments.

The second drawback to bear-market rankings is that not all bear markets are the same. The next market correction may be caused by different economic forces than those that led to the previous one. Hence, funds that held up well in one bear market may not do so well in the next. Conversely, funds that were pummeled the last time around might shine in the next bear market.

All of the risk measurements we've discussed are based solely on past performance. By definition, they fail to account for any future risks a fund might harbor. For example, a fund that used to own mostly low-key large-company stocks may now be heavily invested in smaller companies, and therefore it may be taking on more risk than its historical measures show. Given this limitation, remember that statistical risk measures are a good way to begin understanding a fund's risk, but they're not guarantees of safety.

205: Gauging Risk and Return Together, Part 1

Introduction

Up until now, we've focused on yardsticks that tell you either how good or how volatile a fund's returns have been. But there are also measures that treat performance and risk *together*: risk-adjusted performance measures. We'll cover two of the more common yardsticks, alpha and the Sharpe ratio, in this lesson. You can find both of these figures on the Morningstar fund report.

Alpha Defined

In a nutshell, alpha is the difference between a fund's expected returns based on its beta and its actual returns. Alpha is sometimes interpreted as the value that a portfolio manager adds, above and beyond a relevant index's risk/reward profile. If a fund returns more than what you'd expect given its beta, it has a positive alpha. If a fund returns less than its beta predicts, it has a negative alpha.

As you'll recall from our earlier lesson on risk, beta tells you how much you can expect a fund's returns to move up or down given a gain or loss of its benchmark. For example, if the ABC Fund has a beta of 1.1 in comparison with the S&P 500 and the S&P 500 returns 30% for the year, you would expect ABC Fund to return 33%. (30% x 1.1 = 33%.) Since mutual funds don't necessarily produce the returns predicted by their betas, alpha can be helpful to investors.

To calculate a fund's alpha, first subtract the return of the 90-day Treasury bill, for whatever time period you want to measure, from the fund's raw return. What does a government bond have to do with all this? The T-bill serves as a proxy for a risk-free investment and we're assuming that the return of a mutual fund should, at the very least, exceed that of a risk-free investment. This figure gives you the fund's excess return over the risk-free, guaranteed investment. From that, subtract the fund's expected excess return based on its beta. What's left over is the alpha.

Because a fund's return and its risk both contribute to its alpha, two funds with the same returns could have different alphas. Further, if a fund has a high beta, it's quite possible for it to have a negative alpha. That's because the higher a fund's risk level (beta), the greater the returns it must generate in order to produce a high alpha. Just as a teacher would expect his or her students in an advanced class to work at a higher level than those in a less-advanced class, investors expect more return from their higher-risk investments.

How to Use Alpha

It seems to follow, then, that you would want to find high-alpha funds. After all, these are funds that are delivering returns higher than they should be, given the amount of risk they assume.

But alpha has its quirks. First, it's dependent on the legitimacy of the fund's beta measurement. After all, it measures performance relative to beta. So, for example, if a fund's beta isn't meaningful because its R-squared is too low (below 75), its alpha isn't valid, either.

Second, alpha fails to distinguish between underperformance caused by incompetence and underperformance caused by fees. For example, because managers of index funds don't select stocks, they don't add or subtract much value. Thus, in theory, index funds should carry alphas of zero. Yet many index funds have negative alphas. Here, alpha usually reflects the drag of the fund's expenses.

Finally, it's impossible to judge whether alpha reflects managerial skill or just plain old luck. Is that high-alpha manager a genius, or did he just stumble upon a few hot stocks? If it's the latter, a positive alpha today may turn into a negative alpha tomorrow.

The Sharpe Ratio Defined

The Sharpe ratio uses standard deviation to measure a fund's risk-adjusted returns. The higher a fund's Sharpe ratio, the better a fund's returns have been relative to the risk it has taken on. Because it uses standard deviation, the Sharpe ratio can be used to compare risk-adjusted returns across all fund categories.

Developed by its namesake, Nobel Laureate William Sharpe, this measure quantifies a fund's return in excess of our proxy for a risk-free, guaranteed investment (the 90-day Treasury bill) relative to its standard deviation. To calculate a fund's Sharpe ratio, first subtract the return of the 90-day Treasury bill from the fund's returns, then divide that figure by the fund's standard deviation. If a fund produced a return of 25% with a standard deviation of 10 and the T-bill returned 5%, the fund's Sharpe ratio would be 2.0: (25-5)/10.

The higher a fund's Sharpe ratio, the better its returns have been relative to the amount of investment risk it has taken. For example, both State Street Global Research SSGRX and Morgan Stanley Inst. European Real Estate MSUAX have enjoyed heady three-year returns of 23.9% through August 2004. But Morgan Stanley sports a Sharpe ratio of 1.09 versus State Street's 0.74, indicating that Morgan Stanley took on less risk to achieve the same return.

The higher a fund's standard deviation, the higher the fund's returns need to be to earn a high Sharpe ratio. Conversely, funds with lower standard deviations can sport a higher Sharpe ratio if they have consistently decent returns. Keep in mind that even though a higher Sharpe ratio indicates a better historical risk-adjusted performance, this doesn't necessarily translate to a lower-volatility fund. A higher Sharpe ratio just means that the fund's risk/return relationship is more proportional or optimal..

How to Use the Sharpe Ratio

The Sharpe ratio has a real advantage over alpha. Remember that standard deviation measures the volatility of a fund's return in absolute terms, not relative to an index. So whereas a fund's R-squared must be high for alpha to be meaningful, Sharpe ratios are meaningful all the time.

Moreover, it's easier to compare funds of all types using the standard-deviation-based Sharpe ratio than with beta-based alpha. Unlike beta—which is usually calculated using different benchmarks for stock and bond funds—standard deviation is calculated the exact same way for any type of fund, be it stock or bond. We can therefore use the Sharpe ratio to compare the risk-adjusted returns of stock funds with those of bond funds.

As with alpha, the main drawback of the Sharpe ratio is that it is expressed as a raw number. Of course, the higher the Sharpe ratio the better. But given no other information, you can't tell whether a Sharpe ratio of 1.5 is good or bad. Only when you compare one fund's Sharpe ratio with that of another fund (or group of funds) do you get a feel for its risk-adjusted return relative to other funds.

206: Gauging Risk and Return Together, Part 2

Introduction

Our last session focused on two common measures of risk-adjusted performance: alpha and the Sharpe ratio. But as we pointed out, both of those figures need a context to be useful. Who can say whether an alpha of 0.7 is good? Or whether a Sharpe ratio of 1.3 is good?

That's where Morningstar's proprietary fund rating, often called the star rating, comes in. Unlike alpha and the Sharpe ratio, the Morningstar Rating for Funds puts data into context, making it more intuitive. You can find a fund's Morningstar Rating on its Morningstar fund report.

What Is the Star Rating?

Let's clear the air immediately: The star rating is a purely mathematical measure that shows how well a fund's past returns have compensated shareholders for the amount of risk it has taken on. Morningstar fund analysts don't assign star ratings and have no subjective input into the ratings. Morningstar doesn't subtract stars from funds we don't like or add stars when we do.

The Morningstar Rating is a measure of a fund's risk-adjusted return, relative to similar funds. Funds are rated from 1 to 5 stars, with the best performers receiving 5 stars and the worst performers receiving a single star.

Morningstar gauges a fund's risk by calculating a risk penalty for each fund based on "expected utility theory," a commonly used method of economic analysis. It assumes that investors are more concerned about a possible poor outcome than an unexpectedly good outcome, and those investors are willing to give up a small portion of an investment's expected return in exchange for greater certainty.

Consider a simple example—a fund expected to return 10% each year. Investors are likely to receive 10%, but past variations in the fund's return suggest there's a chance they might end up with anywhere from 5% to 15%. While receiving more than 10% would be a pleasant surprise, most investors are likely to worry more about receiving less than 10%. Hence, they'd probably be willing to settle for a slightly lower return—say 9%—if they could be reasonably certain they'd receive that amount. If a fund expected to return 10% each year, but variations in its past returns suggested a narrower 8% to 12% range, investors wouldn't want to forego as much of the expected return in exchange for increased certainty.

This concept is the basis for how Morningstar adjusts for risk. A "risk penalty" is subtracted from each fund's total return, based on the variation in its month-to-month return during the rating period, with an emphasis on downward variation. The greater the variation, the larger the penalty. If two funds have the exact same return, the one with more variation in its return is given the larger risk penalty. Funds are ranked within their categories according to their risk-adjusted returns (after accounting for all sales charges and expenses). The 10% of funds in each category with the highest risk-adjusted return receive 5 stars, the next 22.5% receive 4 stars, the middle 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star.

For multi-share-class funds, each share class is rated separately and counted as a fraction of a fund within this scale, which may cause slight variations in the distribution percentages. This accounting prevents a single portfolio with multiple share classes in a smaller category from dominating any portion of the rating scale.

Funds are rated for up to three periods—the trailing three, five, and 10 years—and ratings are recalculated each month. Funds with less than three years of performance history are not rated. For funds with only three years of performance history, their three-year star ratings will be the same as their overall star ratings. For funds with five-year records, their five-year histories will count for 60% of their overall rating and their three-year rating will count for 40% of the overall rating. For funds with more than a decade of performance, the overall rating will be weighted as 50% for the 10-year rating, 30% for the five-year rating, and 20% for the three-year rating.

If a fund changes Morningstar categories during the evaluation period, its historical performance within the other category is given less weight in its star rating, based on the magnitude of the change. (For example, a change from a small-cap category to large-cap category is considered more significant than a change from mid-cap to large-cap.) Doing so ensures the fairest comparisons and minimizes any incentive for fund companies to change a fund's style in an attempt to receive a better rating by shifting to another Morningstar category.

Caveats

Like all backward-looking measures, the star rating has limitations. It is critical to remember that the rating is not a forward-looking, forecasting tool. The rating won't predict short-term winners. The star rating is best used as an initial screen to identify funds worthy of further research—those that have performed well on a risk-adjusted basis relative to their peers.

The star rating is a strictly quantitative measure—a high rating doesn't imply the approval or endorsement of a fund by a Morningstar analyst. Additionally, if a management change occurs, the ratings stay with the fund, not with the portfolio manager. Therefore, a fund's rating might be based almost entirely on the success of a manager who is no longer with the fund.

Also, because funds are rated within their respective categories, it's important to note that not all 5-star funds are equal or even interchangeable. A 5-star sector fund, for example, might have the best risk-adjusted return within its specific category, but it's probably far riskier than a highly rated diversified fund.

Rather than buying funds based on their ratings, investors should first decide on an overall portfolio strategy and then seek the best funds for each portion of their portfolios. Use the star rating as a first screen.

207: Examining a Stock Fund's Portfolio, Part 1

Introduction

Most of us wouldn't buy a new home just because it looked good from the outside. We would do a thorough walk-through first. We'd examine the furnace. We'd check for a leaky roof. We'd look for cracks in the foundation.

Mutual fund investing requires the same careful investigation. You need to do more than give a fund a surface-level once-over before investing in it. Knowing that the fund has been a good risk-adjusted performer for investors in the past isn't enough to merit a financial commitment from you today. You need to understand what's inside the fund's portfolio now or how it invests.

Such information, which tells you how your fund will likely behave, helps you set realistic expectations. A fund manager who quickly buys and sells a compact portfolio of high-priced, fast-growing companies will produce different results from a manager who owns 300 stocks of larger companies with lower earnings but cheap prices. Further, unless you know what a fund owns, you can't determine what role the fund fills in your portfolio. For a fund to fill the large-cap growth portion of your portfolio, you need to know that it actually invests in large-growth companies. Finally, examining a fund's portfolio can tip you off to risks the fund may be harboring risks that might not have surfaced yet.

For U.S. stock funds, you'll want to know a handful of things, starting with the size of the companies in which the fund invests, as well as how much the manager is willing to pay for these companies and how quickly they're growing. A quick way to identify the relative size and characteristics of the stocks a fund owns is the Morningstar style box, which appears on the Morningstar fund report.

The Style Box Defined

The Morningstar style box is a nine-square grid that gives you a quick and clear picture of a fund's investment style. The style box classifies funds by whether they own large-, mid-, or small-capitalization stocks, and by whether those stocks have growth or value characteristics or land somewhere in between.

We'll look first at the stock size and growth and value dimensions and then explore the ways in which they come together in the style box.

Company Size. A company's size is commonly measured in terms of its market capitalization (or market cap), which is based on the total market value of its shares. A company's market capitalization fluctuates with the share price, which usually, though not always, reflects the health and growth (or expected growth) of its fundamental operations: sales, earnings, etc.

Investors typically divide companies into three size bands: large cap (for companies with the biggest market capitalization), mid-cap, and small cap. Larger companies are often more established and tend to be more predictable (and less susceptible to operational shocks) than smaller companies. Thus, on average, their market capitalizations tend to be less volatile than those of small- and mid-cap companies.

Rather than assigning a fixed number of "large cap" or "small cap" stocks, Morningstar uses a flexible system that isn't adversely affected by overall movements in the market. Large-cap stocks are defined as the group that accounts for the top 70% of the capitalization of each geographic area; mid-cap stocks represent the next 20%; and small-cap stocks represent the balance.

Growth and Value Metrics. Morningstar determines a fund's style whether it invests in "growth" or "value" stocks by applying a set of growth metrics and a set of value metrics to each individual stock the fund holds. These characteristics are compared with those of other stocks within the same capitalization band, arriving at a score for each company that ranges from zero to 100. For the purpose of Morningstar's style box, we group each stock into one of seven style "zones" based on geographic locales: the United States, Latin America, Canada, Europe, Japan, Asia (excluding Japan), and Australia/New Zealand.

We begin by measuring the "value" aspects of a stock by comparing the price of one share of a stock with the company's projected earnings per share. The other 50% of the value score comes from four equally weighted historical measures: a stock's price/sales (P/S), price/book (P/B), and price/cash flow (P/CF) ratios, as well as its dividend yield. We rank these measures against those of other U.S. stocks in the same size range, and their combined rankings go into the stock's value score.

The growth score similarly uses one forward-looking measure and four equally weighted historical metrics. Half of the stock's growth score comes from ranking its long-term projected earnings growth rate against those of other U.S. stocks in the same capitalization band. Next, we rank the stock based on its historical earnings growth, sales growth, cash flow growth, and book-value growth rates against other U.S. stocks in its market-cap band. The resulting rankings make up the other 50% of the stock's growth score.

We calculate a stock's style score by subtracting its value score from its growth score, resulting in scores that can range from -100 to 100. A stock with a style score of -100 would be a cheap, high-yielding, low-growth stock, while one with a score of 100 would have no yield and very high historical and projected growth rates. We classify stocks in the middle as "core" stocks. The dividing lines between value, core, and growth can vary over time with changes in the market, but on average each style will include approximately one third of all stocks in each market-cap range.

Tackling the Funds. A stock fund is an aggregation of individual stocks, and its style is determined by the style assignments of the stocks it owns. By plotting all of a fund's stocks on the stock style grid, the range of stock styles included in the fund immediately becomes apparent. An asset-weighted average of the underlying stocks' style and size scores determines a fund's placement in the Style Box.

Style box assignments for stocks are updated each month. Assignments for funds are recalculated whenever Morningstar receives updated portfolio holdings for the fund.

Just as with individual stocks, the thresholds between value, blend, and growth funds vary to some degree over time, as the distribution of stock styles changes in the market. However, on average, the three fund styles each account for approximately one third of each market-cap range.

Putting the Morningstar Style Box to Work

When you look at a fund's Morningstar style box, you immediately get some insight into the manager's investment strategy. A growth portfolio will mostly contain higher-priced companies that the manager believes have the potential to increase earnings faster than the rest of the market. A value orientation, on the other hand, means the manager buys stocks that are cheap, but that could eventually see their worth recognized by the market. A blend fund will mix the two philosophies: The portfolio may contain growth stocks and value stocks, or it may contain stocks that exhibit both characteristics.

Because the style box shows you how a fund actually invests, you can use it to get an idea of what sort of risks the fund harbors today. A fund that owns smaller, more expensive stocks is bound to be more volatile than one holding large, cheap names. And the style box allows you to quickly see where a fund's portfolio lands.

208: Examining a Stock Fund's Portfolio, Part 2

Introduction

We've described the Morningstar style box as the "snapshot" of a fund's investment style. It's the best place to start if you're trying to uncover how a fund invests-but don't stop there. A handful of other portfolio statistics reveal additional insights into individual funds-information about a fund's risk and return potential that style boxes don't reveal.

Sector Weightings

Both Meridian Value (MVALX) and FAM Value (FAMVX) land in the mid-cap growth square of the style box, but the funds have different biases. With more than 37% of its portfolio devoted to industrials (as of December 2010), the Meridian fund is heavily exposed to the ups and downs of that sector. Meanwhile, FAM Value favors financial firms, with more than 33% of its assets in that sector as of March 2011.

Welcome to one of our favorite portfolio statistics: sector weightings. Stocks fall into one of three "super" sectors-cyclical, sensitive, and defensive-which are subdivided into sectors, bringing the total number of sectors to 11. The cyclical supersector includes the basic materials, consumer cyclical, financial services, and real estate sectors. In the sensitive supersector, there are the communication services, energy, industrials, and technology sectors. And finally, in the defensive supersector, there are the consumer defensive, health-care, and utilities sectors. Morningstar calculates a fund's sector exposure based on the amount of assets it has in stocks in each sector. By knowing how heavily a fund invests in a given sector, you'll know how vulnerable it is to a downturn in that part of the market or how much sector risk it's taking on.

Average Market Capitalization

So average market capitalization is included in Morningstar's style box calculation. But you should examine it anyway because there are small-cap funds and there are really small-cap funds.

Take Diamond Hill Small Cap (DHSCX) and Aegis Value (AVALX), for example. Both land in the small-cap value portion of the style box. But despite its small-sounding name, Diamond Hill Small Cap sports an average market cap of over $2 billion, while Aegis Value's managers consistently buy tiny firms for a portfolio with an average market cap of $317 million (as of February 2011). That's an enormous difference. That means that Aegis Value will do well against other small-value funds when micro-caps are doing well in the market. Of course, it also lags when investors get nervous and flock to larger, more established firms. Investors who aren't aware of the fund's bias might evaluate the fund as good or bad without understanding the reason behind its performance.

Conversely, there's a difference between large-cap and really large-cap funds. Vanguard Growth Index (VIGRX), for instance, carried an average market capitalization of $36.5 billion in March 2011, while William Blair Growth BGFIX clocked in at just $14.5 billion. While both are large-cap growth funds, the former fund will outperform the latter when giant-sized companies are leading the market. Conversely, the latter fund should one-up the former if smaller companies (well, small within the large-cap division) have the lead.

Price/Earnings and Price/Book Ratios

Price/earnings and price/book ratios, too, are included in the style box, but they are worthy of separate consideration. Just as there are degrees of market capitalizations, there are degrees of price multiples. Bridgeway Aggressive Investors (BRAGX) and Morgan Stanley Inst Mid Cap Growth (MPEGX) are both growth funds, but the Morgan Stanley fund's P/E ratio of 27.1 (as of March 2011) is significantly higher than the Bridgeway fund's 12.2. That means the Morgan Stanley fund courts more price risk (the risk that securities might be overvalued by the market) than Bridgeway Aggressive Investors.

Number of Holdings

It's also important to know whether a fund holds 20 or 200 stocks. You'd expect a fund with fewer stocks to be more volatile than one with hundreds of names on hand. While that isn't always the case, it often is. Just as you need to be aware of funds that place a large portion of their assets in one or two sectors, you need to know if a fund places a large portion of assets in a small number of holdings.

For example, Mosaic Midcap GTSGX and Columbia Acorn (ACRNX) are both mid-cap growth funds, yet the former generally owns less than 40 stocks while the latter stockpiles hundreds of names. Mosaic Midcap is taking on more risk-its performance is dependent on the success or failure of a much smaller number of stocks.

Turnover Rates

A fund's turnover rate represents the percentage of a fund's holdings that have changed over the past year, and it gives an idea of how long a manager holds on to a stock. Fund accountants calculate a fund's turnover rate by dividing its total sales or purchases (excluding cash), whichever is less, by its average monthly assets during the year. You can translate this math easily: A fund that trades 25% of its portfolio each year holds a stock for four years, on average.

Despite its seeming simplicity, turnover rates have their quirks. For instance, a dramatic change in the fund's asset base (the turnover ratio's denominator) can give a false impression of a fund's trading activity. If the manager doesn't change her trading pace, a fund's turnover ratio will decline as assets rise. Conversely, a shrinking asset base can inflate a fund's turnover ratio.

Turnover can give you a sense of a manager's trading activity, but don't read too much into a fund's turnover rate, particularly with bond funds. In general, buy-and-hold managers will have lower turnover rates than managers who trade on short-term factors. And generally, very high-turnover managers tend to practice aggressive strategies. With bond funds, though, quite often managers employ cash-management strategies that inflate turnover rates. It's not uncommon to see turnover rates of 300% or more, even in funds that aren't particularly aggressive.

209: Why Knowing Your Fund Manager Matters

Introduction

Everyone remembers the glory days of Notre Dame football. In the late 1980s and early 1990s, under the watch of head coach Lou Holtz, the Fighting Irish team was a college powerhouse to be reckoned with. During his 11-season tenure, Holtz boasted an admirable 0.765 winning percentage and led the Irish to a national championship in 1988 (and fell just shy of capturing the crown in 1989 and 1993).

But all good things must come to an end. Holtz left in 1997. His replacement, Bob Davie, was never able to find his groove as the Irish spun to a virtually unheard of 25 losses during his five-year stint, and succeeding coaches have had mixed records at best.

Fund investors can learn something from this reversal of fortune. Like college football teams, mutual funds are only as good as the people behind them: the fund managers. Portfolio managers are the people who decide what to buy and what to sell, and when. Because the fund manager is the person who is most responsible for a fund's performance, knowing who's calling the shots and for how long is key to smart mutual fund picking.

Different Manager Structures

Before discussing further why managers are important, let's step back and examine the three ways in which funds can be managed.

First, there's the single-manager approach. In this setup, one person takes primary responsibility for making the fund's investment decisions. The manager doesn't do all the research, trading, and decision making without help from others, though. For example, Harry Lange is still listed as the sole manager of Fidelity Magellan FMAGX, but Fidelity's analysts feed him plenty of stock ideas. The single manager is sole decision maker, not the sole idea generator.

Second, there's the management team, first popularized by families such as American Century, Dodge & Cox, and Putnam. Here, two or more people work together to choose stocks. The level of one team member's involvement or responsibilities can be tough to gauge, though. Sometimes there's a lead manager who is the final arbiter, while other times it is more of a democracy.

Third, and most rare, there is the multiple-manager system. The fund's assets are divided among a number of managers who work independently of each other. American Funds is the biggest fund family using this approach. Multiple managers are more common with funds managed by firms other than the fund company itself, such as Vanguard Windsor II (VWNFX) or Managers Investment Group funds.

Why Managers Matter

We think it is always important to know who a fund's manager is, whether the fund is run by one person or a whole team. Equally important is how long the person or team has been running the fund. Make sure that the manager who built the majority of the fund's record is still the one in charge. Otherwise, you may be in for a surprise.

For example, Oppenheimer International Small Company (OSMAX) is likely to look very different following the departure of Rohit Sah in February 2011. Sah had a distinctive, bold style, and although it backfired occasionally, over time it provided excellent returns. Instead of searching for a single replacement, two managers from Oppenheimer will lead a team of seven, each of whom will contribute ideas. The fund may still end up being a solid option, but it won't likely have the same unusual style it did under Sah going forward.

Of course, not every manager change is a cause for potential concern. Matthews Pacific Tiger remained one of our favorite Asia focused funds even after it shuffled its management team at the start of 2008. Mark Headley, who came on board as a comanager in 1996 and took the helm several years later, gave up his lead manager position at that time for health reasons. That was a blow, as Headley is one of the most seasoned and skilled Asia investors around. But he stayed involved with the fund as a comanager. Moreover, we had ample reason to believe in the two new lead managers, Richard Gao and Sharat Shroff, who had good records at the fund's siblings. Indeed, over the trailing three years through May 2011, Matthews Pacific Tiger has gone on to beat more than 90% of its peers..

Where Managers Matter Most--and Least

If you're looking for new investments and find two equally good funds, choose the one with the more experienced manager. But if the manager of a fund you already own jumps ship, it's not always best to sell the fund immediately.

First, you may have to pay taxes on your sold shares, if they gained in value, and what you give up in taxes may not be offset by extra future gains in a different fund. Second, the new manager may do just as well as the old. Finally, some types of funds are simply less affected by manager changes than others. Here are some examples:

Index Funds. Managers of index funds are not actively choosing stocks, but simply mimicking a benchmark by owning the same stocks in the same proportion. As such, manager changes at index funds are less important than manager changes at actively managed funds.

Funds in Categories with Modest Return Ranges. Managing an ultrashort-bond fund is a game of basis points. (A basis point is one one hundredth of a percentage point.) In other words, because ultrashort bonds don't offer much return potential, the difference in return between a great and an awful ultrashort-bond fund is a matter of one or two percentage points. So if your ultrashort-bond fund manager leaves, it's probably not a big deal.

Funds from Families with Strong Benches. When a fund manager leaves T. Rowe Price, we generally don't get very upset. Why? Because T. Rowe has many talented managers and analysts who can pick up the slack. Manager changes aren't quite as troubling if you're talking about a fund from a family, such as Fidelity, T. Rowe Price, and American, with a number of good funds and a strong farm team.

Funds Run by Teams. While this isn't always the case, you'll often find that funds run by teams are less affected by manager changes than funds run by only one person. But that's only true if the fund really was run in a team fashion, in which decisions were truly democratic.

Conversely, then, manager changes can be a crushing blow to other types of funds. Investors who disregard managers and manager tenures in the following types of mutual funds may find themselves much worse off than a disappointed sports fan.

- One-manager funds.
- Funds run by very active managers who've proved to be adept stock-pickers or traders.

- Good funds from families that aren't strong overall, or from fund families that lack other strong funds with a similar investment style.
- Funds in such categories as small growth or emerging markets, where the range of possible returns is very wide.

210: Your First Fund

Introduction

You've learned how to evaluate funds so that you can answer five key questions: how has it performed, how risky has it been, what's in its portfolio, who's in charge, and how much does it cost. Those are questions you need to be able to answer whether you're choosing your first or your thirty-first fund. (Yes, some people own that many.)

When selecting your first stock fund, though, you need to focus on a few additional, specific things. Why? Because for some of you, your first fund may be your only fund—or your only fund for awhile.

Here are the qualities to look for in your first fund.

Seek Diversification

Whether you're investing for a goal that's five or 50 years away, your first stock fund should be well diversified. That means the fund should hold a large number of stocks (100 or more) from a wide range of industries, or sectors. By looking at Morningstar's fund reports on Morningstar.com, you can find how many stocks a fund owns as well as which sectors it favors.

What's the big deal about diversification? Funds that own many stocks from many different sectors are generally more stable than funds holding few stocks from only one or two industries. For example, the average natural resources fund carried a standard deviation (a measure of volatility) of 31.1 in May 2011, while the average large-blend fund's standard deviation was a more sedate 22.4.

While you may own some of these more concentrated types of funds at some point in your investment life—say, to rev up your returns or to add some variety to your investments—they aren't suitable first-time investments. (We'll talk more about diversification and when you might focus on concentrated investments in later lessons.)

Favor Large Companies

Next, focus on funds that buy stocks of large U.S. companies. Funds with a collection of stocks such as Coca-Cola KO, Procter & Gamble PG, and Wal-Mart WMT may not always offer the most exciting returns, but they tend to hold up better than smaller companies when times get tough.

Morningstar groups these funds, which are called large-cap funds, into three categories: large value, large blend, and large growth. Large-value funds own stocks that are undervalued, large-growth funds buy stocks that have strong growth prospects, and large-blend funds own a combination of the two.

Which should you choose? Large-growth funds are the most volatile of the three categories, because they tend to own stocks in higher-growth, and therefore higher-risk, sectors, such as health care and technology. Large-value funds are generally less volatile but tend to perform in fits and starts, too, as they have their own pet sectors, such as financials and industrials. When these sectors suffer, so will most large-value funds.

Your best choice would be a large-blend fund that owns both types of stocks. It has exposure to a blend of the aforementioned sectors.

Go with a Big Family

When buying your first fund, start with one of the larger fund families. Why? Giants such as Fidelity, Vanguard, and T. Rowe Price are closely monitored by the media and by investors. Intense public scrutiny has made it difficult for these shops to wield really poor players for too long, and while it's unlikely their funds will top the charts year in and year out, they're generally reliable.

Going with one of the bigger families has another benefit: Your first fund may not be your last fund, and the big families boast a range of offerings, from domestic large- and small-company funds to international options; taxable and tax-free bond offerings to single-sector funds. It's possible to build an entire portfolio from just one family.

But don't confuse big with diversified. PIMCO, for example, is one of the industry's largest fund families. While the group does offer some equity funds, it's made its name as a bond-fund manager.

To see how much variety a family offers, type in the name of the family in our Quotes/Reports box on Morningstar.com's home page. You'll find a list of Fund Reports for the family's funds. Go through some of the reports to get an idea of the types of funds the group offers or visit the fund family's Web site.

211: What to Look For in a Fund

Introduction

Let's be honest: Very few investors are as geeky as Morningstar mutual fund analysts. Most people don't have time to fly around the country attending investment conferences and they don't waste their time swapping fund industry gossip. Furthermore, most investors have better things to do than to monitor dozens of funds. Finally, people starting out in investing probably don't have the money to buy more than one fund anyway.

So here's our advice for those searching for their first—and perhaps only—mutual fund.

Index Funds

Index funds are about as simple as it gets. You might remember from "Lesson 209: Why Knowing Your Fund Manager Matters" that index-fund managers aren't picking stocks in the traditional sense. Instead, they are buying the same stocks in the same proportion as they appear in a particular index. In other words, they don't buy a stock because they like a company's prospects or sell because a firm's outlook has become less than rosy. They simply own the index. They are passive investors.

Index funds have plenty of benefits. Most important, they tend to be low in cost. For example, Schwab 500 Index's SWPPX expense ratio is just 0.09% versus 0.84% for the typical large-blend fund. Because the index-fund managers aren't actively managing their funds—instead of making buy and sell decisions, they're simply doing what the index does—management fees tend to be low.

Index funds are also advantageous because they are fairly predictable. First, they tend to return what the index does, minus their expenses. Second, they always own what the index owns, which means they tend to be style specific. For example, if a fund indexes the S&P 500, that means it owns large-blend stocks; it'll own those types of stocks today, tomorrow, and the next day. You know what to expect from an index fund. Funds that aren't indexed, also called actively managed funds, might not own the same types of stocks day in and day out. It all depends on the manager's style. He or she may like large companies one day and then see value in smaller firms the next.

Finally, index-fund investors don't have to worry about manager turnover: If the manager leaves, the next manager is likely to do just as well, as long as the mutual fund shop's resources haven't changed. Nor is asset size an issue. Index funds can handle plenty of assets, because they generally don't use fast-trading strategies.

If you only plan to own one index fund for awhile, make sure it favors large companies. Some funds, including Vanguard Total Stock Market Index VTSMX, hold stocks of all sizes, though larger companies are most heavily represented. Such funds would be excellent choices for one-fund owners.

Funds of Funds

Funds of funds are mutual funds that invest in other mutual funds. That may sound redundant, but it's true.

Just as a regular mutual fund offers the skills of a professional manager who assembles a portfolio of stocks or other securities, the manager of a fund of funds will select a portfolio of funds, managed by other managers.

If you have only a small amount to invest each month, a fund of funds allows you access to more funds than you might be able to afford on your own. It also allows investors to avoid the recordkeeping and paperwork that comes with owning an assortment of funds.

So what's the catch? Expenses, mostly. The fund of funds structure creates a double layer of costs. First, there are the expenses associated with running the fund of funds itself—management fees, administrative costs, etc. Second, there are the costs associated with the underlying funds—the same sorts of management fees, administrative costs, and so on. A fund of funds may report an expense ratio of just 1%, but keep in mind that you're still paying the expense ratios on each and every fund that the fund of funds owns.

Some fine funds of funds eliminate the double-fee problem. Families such as T. Rowe Price and Vanguard offer funds of funds that invest only in their own funds. The families then waive the cost of the funds of funds—their reported expense ratios are 0%—and you only pay the costs of the underlying funds. Obviously, these funds are a much cheaper option.

Funds300

301: Why Diversify?

Introduction

In this lesson, we'll cover what diversification is and what role it plays in building a mutual fund portfolio. Subsequent lessons in this level will discuss how to build a portfolio of mutual funds.

Diversification: What It Is

If you're having friends over for a barbecue, would you only serve meat? We may be a bunch of Midwesterners at Morningstar, but we're sophisticated enough to expect more than just protein. Instead, you'd probably offer an assortment-some salad, watermelon, maybe lemonade, and so on. In short, you'd diversify your table so that your guests would be satisfied.

Now consider investing. You want to own various types of funds so that your portfolio, as a group of investments, does well. Certain types of investments will do well at certain times while others won't. But if you have enough variety in your portfolio, it is pretty likely you'll always have something that is performing relatively well. Owning various types of funds can help reduce the volatility of your portfolio over the long term.

Let's say that you buy a value fund that owns a lot of cyclical stocks, or stocks that tend to do well when investors are optimistic about the economy. If that were your only fund, your returns wouldn't look very good during a recession. So you decide to diversify by finding a fund heavy in food and drug-company stocks, which tend to do relatively well during recessions. By owning the second fund, you limit your losses in an economic downturn. That is the beauty of diversification.

Diversification: What It Isn't

Diversification isn't a magic bullet.

Having a diversified portfolio doesn't mean you'll never lose money. Diversification doesn't mean complete protection from short-term dips or market shocks. Diversification does not guarantee that if one investment goes down another investment will go up -it isn't a seesaw.

2008 illustrated this point. The height of the financial crisis was an absolutely wretched time for investors; the average U.S. stock fund lost almost 39% that year. The average foreign-stock fund lost 45%. Funds that bought emerging-markets stocks were down 55%. Real estate funds tumbled almost 40%, while precious metals funds slid 30%. Even bond funds (with the exception of Treasuries) were in negative territory. The lesson: Because all sorts of investments can suffer at the same time, your only sure-fire protection against sudden losses is to put some of your assets in a money market fund.

Ways to Diversify

Diversification can occur at several different levels of your portfolio. Some of those levels are more important for mutual fund investors than others.

Diversifying across Investments Say you owned stock in a single company. If the company flourished, so would your investment. But if the company went bankrupt, you could lose all of your investment. To reduce your dependence on that single company, you buy stock in four or five other companies, as well. Even if one of your holdings sours, your overall portfolio won't suffer as much. By investing in a mutual fund, you're getting this same protection.

Diversifying by Asset Class The three main asset classes are stocks, bonds, and cash. Some financial advisors contend that international stocks, real estate investment trusts, emerging-markets stocks, and the like are also asset classes-but the stocks, bonds, cash division is the most widely accepted. Adding bonds and cash (typically considered to be securities with maturities of one year or less) to a stock-heavy portfolio lowers your overall risk. Adding stocks to a bond- or cash-heavy portfolio increases your total-return potential. For most investors, it is wise to own a mix of all three. How you determine that mix depends on what your goals are and how long you plan to invest.

Diversifying by Subasset Classes Within two of the three main asset classes-stocks and bonds-investors can choose several flavors of investments. With stocks, for example, you may distinguish between U.S. stocks, foreign developed-market stocks, and emerging-markets stocks (typically considered to be stocks from emerging economies, including Latin America, the Pacific Rim, and Eastern Europe). Furthermore, within your U.S. stock allocation, you can have large-growth, large-value, small-growth, or small-value investments. You can also make investments in particular sectors of the market, such as real estate or technology. The possibilities for classification are endless and often overwhelming, even to experienced investors.

So what is the bottom line on diversification? Diversifying across investments and by asset class is crucial. Subasset class diversification is useful, but not everyone needs to own a government-bond fund, an international fund, a small-cap fund, a real-estate fund, and on and on. You should nonetheless consider the various ways that such investments might add diversity to your portfolio-and allow you to rest a little easier.

302: Building Your Mutual Fund Portfolio

Introduction

There are no right answers.

Assembling a mutual fund portfolio is largely a matter of personal taste. How to invest depends on who is doing the investing. We would love to say that we know how to create the perfect portfolio - what funds you and everyone else should buy, and in what proportion, to meet each and every one of your goals. We would like to give you the model portfolio that will allow you and everyone else to retire at age 55, to buy that second home, to send your children to college. But we can't. There is just no one-size-fits-all answer. There is no one "correct" way to build a mutual fund portfolio.

Putting together a group of mutual funds is a matter of personal preference and personal goals. But there are some universals you should think about when choosing and combining funds.

Define Your Objectives and Priorities

This step is probably the toughest part of the investing process: sitting down to figure out why you're investing, what you're investing for, and how much money you'll need to reach that goal. Your goals and your risk tolerance should then determine what your portfolio looks like.

Keep in mind that your goals and your stomach might not agree. You may find, for example, that the idea of losing 20% in one quarter makes you nauseated, but you need to invest aggressively to have a shot at accumulating the return you'll need to reach your goal. If so, you will need to compromise by accepting the risk, changing the goal, or saving more.

Time plays a part, too. If your goal is to retire in 30 years, you might be more willing to put up with short-term ups and downs if it means reaching your long-term goal. If you suffer a loss, you have time to make up for it. But if your goal is just five years away, taking on more risk might not be a good idea, because you have less time to make up for any losses.

Develop a Core

For each goal you have identified, you should have a core group of three or four funds that are proven performers. The bulk of your assets - typically 70% to 80% - should be invested in these core funds.

What are core holdings? They're the engines of your portfolio, the investments that you can count on to deliver year in and year out. Funds that fall into Morningstar's large-blend or large-value categories tend to be the best core investments for meeting your long-term goals. For shorter-term goals, consider short- or intermediate-term high-quality bond funds. Simplify the investing process by focusing on a few funds that can deliver what you want, and build your investment in those funds rather than adding other funds.

When looking for core funds, simple rules prevail. The more boring, the better; the goal is steady gains, not excitement. Look for funds with low fees, long-tenured managers, easily understandable strategies, moderate risk, and consistent performance.

Limit How Much You Put Outside the Core

Noncore holdings are the stop-and-go funds that may juice up returns - funds that focus on a single industry or emerging markets, and funds run by managers who make large bets on particular holdings or on certain parts of the market. Small-cap funds could also fall into this category, simply because they tend to be more volatile than large-cap funds. Use noncore funds for diversification and growth potential. For instance, if your portfolio's core is made up of large-cap funds, you might want to add small-cap, international, or sector funds to the noncore portion of your portfolio for diversification. As we discussed in the previous lesson, a variety of funds improves the likelihood of at least one of your investments doing well at a given time.

Though you probably wouldn't want to put a significant portion of your portfolio in any one of these types of funds, they do allow for the possibility of extraordinary returns. Of course, they also generally carry a higher level of risk. But as long as you limit the riskier portion of your portfolio, you aren't likely to threaten the bulk of your nest egg. And for some people, core funds may be all they ever need.

Don't Worry about an Optimal Number of Funds

There is no ideal number of funds to own. We have seen fund junkies build 30-fund portfolios while other investors can be perfectly diversified owning just two or three funds.

What you should worry about is how diversified your portfolio is, regardless of how many funds are in it. If all of your funds were growth funds or were heavy on a particular sector, you could own dozens of funds and still not be adequately diversified. Conversely, a one-fund portfolio could be better diversified than a multifund portfolio, if that one fund were an index fund covering the entire stock market.

Consider Your Tax Situation

Are you investing in a tax-deferred account, such as an IRA or a 401(k)? If not, recognize that you'll be paying taxes on any income and realized gains from your funds. And remember, funds can be tax nightmares. So if you are investing in a taxable account, look for funds (particularly tax-managed funds) that generate strong aftertax results.

303: Choosing an Index Fund

Introduction

Index funds make low-maintenance investments. You don't need to worry about a manager changing his/her strategy: Because index funds rigorously track specific indexes, the manager doesn't have much say in the matter. Don't fear that your manager will leave for greener pastures, either: Index-fund managers aren't actively selecting stocks, so it doesn't matter much who is calling the shots. Finally, asset growth isn't an issue: Because indexing is a relatively low-turnover approach, index funds don't suffer under the weight of too many assets.

Choosing an index fund isn't such a snap, though. More than 250 index funds ply their trade in more than 45 different investment categories. To complicate matters, some investment categories (such as large-blend) have multiple index funds, many of them locked to a different benchmark. It's getting so you can't tell the players without a program.

To simplify the process of choosing an index fund that meets your needs, consider the following suggestions.

Know Which Index the Fund Follows

Vanguard FTSE Social Index VFTSX and Vanguard Growth Index VIGRX both land in the large-cap growth category, and they are both index funds. But their performance patterns have diverged over the past five years through April 2011. What gives? The funds may be large-growth, but they track different indexes.

FTSE Social Index tracks the FTSE4Good U.S. Select Index, which excludes alcoholic-beverage and tobacco makers, as well as firms with unfair or unsafe labor practices and poor environmental records. (We'll cover socially responsible investing in an upcoming lesson.) The index's strict inclusion criteria mean that certain industries and sectors are more represented than others. This leads the fund to a pronounced sector profile, including a much larger stake in financials--the fund holds more than 25% in the sector--versus the Growth Index, which holds just 6% in financials. The financial-services sector has been the worst performing sector over the last five years, acting as a major headwind against the Social Index Fund.

Knowing what index a fund tracks gives you a handle on the risks and returns you can expect and how they differ from other index funds. Although both funds feature Apple AAPL as their top holding (as of March 2011), J.P. Morgan shows up as the second-largest stake in the Social Index, at 3.5%. Wells Fargo is also in the top five holdings. Neither name shows up in the Growth Index at all.

Know Your Options

Thanks to the variety of index funds, you have much more flexibility than a decade ago, when tracking the S&P 500 was one of the only indexing options. Today, you can build a well-balanced portfolio made up entirely of index funds.

Here are some common indexes; there are various funds tracking these indexes, or some variation on them.

U.S. Stock Indexes

Wilshire Large Growth

Screens 750 largest U.S. stocks for sales growth and other growth indicators.

S&P 500

500 of the largest U.S. stocks, both value and growth.

Wilshire Large Value

Screens 750 largest U.S. stocks for lowest P/E and P/B.

Wilshire Mid-Cap Growth

Screens 501st to 1,000th largest U.S. stocks, following same criteria as Wilshire Large Growth.

S&P 400

501st to 900th largest U.S. stocks, both value and growth.

Wilshire Mid-Cap Value

Screens 501st to 1,000th largest U.S. stocks, following same criteria as Wilshire Large Value.

Wilshire Small Growth

Screens 751st to 2,500th largest U.S. stocks, following same criteria as Wilshire Large Growth.

Russell 2000

1,001st to 3,000th largest U.S. stocks, both value and growth.

International Indexes

MSCI World

Designated to track equity market performance of 24 developed market countries worldwide

MSCI EAFE

Designed to track equity market perfromance of 22 developed market countries worldwide, excluding the U.S. and Canada.

MSCI Emerging Markets

Designed to track equity market performance of 21 emerging market countries, including Brazil, Russia, India, and China.

Bond Indexes

BarCap Aggregate Bond Index meant to be a proxy for investment-grade bond market in the U.S.

Know the Tax Effects

One of the most common myths about indexing is that all index funds are tax-efficient. Funds that buy the biggest stocks, such as Vanguard 500, do boast terrific tax efficiency: As of April 2011, Vanguard 500's shareholders had kept about 87% of their pretax earnings from the past 10 years. That's because stocks that drop out of the large-cap S&P 500 usually are pretty small players in the index (most companies drop out of the index precisely because they've become too small)—after the 228th stock, none accounts for more than 0.10% of the index. When index funds sell these smaller positions, they don't reap sizable taxable gains.

Don't expect similar tax efficiency from funds tracking other indexes, though. Funds following smaller-cap indexes have to sell stocks that have grown too large to remain in the small-company index; because those are also the funds' largest positions, selling them means realizing large capital gains, which then have to be distributed to shareholders.

You can find out how tax efficient an index fund is by checking out its Fund Report on Morningstar.com.

Know the Costs

Another common assumption about indexing is that all index funds are cheap. Because they don't demand the resources of active management, they certainly ought to be. But some index funds charge surprisingly high annual expenses. Consider this: Transamerica Partners Stock Index DSKIX, one of the priciest no-load S&P 500 index funds in May 2011, takes a 0.65% bite out of your investment every year. That is awfully steep when you consider that the Schwab S&P 500 Index SWPPX charges a modest 0.09% fee.

Of course, you might willingly pay more for some index funds, such as Vanguard FTSE Social Index (0.29%), because you want the socially responsible screens it applies in deciding which companies to include in its index. But all things being equal, cheaper is better.

304: SRI Funds

Introduction

No politics. No religion. We're taught to avoid delicate subjects at the dining room table.

There's no longer any need to avoid these issues when it comes to investing, though. Now, investors can adhere to their values using socially responsible funds. Very broadly, socially responsible investing (SRI) weaves values-based, nonfinancial criteria into the investment process.

But that definition is pretty broad. The SRI label can apply to various, even complex, investing strategies. However, despite the complexity, there are really just five basic questions you need to answer when looking for an SRI fund.

Despite the complexity, though, there are really just five basic questions you need to answer when looking for an SRI fund.

What Issues Are Most Important to Me?

Before getting bogged down in reams of information about different SRI funds, examine your own values. Which issues are driving you to become a socially conscious investor? Do you simply want to avoid investing in alcohol and tobacco stocks? Are you especially concerned about the environment? Are issues of workplace diversity critical to you? Do you want to avoid weapons makers?

Once you've identified the issues that mean the most to you, decide if you'd like a religious or a secular fund. The largest and best-known SRI funds, such as Pax World Balanced (PAXWX), TIAA-CREF Social Choice Equity (TISCX), and the Calvert funds, are secular funds. They usually avoid weapons makers and nuclear-power, alcohol, and tobacco firms. In addition, many secular SRI funds look for those companies with the best environmental, human-rights, and workplace-diversity records.

A growing number of religious offerings cater to an assortment of denominations. The Praxis funds are designed for Mennonite investors; the Ave Maria and Aquinas funds serve Catholics; the Amana funds were created for Islamic investors; and the Timothy funds serve conservative Christians. The majority of religious funds avoid alcohol, gambling, and pornography stocks, but their screens vary widely in other ways. For example, because of an Islamic principle against usury (interest), the Amana funds don't invest in bonds or many financial stocks.

How Does a Fund Screen Its Investments?

Once you decide which screens are most important to you, it's time to find the closest match. You might start by looking at Web sites that provide details on socially responsible investing. The most complete Web site of how SRI funds screen companies is the Social Investment Forum.

Accurate information about a fund family's screening efforts is also often available on the firm's Web site. Moreover, prospectuses and annual reports carry basic information about the types of social screens that the funds use. SRI customer-service representatives should also be able to answer your questions. Finally, examine a recent portfolio of any SRI fund you're seriously considering. Sure, a fund may say it uses environmental screens, but are those screens stringent enough for you? For example, Neuberger Berman Socially Responsive NBSRX takes a relative approach to screening. That is, the managers look for the companies in each industry with the best workplace and environmental records. That means, however, that the fund owns oil-exploration company Newfield Exploration (NFX). Investors seeking stellar environmental records may not be that comfortable owning even the most socially responsible oil-exploration firm.

Is This Fund Involved in Shareholder Activism and Community Investment?

No corporation will clear all socially responsible hurdles. A company may have an excellent environmental record, but it may not provide the best working environment for its minority employees. If SRI funds demanded perfection from every company they owned, they would never buy anything.

Thus, some fund families, including Domini and Calvert, use shareholder activism to challenge the policies of some of those companies they do own. Because shareholders own the company, they can push for it to change. Other times, funds simply engage the firm in a discussion, quietly pressuring the company to make alterations to the policies it considers unpalatable. To find out if a fund you're considering engages in shareholder activism, visit its Web site or call the company itself.

Is This a Good Investment?

Just because you want to invest with your heart doesn't mean you should risk losing your shirt. SRI funds can perform just as well or even better than their non-socially screened peers. (For example,e Amana Trust Growth (AMAGX) ranks No. 1 and 2 in its fund category over the trailing 10- and 15-year periods through April 2011.) But there are some poorly performing SRI funds out there, and you should avoid those as you would any bad fund.

Also, find out how expensive the fund is. You'll probably have to pay more for your socially screened funds. That's because such funds are typically smaller than their nonscreened peers and smaller funds tend to have higher expenses. Higher expenses may also reflect the additional research required to determine whether or not a company passes the fund's social screens.

How Do These Funds Work in My Portfolio?

Do you want an entire portfolio of funds that match your values, or are you comfortable with just one or two SRI offerings? There are socially responsible funds available in all major asset classes, although they're not equal in quality or quantity. SRI funds focusing on U.S. companies are the most plentiful. However, there are fewer SRI bond and international funds.

If you can't find enough suitable funds to build an all-SRI portfolio, you might simply choose one SRI fund to serve as a good large-cap core holding. After all, the largest companies are likely to have the biggest impact on the issues you care about, so why not focus on the big guys? There are a number of respectable large-cap funds available to socially conscious investors, including Domini Social Equity, Pax World Balanced, and Amana Income (AMANX).

305: Choosing an International Fund, Part 1

Introduction

By April 2011, U.S. investors had poured $1.4 trillion into funds that primarily buy stocks of foreign companies, according to Morningstar Fund Flow Data.

What's the attraction? Alluring returns, for one. Over the trailing 10 years through the first quarter of 2011, international stock funds have returned 7.45% per year on average, versus 5% for domestic stock funds, and only 3.3% for the S&P 500. What's more, foreign investing offers sought-after diversification. As we discussed in Lesson 301: Why Diversify?, if you own a variety of investments, chances are you'll always have a hand in something that's performing well.

Unless you understand how to evaluate these funds, though, investing abroad can be pretty harrowing. The key to smart foreign-fund investing comes down to looking beyond returns and Morningstar ratings and understanding how your fund invests. By doing so, you will be able to set reasonable expectations for the investment and uncover its hidden risks—and avoid surprises. Start by asking the following two questions. You can find most of the answers to these questions on the Morningstar Fund Report, on the fund family's Web site, or in the fund's shareholder report.

Does the Fund Own Emerging-Markets Stocks?

A good portion of the outperformance of international stocks over the trailing 10 years is due to emerging-markets equities, or stocks of companies domiciled in smaller or less developed markets, such as India, China, or Russia.

Owning emerging-markets stocks has its benefits. First, they can generate robust returns: Over the last 10 years through the first quarter of 2011, diversified emerging-markets funds have blown just about every other fund category out of the water, with an annualized 16% return. Emerging-markets stocks also add more diversity to a U.S. portfolio than stocks from many of the more-developed international markets, such as Germany and the United Kingdom, do. That's because the returns of the U.S. market and other developed markets tend to move in tandem.

There's a price for emerging-markets stocks' exhilarating highs and diversification, though: the threat of steep losses. In June 1998, for example, the MSCI Emerging Markets Index was in a free fall: It had shed 19% in the preceding six months. The developing world suffered currency collapses and soaring inflation, and investors' returns suffered. Then, during the financial crisis of 2008, emerging-markets funds swooned again, dropping over 50% on average, far worse than the S&P 500's 37% drop for the year. If oscillating fortunes make you sweat, limit your search to funds that are light on emerging-markets stocks.

If you're trying to avoid emerging markets, you'll need to be vigilant; after all, most diversified international funds nibble at emerging-markets stocks. In fact, the average fund in the foreign large-blend category held more than 11% of its assets in emerging-markets names in April 2011. Your best bet is to find out which countries a fund frequents. Funds that go shopping in Europe, the U.S., and Japan are focusing on developed markets. But if you see a number of companies from countries in Latin America or the Pacific Region, you'll know that the fund is venturing into emerging markets.

Does It Concentrate in a Specific Region or Country?

While you are examining a fund's country exposure, get a feel for whether the fund prefers a few markets or a particular region, or whether it casts a wider net. Morningstar clumps international funds that focus on a single region into one of the following regional categories: Europe stock, Latin America stock, Japan stock, Pacific/Asia stock, China region stock, and Pacific/Asia ex-Japan stock.

However, funds can overweight particular countries or regions and still land in the broad foreign-stock category because they have enough variety among their holdings to avoid being classified as regional funds. For example, Oakmark International OAKIX and Columbia International Value housed 25% and 30% of their assets in Japan, respectively, in early 2011. The average foreign large-blend stock fund, by comparison, holds 18% in Japan.

Note that a good dose of any single region or country (especially volatile Japan) can deliver uneven results. Largely due to its hefty Japan stake, Columbia International Value has returned far less than most of its peers following the financial crisis of 2008. If you are looking for a smoother ride, find funds that own stocks from a wide variety of markets.

306: Choosing an International Fund, Part 2

Introduction

As you learned in Lesson 305: Choosing an International Fund, Part One, examining the countries that an international fund invests in is central to understanding whether the fund is right for you. If sharp market movements make you nervous, investing in a fund that concentrates just on Latin America or Asia's emerging markets probably isn't the best idea for you.

But the countries in which a fund invests constitute only one factor contributing to an international fund's returns and volatility. Two other elements-the manager's investment style and currency-hedging policy-play equally important roles. Thus, you have two additional questions to ask before buying an international fund.

What Is Its Style?

In the early days, style wasn't an issue for foreign-stock funds. Most funds bought reasonably priced stocks of the world's largest companies. After all, international-investing pioneers such as Sir John Templeton and the managers at Scudder had profited for decades by using such strategies. In the 1990s, though, Janus and American Century met with great success when they began applying the growth-focused strategies they used at home to investing abroad. Their styles were still novel among foreign-stock investors.

The issue of investment style doesn't end with the choice between value and growth. It also involves the question of the size-otherwise known as market capitalization-of the stocks in which a fund invests. To determine an international fund's investment style, consult its Morningstar style box, which you can find on the Fund Report.

A fund's investment style will have a direct impact on its risk level. If ups and downs make you queasy, steer clear of funds that emphasize small foreign companies, because they tend to be more volatile than large-cap players. (Just like volatile emerging-markets stocks, though, foreign small-cap stocks generally do a better job of diversifying a U.S. portfolio than foreign large-cap stocks do.) And the easiest way to get exposure to both large-value and large-growth foreign stocks is through a large-blend foreign fund.

What Is Its Currency-Hedging Policy?

When fund managers buy foreign stocks, they're also effectively buying the foreign currency that the stock is denominated in. So a foreign stock's return is really a combination of two things: the performance of the stock itself and the performance of the country's currency versus the U.S. dollar.

Let's take an example. Say you buy a Japanese stock, Sony (SNE). The value of the stock itself rises 10%. But the yen (Japan's currency) falls 15% against the U.S. dollar. As a U.S. investor, you've lost money on that investment, because even though the stock price has risen, the currency's value has fallen. What if the yen rises 10% instead? Then you have a nice tailwind, because you get the 10% rise in the stock's price and the 10% rise in the currency.

Managers can own foreign stocks and, with a little work, eliminate their exposure to foreign currencies. They do that by hedging their foreign currencies-trading in their foreign currencies for U.S. dollars.

Let's go back to our example. You buy Sony, but hedge your currencies by selling Japanese yen and buying U.S. dollars. Sony's stock rises 10% and the yen falls 10% against the dollar. Because you hedged your currency exposure, whether the yen rises or falls doesn't have any effect on your investment.

Most studies indicate that hedging currencies has only a minimal effect on returns over very long time periods. But over shorter spans, hedging can make quite a difference in a fund's performance. Aside from simply hedging exposure, some funds managers will actively place currency bets to capitalize on a particular macroeconomic view.

If you can't quite understand why a foreign fund is behaving the way it is, chances are the fund manager is doing something with currencies. To avoid the unexpected behavior that can accompany mistimed currency plays, you can favor funds with strict hedging policies--those that never hedge or those that always do. Consult a fund's shareholder report to find out whether or not it hedges its currencies. If this information isn't available in the shareholder report, call the fund company and ask.

307: Bond Funds, Part 1

Introduction

Glazed eyes. Gaping mouths.

Bond talk is generally considered a sure-fire way to put your dinner companions to sleep. We're convinced that this is largely because people don't really understand the basics of bonds and like everyone—yes, everyone, including the media and a lot of so-called market "experts"—they're terrified by the fixed-income world.

In the next two lessons, we'll quell that terror, detailing all you need to know before choosing your first—and perhaps only—bond fund.

What Bonds Are

If you're going to choose a bond fund, the harsh truth is that you need to know what a bond is. When you buy a stock, you become part owner of the company. When you buy a bond, you are making a loan; you are simply lending money to the company (or, in the case of Treasury bonds, to the government). Your loan lasts a certain period of time—until the date that the bond reaches maturity. In the meantime, you can typically expect dividend payments (commonly known as coupons) as interest on the loan. Thus, the essential issues for bond investing will be the bond's maturity, how much interest it pays, and how confident you are that the business or government can actually repay the loan.

Understand Interest-Rate Risk

Bond prices move in the opposite direction of interest rates. When rates fall, bond prices rise. When rates rise, bond prices fall. To determine how dramatic a fund's ups and downs might be, check out its duration.

Duration—or interest-rate risk—boils down to the three risk factors of bonds: maturity, the cash flows from coupons, and current interest rates. Sound confusing? Think of a bond as a pro-basketball player's contract. In negotiating his first contract, a top draft pick wants a salary that will stay competitive with what's offered in the NBA. Looking at different contract proposals, he'll consider the length of a contract (its maturity), the salary (the coupons or cash flow), and wages across the league (current interest rates).

Suppose the player is offered an average five-year contract at $1 million a year. He likes the cash flow, but he's nervous about the long-term commitment. If he takes the five-year contract and the average NBA salary spikes up, he'll be earning a lower salary than average in the last years of the deal, and a lower salary is more likely to become noncompetitive than a higher one. Duration expresses these trade-offs as a kind of risk measure that investors can use for comparison purposes.

One of the nonintuitive aspects of duration is that it's expressed in years, just like maturity. But duration isn't nearly as concrete a concept as maturity. Take a bond with a maturity of 11 years and a duration of 8.5 years. At the end of 11 years, we know that something happens—the bond is paid off. But what happens after 8.5 years? Nothing, really.

Duration is a useful abstraction, though. The higher a bond's duration, the more it responds to changes in interest rates. If a bond fund has a duration of five years, you can expect it to gain 5% if interest rates fall by one percentage point, and to lose 5% if interest rates rise by one percentage point. And that bond fund with a duration of 8.5 years? We know it's more volatile, and more vulnerable to interest-rate changes, than the bond fund with a duration of five years.

At Morningstar, we're fans of funds with short- and intermediate-term durations—between three and five years. They're just less volatile than longer-duration funds and offer nearly as much return. For example, over the trailing 15 years through May 2011, Vanguard Intermediate-Term Bond Index VBIIX returned 6.89% on average per year, while Vanguard Long-Term Bond Index VBLTX returned less than a percentage point more, at 7.74%. However, the Intermediate-Term Fund's standard deviation was almost half the Long-Term Fund's.

Understand Credit Risk

Interest-rate risk is but one risk that bond funds face. The other, credit risk, involves the fund's credit quality. Credit quality simply measures the ability of an issuer to repay its debts.

Think of it this way. If your no-good brother-in-law who hasn't held a job in six years wants to borrow $50 from you, you would probably wonder if you'd ever see that $50 again. You'd be far more likely to loan money to your super-responsible kid sister who just needs a little emergency cash. The same dynamic occurs between companies and investors. Investors eagerly loan money to well-established companies that seem likely to repay their debts, but they think twice about loaning to firms without a solid track record or that have fallen on hard times.

Judgments about a firm's ability to pay its debts are encapsulated in a credit rating. Credit-rating firms, such as Moody's and Standard & Poor's, closely examine a firm's financial statements to get an idea of whether a company is closest to being a no-goodnik or a debt-paying good citizen. They then assign a letter grade to the company's debt: AAA indicates the highest credit quality and D indicates the lowest.

So if you hold a bond rated AAA, odds are very good that you'll collect all of your coupons and principal. Indeed, bonds rated AAA, AA, A, and BBB are considered investment-grade, meaning that it's pretty likely the company that issued the bonds will repay its debts. Bonds rated BB, B, CCC, CC, and C are non-investment-grade, or high-yield, bonds. That means there's a good chance that the bond issuer will renege on its obligations, or default. In fact, D, the lowest grade, is reserved for bonds that are already in default.

Of course, you probably don't want a bond that may not pay its promised coupons and principal. The main purpose in owning a bond, after all, is getting your hands on its income. So if you're bond shopping, you're not going to pick up a lower-rated bond just for the heck of it. You need some sort of incentive. That incentive comes in the form of higher yields. All other things being equal, the lower a bond's credit quality, the higher its yield. That's why you can find a high-yield bond fund with a yield of 7%-8% or more, while many investment-grade bond funds offer yields around 4%. Because investment-grade issuers are more likely to meet their obligations, investors trade higher income for greater certainty.

Credit quality affects more than just a bond's yield, though; it can also affect its value. Specifically, lower-rated bonds tend to drop in value when the economy is in recession or when investors think the economy is likely to fall into a recession. Recessions usually mean lower corporate profits and thus less money to pay bondholders. If an issuer's ability to repay its debt looks a little shaky in a healthy economy, it will be even more suspect in a recession. High-yield bond funds usually drop in value when investors are worried about the economy.

308: Bond Funds, Part 2

Introduction

In Lesson 307: Bond Funds, Part 1 we introduced the two drivers of bond performance: duration and credit quality. In this course, we examine what Morningstar brings to the table: the fixed-income (a common term for bonds because they pay a fixed dividend to bondholders) style box and our tips for smart bond-fund buying.

Morningstar's Fixed-Income Style Box

The fixed-income style box is a nine-square box that gives you a visual snapshot of a fund's credit quality and duration. The style box allows investors to quickly gauge the risk exposure of their bond fund.

The horizontal axis of the fixed-income style box displays a fund's interest-rate sensitivity, as measured by the average duration of all the bonds in its portfolio. Morningstar breaks interest-rate sensitivity into three groups: limited, moderate, and extensive. In previous lessons, we explained that short-term (or limited) bond funds are the least affected by interest-rate movements and thus the least volatile; long-term (extensive) funds are the most volatile. Morningstar divides funds into these buckets based on their duration relative to the 3 year effective duration of our core bond index.

The vertical axis of the style box measures credit quality and is also broken into three groups: high, medium, and low. A fund's placement is determined by the average credit quality of all the bonds in its portfolio, and also adjusts for the fact that default rates increase more rapidly between lower grades than higher grades. Funds with high credit qualities tend to own either U.S. Treasury bonds or corporate bonds whose credit quality is just slightly below that of Treasuries. On the other hand, funds with low credit quality own a lot of high-yield, or junk, bonds. Medium-quality funds fall between the two extremes.

The style box can make it far easier for investors to find appropriate funds. Say you need a fund that carries only slightly more risk than a money market fund. Just look for funds that fall within the short-term, high-quality square of the style box. Or perhaps you want a rich income stream but aren't comfortable buying junk bonds. A fund that falls within the long-term, medium-quality square might be the answer. You can find the style box for all bond funds on their Morningstar Fund Reports.

Our Bond-Fund Buying Advice

Look for low costs.

A Wal-Mart WMT mentality is a must when evaluating funds—even more so when the funds in question buy bonds. Because bonds typically gain less than stocks over time, their costs become a heavier burden. Costs are the most important factor when evaluating bond funds, hands down.

Note that, in addition to their expenses, high-cost bond funds often take on more risk than low-cost bond funds. Expenses get deducted from the income the fund pays to its shareholders, so managers of high-cost funds often do the darndest things to keep yields competitive, such as buying longer-duration or lower-quality bonds, or complex derivatives. In doing so, they increase the fund's risk.

Managers with low expense hurdles, in contrast, can offer the same yields and returns without taking on extra risk. Plenty of terrific bond funds carry expense ratios of 0.60% or less.

Focus on total return, not yield.

Yield provides instant gratification in the form of regular income checks. But chasing yield can have its costs. Some funds use accounting tricks to prop up their yields at the expense of their principal, or net asset value (NAV). Managers will pay more than face value for high-yielding bonds and distribute that entire yield as the bonds depreciate to face value. Or they'll buy undervalued bonds and supplement their lower yields with capital gains. Both practices cut into NAV.

Investors sometimes accept dwindling NAVs for burly yields because they want the regular income that yields offer. Bad idea. Yield is nothing more than a percentage of NAV, so shrinking NAV leads to smaller income checks over time.

Imagine a $10,000 investment in a fund carrying an NAV of $10 and yielding 6.5%. One year later, the fund still yields 6.5%, but its NAV has slipped to $9. In that one year, income dropped from $650 to $585.

So instead of judging a bond fund by its yield, evaluate its total return—its yield plus or minus any capital appreciation or depreciation.

Seek some variety.

You wouldn't choose a fund that buys only health-care stocks as your first equity fund, so why should your first (and perhaps only) bond fund be a narrowly focused Ginnie Mae fund? Yet many investors own bond funds that buy only government bonds, or Treasuries, or mortgages.

For your first—and maybe only—bond fund, consider intermediate-term, broad-based, high-quality bond funds that hold both government and corporate bonds. Those investors in high tax brackets might consider municipal-bond funds, whose income is exempt from income taxes.

309: Munis

Introduction

Driving a Jaguar. Shopping at Neiman Marcus. Investing in municipal bonds.

These activities may seem exclusive to the rich and famous, but you don't need to be part of the elite to invest in municipal bonds. Investors in the highest tax bracket may profit most from municipal bonds' tax-exempt status, but investors in the lower tax brackets can benefit, too.

In this lesson, we'll find out how municipal bonds work, and why they are one of the last great tax breaks for investors. We'll then share Morningstar's hints for selecting a good municipal-bond fund.

What's a Muni?

States, cities, municipalities, and county governments can all issue municipal debt, or muni bonds, to raise money. They use the proceeds to improve roads, refurbish schools, or even build sports complexes. The bonds are usually rated by a major rating agency, such as Standard & Poor's or Moody's, based on the quality of the issuer.

Unlike income from bonds issued by corporations or the federal government, income generated by municipal bonds is exempt from federal and sometimes state income taxes. So when examining a municipal bond's yield, you must take the implicit tax advantage into account.

Let's take an example. Say you're an investor in the 25% tax bracket. You want to know which investment offers you a better yield: a corporate-bond fund yielding 7% or a muni-bond fund yielding 6%. After taxes, the muni fund is the higher yielding investment: Take 25% in taxes off the corporate-bond fund's 7% yield, and you're left with an aftertax yield of just more than 5%.

Muni-Fund Considerations

As you can see, municipal-bond funds can certainly be a compelling choice for the bond portion of your portfolio. If you decide that munis make sense for you, consider the following when searching for a suitable muni fund. (You can find much of this information on a Fund Report, in its shareholder report or prospectus, or on the fund family's Web site.)

Intermediate-Term Durations. As with most bond funds, a municipal-bond fund's value rises and falls depending on interest-rate changes. To determine a fund's interest-rate risk, check its duration. A long duration usually means greater potential for short-term gains and losses.

In December 2010, Vanguard Long-Term Tax Exempt's (VWLTX) duration was around 7 compared with Thornburg Limited-Term Municipal National's (LTMFX) duration of 4. No wonder the Vanguard fund lost much more than the Thornburg fund (-1.56% versus 0.48%) in December 2010 through February 2011 as interest rates rose. But when rates were more subdued in 2009, the Vanguard fund's longer-duration portfolio outgained the Thornburg fund's, 14% to 8.5%.

Our suggestion: Choose the happy medium. The intermediate-term and long-term municipal-bond fund categories have returned roughly the same (4.7% annualized) over the trailing 10 years through 2010. But the intermediate-term muni category has had less volatility. As with most bond funds, a municipal-bond fund's value rises and falls depending on interest-rate changes. To determine a fund's interest-rate risk, check its duration. A long duration usually means greater potential for short-term gains and losses.

Average Quality Some municipal-bond funds are vulnerable to credit problems and bond defaults. (That is, the issuers of the bonds they own could fail to pay up on their obligations.) Some aren't.

Baird Intermediate Muni Bond Fund (BMBIX), for example, focuses on very high-quality munis, with over 70% of the portfolio allocated to AAA-rated bonds as of March 2011. Such bonds are very unlikely to face default, but they are also highly sensitive to interest-rate movements, and generally yield less than lower-quality bonds. On the other end of the credit spectrum lies Franklin High Yield Tax-Free Income (FRHIX), which invests heavily in lower-rated, higher-yielding munis.

For most of the 1990s, the strong economy masked the risks of high-yield municipal bonds. The average high-yield muni fund returned about 3% more annually than the average high-quality offering during the decade ending Dec. 31, 1999. Roles reversed in the 2000s, though, as the economy has slowed and more municipalities threaten to default on their debts.

Here too, we recommend a middle-of-the-road approach: Favor funds with average credit qualities of AA. They have enough high-quality bonds to skirt most credit scares but are still flexible enough to snap up higher-yielding, lower-rated issues.

Know Your State's Tax Rate. Some municipal-bond funds invest all over the country, while others focus on a single state. National funds offer geographical diversification and can seize opportunities from New York to New Mexico.

Single-state funds, meanwhile, provide residents of some states with income that's exempt from both federal and state taxes. (National muni funds only give you the federal tax break.) A Californian doesn't pay the state income tax on the income from a California muni fund, and a resident of the Bay State avoids the Massachusetts tax on income from a Massachusetts fund.

Choose a single-state fund if you live in a high-tax state. Otherwise, go national for the diversification benefits.

Seek Low Costs. Costs are important for all bond funds, but especially for municipal-bond funds. In any given year, the difference between the highest- and lowest-returning muni funds can be just a few percentage points. A small cost advantage therefore goes a long way. Invest in a muni fund with an expense ratio of less than 1%.

Avoid AMT, if Need Be. You can still owe taxes on the income of municipal-bond funds if you're exposed to the Alternative Minimum Tax (AMT) and the fund you own holds bonds subject to this tax. Fund managers buy bonds subject to the AMT because they tend to yield more than non-AMT bonds.

If you're concerned about the AMT, choose a muni fund that avoids bonds subject to the tax, such as T. Rowe Price Tax-Free Income (PRTAX). Fund family websites and prospectuses should spell out each fund's AMT policy.

Funds400

401: Shades of Value

Introduction

Everyone has a different definition of value. For example, you and your best friend are comparing footwear (or grocery stores, plumbing services, or even housing). You call your shoes a deal because you got them on sale 50% off! Your friend, meanwhile, considers her shoes a value buy simply because she paid less than she would have for a comparable brand.

Fund managers who buy value stocks express similar differences of opinion. All value managers buy stocks that they believe are worth significantly more than the current share price, but they tend to argue about just what makes a stock a good deal. How a manager defines value will determine what his or her portfolio includes and, ultimately, how the fund performs.

Why Shadings Matter

Consider the following as a great example of why investors need to understand how their fund managers define value. Schneider Value (SCMLX) and Forester Value (FVALX) are both large-cap funds that fall into the value side of the Morningstar Style Box, but their performances over the past three years through June 2011 have been startlingly different. Schneider has lost 8.6%, landing in the category's basement, while Forester Value has gained 7.3%, making it a top category performer over the trailing time period.

What made the difference? Different definitions of value and different strategies. Arnie Schneider III, manager of Schneider Value, and his team use fundamental research to identify both struggling companies and industries in a rough patch. He often invests in companies going through management changes, strategy shifts, or cost cuts, and pays dirt-cheap valuations. That strategy has paid off in the past, but the fund's gutsy approach has also backfired at times. Owning--and adding to--the likes of Fannie Mae, Freddie Mac, and Countrywide during the market meltdown were among Schneider's worst moves.

Meanwhile, Tom Forester of Forester Value also looks for attractive valuations and scans for historically low P/E, price/cash flow, and price/book ratios as well as companies that pay dividends. Once he finds a cheap company, though, he will only buy if it has a solid balance sheet, good competitive position, and historical earnings per share and dividend growth. In 2008, Forester held a significant cash stake as he waited for bargains to appear, allowing him to beat the pack during the depths of the downturn.

On the flip side, during market rallies, Forester Value's conservatism can cause the fund to badly lag (and often it had ended up in the category's basement in bull markets). Schneider Value, on the other hand, can roar back during speculative market rallies, as its deeply out-of-favor names bounce back hard.

So, although both funds are value vehicles, the execution is vastly different, and can lead to strikingly different performance profiles. Thus, it is important to dig beyond the style box to truly understand how a fund is run and what kind of performance you may expect in different market environments.

Relative Value

Value strategies roughly divide into the relative-value and absolute-value camps. Not surprisingly, there are a lot of variations within each group.

Fund managers practicing relative-value strategies compare a stock's price ratios (such as price/earnings, price/book, or price/sales) with a benchmark and then make a decision about the firm's prospects. In other words, value is relative. These benchmarks can include one or more of the following:

The Stock's Historical Price Ratios

Companies selling for lower ratios than usual can be attractive buys for value managers. Often, these companies' prices are lower due to some "bad news," to which the market often overreacts. Some value managers have picked up Cisco (CSCO) in late 2010 and early 2011, for example, as a string of recent earnings misses have soured investor sentiment on the firm. But many believe that management's commitment to refocus the firm on its core operations will make the sell-off seem overdone.

The Company's Industry or Subsector

A manager may believe that a company is undeservedly cheap compared with its competitors. For example, Goldman Sachs Large Cap Value looks for stocks on an industry-by-industry basis, seeking companies that are trading cheaply relative to their industry peers. The fund also limits sector bets to within a few percentage points of the Russell 1000 Value Index.

Funds that look for companies that are cheap relative to their industry peers may well take on more price risk than absolute-value funds. For example, in early 2000, even though the technology sector as a whole was dramatically overvalued, a relative-value manager, or a manager that needed to maintain a certain percentage in each sector according to an index benchmark, might have continued buying technology stocks that appeared cheap relative to other technology stocks. Meanwhile, value managers following a different approach might have avoided technology altogether.

The Market

In this case, managers look for companies that appear attractively valued relative to the broader equity market, not just their industry peer groups. For such a manager, technology stocks wouldn't have been a likely place to find bargains in early 2000, even though many would have filled the bill for a manager seeking companies that were merely cheap relative to their industry peers.

For these managers, a company may be attractively valued because of issues specific to its own operations that have depressed its share price or because it's in an out-of-favor industry. This scenario is common with cyclical sectors, such as industrials or consumer discretionary names.

Absolute Value

Managers such as the team at Longleaf Partners (LLPFX) follow an absolute-value strategy. They don't compare a stock's price ratios with something else. Rather, they try to figure out what a company is worth in absolute terms, and they want to pay less than that figure for the stock.

Absolute-value managers determine a company's worth using a variety of factors, including the company's assets, balance sheet, and likely future earnings or cash flows. They may also study what private buyers have paid for similar companies.

At Longleaf, the managers look for companies that trade at discounts of 40% or more to the team's estimates of their intrinsic value, using discounted cash-flow analysis, asset values, or sales of comparable firms to determine the latter. The managers place much importance on the ability of a company's management to run the business on an operational level and to effectively allocate capital. They often take sizable positions, and the fund typically holds 20-25 names. The turnover rate is typically very low.

Because of this approach, the Longleaf portfolio isn't broadly diversified, and its concentrated approach means that trouble in a few top holdings can have a significant negative impact on returns. Indeed, for six of the past seven years (as of early 2011), the fund has landed in either the top decile or bottom decile of the large-blend category.

However, over the long term (10- and 15-year periods), the fund lands solidly in the top 10% of its category.

This case study illustrates the patience required of investors in an absolute value fund. Because such a fund may look very different than the broad market, and its performance may deviate as a result, it can look very out of step over shorter time periods. Of course, some absolute value funds are better than others, but even the best absolute value funds can be misused by investors who can't stomach the rougher ride.

When Value Managers Sell

There are two chief reasons value managers will sell a stock: It stops being a value, or they realize that they made a bad stock pick.

Stocks stop being good values when they become what managers call fairly valued. That means that the stock is no longer cheap by whatever value measure the manager uses. For relative-value managers, that could mean that the stock has gained so much that its price ratios are now in line with industry norms. For an absolute-value manager, that could mean that the stock's price now reflects the absolute worth the manager has placed on the company.

A manager may also sell a stock because it looks less promising than it did initially. In particular, new developments may lead the manager to a less favorable evaluation of the company. Nevertheless, if the stock's price drops but the manager believes the company itself is still attractive, that may be a chance to buy even more of it.

402: Shades of Growth

Introduction

Not everyone loves a sale. After all, sales can be messy and tiring and you can pick up some real duds along the way, whether it's a sale on shoes or refrigerators or an old house that has dry rot underneath the hardwood floors.

Value and growth are often considered opposites in investing, and for good reason. Most growth managers are more interested in a company's earnings or revenues and a stock's potential for price appreciation than they are in finding a bargain. Thus, growth funds will usually have much higher average price/earnings and price/book ratios than value funds, as the managers are willing to pay more for a company's future prospects. Value managers want to buy stocks that are cheap relative to the company's current worth or some other benchmark.

Of course, growth managers have different styles, just like value managers do. And not surprisingly, those styles have a big effect on how a fund performs and how risky it is.

Earnings-Driven

The majority of growth managers are earnings-driven, which means they use a company's earnings as their yardstick for growth. If a company isn't growing significantly faster than the market average or its industry peers, these managers aren't interested.

Within this earnings-driven bunch, momentum managers are by far the most daring. Momentum investors buy a rapidly growing company that they believe will deliver a quarterly earnings surprise or other favorable news that will drive the stock's price higher. Managers who follow this style try to buy a stock just prior to a positive earnings announcement (that is, when a company announces that its earnings are higher than Wall Street analysts predicted) and sell it before it misses an estimate (that is, when its earnings fall below what analysts thought they would be) or has other negative news. Momentum managers pay little heed to stock prices. Their funds, therefore, can feature ultra-high price multiples. They also tend to have high annual turnover rates, which can make for big capital-gains payouts and poor tax efficiency. Some prominent momentum funds include Turner Midcap Growth TMGFX, Brandywine BRWIX, and American Century Vista TWCVX.

Some managers seek earnings growth in a different way. Instead of searching for stocks with the potential to surprise during earnings season, these managers seek stocks that boast high or sustainable yearly growth rates. Although some funds will look for high growth rates higher than 20% (and will often pay up for such performance), other, more moderate earnings-growth-oriented managers look for stocks growing in a slow but steady fashion. The slow-and-steady group usually buys blue-chip stocks such as Wal-Mart WMT and Oracle ORCL. As long as these stocks continue to post decent earnings, slow-and-steady managers tend to hold on to them. Steady-growth funds often have more modest price ratios than their peers. But when reliable growers take the lead, these funds endure as much price risk as the more aggressive funds. Funds known for following this moderate-earnings-growth strategy include American Funds Growth Fund of America AGTHX and Fidelity Blue Chip Growth FBGRX.

Revenue-Driven

Of course, not all growth companies have earnings. In particular, younger companies may be unprofitable for years until their businesses reach critical mass. Some growth managers will buy companies without earnings if the companies generate strong revenues. (Revenues are simply a company's sales; earnings are profits after costs are covered.) Because there is no guarantee that firms without earnings will ever turn a profit, this approach can be risky.

Growth at a Reasonable Price

Managers who seek growth at a reasonable price (GARP) try to strike a balance between strong earnings and good value. Some managers in this group find moderately priced growth stocks by buying the rejects of momentum investors; often, these stocks have reported disappointing earnings or other bad news. GARP managers also look for companies that have been ignored or overlooked by market analysts and that are therefore still selling cheaply. Like value investors, GARP investors try to find companies that are only temporarily down and out and that have some sort of catalyst for growth in the works. Because many GARP managers are sensitive to high price tags, this group of growth funds often features lower-than-average price multiples than the flat-out growth funds we discussed in the preceding section. As a result, these funds can land in the blend column of the Morningstar Style Box. GARP funds also tend to have lower turnover rates than pure-growth funds and are therefore generally more tax-efficient than more aggressive growth offerings. Prominent GARP funds include Fidelity Contrafund FCNTX and American Funds New Economy ANEFX.

Mixing It Up

Few managers stick to just one kind of growth strategy. Instead, most blend a variety of stock-picking approaches. Fidelity Large Cap Stock FLCSX, for example, owns both steady growers and more economically sensitive names, but management attempts to buy them when they trade cheaply relative to their growth prospects.. Thanks to this diversity, these funds can perform better than their narrower peers across a wider variety of market environments.

403: Using Focused Funds

Introduction

Focused funds (also known as concentrated, compact, select, or nondiversified funds) have become very popular. Many fund families now offer at least one.

Should you buy one? And if so, what should you look for? Before answering those questions, let's examine what exactly we mean when we talk about focused funds.

What Are They?

There is no standard definition for focused funds. The most common reference point is the number of individual stocks a fund holds. Generally, a focused fund will hold fewer than 40 stocks, and some of the most focused funds, such as Oakmark Select (OAKLX), hold around 20 names. Find how many stocks a fund holds by checking its portfolio in its shareholder report or looking at the Portfolio section of its Morningstar fund report.

Numbers aren't everything: A fund can also be considered focused if it concentrates a large percentage of its assets in its top five or 10 holdings. (This style is a common byproduct of investment strategies that also limit the fund's number of holdings to fewer than 40 stocks.) Columbia Acorn Select (LTFAX), for example, is considered a focused fund; as of March 2011, it devoted nearly one fourth of its assets to its five largest holdings.

Finally, focused can refer to a diversified fund's sector exposure. Some funds concentrate in only one or a few market sectors. For example, CGM Focus (CGMFX) invests a lot in some industries, such as technology and energy, and 0% in others, such as consumer defensive, health care, and utilities (as of March 2011). Sometimes, but not always, funds can become focused by sector because they own few individual stocks.

Why Would You Want One?

Buying a fund with a limited number of holdings is similar to picking a bunch of individual stocks-except that you don't pick those stocks yourself. Focused-fund managers often run these portfolios in addition to managing more diversified funds. Their focused funds are those in which they invest heavily in their favorite stocks or "best ideas," without worrying much about diversification or risk control. These managers usually argue that they're better able to generate superior returns by closely following a handful of top-quality stocks rather than a large collection of names.

For example, the highly concentrated Fairholme Fund enjoyed a nearly uninterrupted string of top-tier annual performances through 2010, but it stumbled in early 2011 with its nearly 90% stake in financials weighing it down. Although fallen angels such as AIG (AIG) and Citigroup (C) (both in the fund's portfolio) rebounded nicely in 2010 after the financial crisis, they came back to earth in early 2011, with the fund landing in the basement of its category over that short time period. Given manager Bruce Berkowitz's contrarian approach and concentrated bets, periods of poor returns are inevitable, even though the fund's longer-term record is stellar. That means funds such as Fairholme require far more conviction and patience than most in order to pay off for investors.

Given the added risk of investing in a focused fund, consider your own tolerance for short-term volatility. Would you be comfortable owning a fund that loses several percentage points in a matter of days? Could you stomach owning a fund that severely underperforms its category for a year or more? Even risk-tolerant investors will probably only want to buy a focused fund for a well-diversified portfolio and relegate it to their portfolio's most aggressive spot. Concentrated funds can be particularly useful counterweights to S&P 500 index funds or other broadly diversified funds.

What to Look For

If you think your investment portfolio could use a focused fund, look for the following five qualities before you buy.

Experienced management Because so much rides on the individual stocks in a focused fund's portfolio, it is crucial that you look for a fund run by a seasoned manager. Few fund managers cut their teeth on a focused fund. Usually, they get their start in the industry running fairly well-diversified portfolios. Look at the performance and risk records of the funds the manager has run in the past. Did those funds produce better performance than their category peers? It's even better if a manager already has a long and solid record running a focused fund.

A reputable fund family In conjunction with an experienced manager, look for focused funds from proven fund families. Some firms are better known for their stock-picking ability than others, and families that offer extensive research capabilities are probably a good bet. Also, look for a fund from a family known for its quality control. Does the family tolerate long periods of underperformance? Or does it take action, as Vanguard does with its subadvised funds when it sees something it doesn't like? (A fund is subadvised when the company offering the fund hires outside managers to run it.

Vanguard does that with many of its non-index equity funds.) Families with reputations to protect are likely to be more vigilant than recent startups that have nothing to lose.

Strong long-term performance You may be attracted to a focused fund because of a great quarter or sensational year. But because focused funds are linked so tightly to a few stocks or sectors, most of them will have a few glory days. Instead, look for a fund that has done well over time. If managerial experience at a previous fund is not available, then make sure the fund you're interested in buying possesses at least a solid three-year record.

Modest expenses As with any other fund purchase, check the cost before you write your check. You should avoid any focused fund with an expense ratio higher than 2%.

Risk-busting approach Most focused funds are risky investments by their very nature, but even in this arena there are ways you can reduce risk. Consider a fund that follows a value strategy (or is at least valuation-conscious), rather than a growth strategy. Clipper (CFIMX) is a value-oriented focused fund. You might also consider a fund that's focused in its number of holdings but that has some sector diversification, making it less vulnerable to economic cycles.

404: Style-Box-Specific versus Flexible Funds

Introduction

Legendary fund manager and former head of Fidelity Magellan Peter Lynch was an opportunist. Sometimes he liked growth stocks. Other times, value investments held more allure. Large companies struck his fancy but so did smaller firms. Funds that are managed in this fashion often don't stick to one part of the Morningstar style box (see lesson 207), but migrate from box to box.

Some investors prefer this sort of flexibility, with a manager who is free to mine opportunities (and avoid trouble spots) wherever they may crop up. Other investors, meanwhile, prefer for their funds to stick to one style, so they can more easily build and maintain diversified portfolios according to their needs.

Morningstar may seem to be among the "style purists." After all, we categorize funds by narrow investment styles, such as large growth or small value. But we don't necessarily favor funds that stay in the same part of our style box year in and year out. In fact, while we know that style-specific funds have their charms, we acknowledge that flexible funds also have advantages. Neither one is better than the other. It's up to you to decide how to use each in your portfolio.

Flexibility's Power, Purity's Charms

Lynch wasn't the only fund-industry luminary who would have the freedom to pursue his best ideas, wherever they may lie. David Decker of Janus Contrarian JSVAX, scours a much broader opportunity set than most of his large-blend peers and is willing to pick up stocks whose value has not yet been realized by the majority of the market. Over the last several years, the fund has traveled from the large-blend to the large-growth to the mid-value squares of the style box.

But flexible funds have their downside: They can make building a portfolio tricky. After all, if a fund is a small-cap fund one day and has large-company tendencies the next, how can investors be sure they're really diversified? No wonder some advisors and investors are wary of flexible funds.

Style-specific funds, meanwhile, tend to cleave to one part of our style box. They always invest in, say, small-value stocks or mid-cap growth stocks. Using index funds, such as Vanguard Value VIVAX, is one of the more certain ways to ensure style purity in a fund. As you can imagine, it's much easier to build and monitor a portfolio of style-pure funds. If you select four style-pure funds that invest in different ways, you can be confident that they'll continue to invest that way. Thus, you're always sure that you're diversified.

Using Flexible Funds

Writing off flexible funds altogether can mean tossing aside some great funds and fund managers, however. Here's how even style-specific devotees might work flexible funds into a portfolio.

Give away some but not all control.

Use style-specific funds at the core of your portfolio. Treat them as building blocks to meet your asset-allocation goals and save a portion of assets for flexible funds. That way, your overall asset allocation won't get beyond your control.

Because change is a given, monitor flexible funds carefully.

Keep an eye on where and why your flexible fund's manager is moving. And if you choose to devote significant assets to more than one flexible fund, enter your portfolio in Morningstar.com's Instant X-Ray to take note of how your overall portfolio is positioned. Instant X-Ray will tell you how much you have in each investment style. If all of your flexible-fund managers are favoring large-growth stocks, you may want to assume they know something you don't and let them ride. Or you may want to temper that bet somewhat. In any event, know what you own.

405: Sector-Fund Investing

Introduction

Everyone knows you can start a fire using a magnifying glass: Grade school kids routinely put this optics lesson to the test. This experiment teaches a valuable lesson: Focus is a powerful thing.

The power of focusing is the principle behind sector funds, mutual funds that invest in a specific industry. How powerful can sector investing be? At the end of 1999, nine of the 10 funds with the best 10-year returns were technology funds.

Such stellar returns are often the reason investors flock to particular sectors, such as technology during 1999 or financials in the mid-1990s. More recently, at the end of 2007, natural resources and real estate funds led the charts with top-tier 10-year records.

While sector investing offers great potential, it offers great risk, too. We all know what happened to technology and real estate after their runups, and even commodities swooned during the 2008 downturn. How much more volatile can these funds be? The standard deviation (the variation of a fund's monthly returns around its average monthly return) of the average technology fund is almost double the S&P 500's.

In this lesson, we'll discuss the variety of sector funds available, ways you might-or might not-use them in a portfolio, and what to look for when buying a sector fund.

The Many Flavors of Sector-Fund Investing

Investors have many sector funds to choose from, spanning eight different Morningstar categories: communications, consumer discretionary, consumer staples, equity energy, financials, health care, industrials, natural resources, precious metals, real estate, technology, and utilities. Some sector funds focus more narrowly, homing in on a particular subsector of an industry. For example, Fidelity Select Biotechnology (FBIOX) is categorized as a health-care fund, but it invests in just biotech companies, which tend to have very different characteristics from medical suppliers and diversified pharma firms. Likewise, Fidelity Select Wireless (FWRLX) is a telecom fund that focuses entirely on wireless service providers and gearmakers. Given their more concentrated focus, these funds could be even more volatile than the typical sector fund.

Do You Need a Sector Fund?

Not according to John Bogle, the founder of Vanguard funds and the granddaddy of index investing, who is firm: "You could go your entire life without ever owning a sector fund and probably never miss it." (But despite this, Vanguard offers sector funds such as Vanguard Health Care (VGHCX) and Vanguard Energy VGENX.) Bogle's point is simply that a well-diversified portfolio doesn't need sector funds.

Let's take an example. If you owned Vanguard Total Stock Market Index (VTSMX), you'd have all of the major U.S. industries covered. The fund's portfolio would range from nearly 2.8% in real estate stocks to about 16.7% in technology as of March 31, 2011. Your other significant exposure would be almost 13.6% in financials and 13.5% in industrials. That's pretty broad diversification, so you might not need or want to invest additionally in a sector fund-especially not one focused on bank stocks or tech firms, or anything else significantly represented in the index.

Using Sector Funds to Diversify

This is the bringing-coals-to-Newcastle rule: If a sector is already well represented in your portfolio, why buy more of it? If you're going to make use of a sector fund, it should add something your portfolio lacks, or it should increase your exposure to a sector that is underrepresented in your portfolio.

To determine whether you should buy more funds in a particular sector, you need to know and monitor your portfolio's sector weightings. Vanguard Total Stock Market, for example, owns only 3.18% in utilities as of March 31. More conservative investors who like the dividends that utilities stocks often pay out might want to right bump up their exposure with a utilities sector fund.

Speculating with Sector Funds

It can be so tempting to dive into a part of the market that you think will soar based on some trend, an analyst's recommendation, or your gut. Morningstar isn't a fan of this kind of speculation, but if you must, do it sensibly. Reserve a very small slice of your portfolio-say 5% or less-for such activities and make sure the remainder of your portfolio is well-diversified and designed to meet your long-term investment goals with a level of risk that is acceptable to you. Finally, understand that when you speculate, you may be wrong-in other words, be prepared to lose that 5% of your portfolio.

We also recommend that you avoid buying a fund that's already hot. Investors who fall prey to that temptation often miss out on some great returns from underappreciated funds. If a fund is hot enough to catch investors' attention, many of its holdings may sport tremendously high price multiples. Investors chasing such hot funds can wind up losing money when the companies they hold fail to live up to the lofty expectations embedded in their prices.

Take T. Rowe Price Media & Telecom (PRMTX), a topnotch sector fund. The offering boasted fantastic returns when the communications frenzy took hold in the late 1990s, posting a 93% gain in 1999. Investors loved the sector and they hopped on board just in time to spend the next three years in the red. It's worth pointing out, of course, that the fund continues to impress-at least on a relative basis. It may lose a lot of money from time to time (such as 2008, when the fund lost 46% compared with the S&P 500's 37% decline), but it generally outpaces its industry rivals nicely, and is at the top of its category over the trailing 5- and 10-year period.

If you can't resist the temptation to bet on a sector, though, do one of two things: Either play long-term trends (the aging of the baby boomers and increased demand for health care is one such trend) and dollar-cost average (invest a set dollar amount each month) into your sector fund, or make a bet on an out-of-favor sector, particularly one that most other fund investors are avoiding. Because the average investor doesn't have such good timing, you can often outperform by buying what most investors are selling. We'll explore this strategy in a later lesson.

A Few More Questions

In addition to the questions you would ask about performance, risk, portfolio holdings, management, and costs before buying any fund, ask two more questions that apply specifically to sector funds:

How diversified is it?

As we explored earlier, some sector funds are quite concentrated. It's therefore important to know if the fund favors certain subsectors and totally disregards others.

To get some idea of a fund's diversification, you can check its weightings, holdings, and concentration (how much of its assets it has in its top 10 holdings) in the portfolio section of its fund report page on Morningstar.com In addition, you should examine the fund's shareholder report and read its prospectus.

Does it charge a redemption fee?

Sector funds very often charge redemption fees if you sell the fund within a certain period of time from purchase. Redemption-fee information appears in the expenses section of our fund reports.

As a long-term investor, you shouldn't get hung up on redemption fees, though. In fact, think of them as your friends. The fees penalize people who invest for less than a set period of time (often three months, but sometimes a year or more). Basically, they are penalties for early withdrawal that are paid back into the fund rather than to the fund company. Funds use these fees to deter investors who rush into hot funds, then flee when they turn cold. These shareholders can undermine a fund's performance with untimely buying and selling.

406: Using Quirky Bond Funds

Introduction

In other lessons, we talked about using various types of funds that can add value to a portfolio. We covered growth funds and value funds, focused and flexible funds, even sector funds. But let's not forget about bond funds.

We'll talk about more than your grandmother's T-bills here; we'll explore high-yield bond funds, bank-loan funds, and Treasury Inflation Protected bond funds. These funds are designed to stamp out some of the interest-rate or inflation risk that may lurk elsewhere in your portfolio. You can also buy them to pick up some extra return.

High-Yield Bond, or Junk Bond, Funds

If you are looking to expand your bond-fund horizons, high yield may be the first area you've considered. High-yield bonds are often called lower-quality bonds, or junk bonds. No matter the name, these bonds offer much more income than Treasuries or other high-quality corporate bonds. That's because they have more credit risk the risk that their issuers may not be able to make regular income payments or pony up the principal they originally promised to return. In other words, if the economy slows down, or if the companies fall into trouble, they may not be able to pay back the IOU.

Because credit risk, not interest-rate risk, is their Achilles' heel, junk bonds help diversify the interest-rate risk inherent with most high-quality bonds. Remember, funds favoring high-grade bonds with far-off maturities can be pretty volatile, depending on what interest rates do. But because junk bonds pay higher yields and are often denominated in shorter maturities, they aren't as sensitive to interest-rate shifts as higher-quality, longer-duration bonds are. For example, the Federal Reserve continued to increase interest rates in the first half of 2006, hurting longer-term, high-quality bond funds. But the average junk-bond fund, which is far less vulnerable to interest-rate movements, gained more than 10% for the year, affected more by declining defaults and improving corporate profits.

When shopping for a junk-bond fund, examine a fund's credit quality, which appears on our fund reports. Is the fund investing in the upper tiers of junk (say, bonds with credit qualities of BB and B), or is it dipping lower for added yield? Check, too, to see if the fund owns any stock, convertible bonds (bonds that convert to stocks), or bonds from emerging markets. These elements would likely make the fund more volatile. Finally, examine how the fund performed during tough markets for junk-bond funds. That will give you a sense of how risky the fund could be in the future. Those tough markets will be periods when the economy faltered. Junk-bond investors experienced trying periods in 1990 and during the summer of 2002 (when Worldcom's bankruptcy roiled the high-yield market), and in 2008, when high-yield bond funds lost more than 26%!

Keep in mind that high-yield bond funds can be a good supplement to a portfolio already well rounded with Treasuries, corporate bonds, and mortgages, all of which offer high credit quality. But you'll generally want to keep junk to less than one fourth of your bond assets.

Bank-Loan Funds

During periods when investors are concerned about rising interest rates, demand for bank-loan funds tends to spike. As their name makes clear, these funds invest in bank loans. Banks typically make such loans to companies as part of a leveraged buyout deal, and then they sell these loans to institutional investors and mutual funds. The yields on the loans rise and fall along with interest rates, which helps cushion the effect of interest-rate changes on the funds' NAVs.

Though bank-loan funds have limited interest-rate-related risk, they can carry substantial credit risk. (In fact, every bank-loan fund in the Morningstar database lands in the lower left-hand corner of Morningstar's fixed-income style box: low credit quality and short interest-rate sensitivity.) That's because the loans that populate most bank-loan portfolios have been extended to lower-quality borrowers, some of which are distressed and/or operate in cyclical industries.

Secondly, most charge relatively high fees when compared with the average bond fund. Further, some use investment leverage, which boosts gains but also magnifies losses. Leverage is essentially borrowing to invest. Say a fund with $100 million in assets invests those assets in a security returning 10% over a given period. In addition, it borrows another $25 million, which it invests in the same security with the same 10% return. At the end of the period, the fund will have increased in value by $12.5 million (10% of $125 million), representing a 12.5% return on the $100 million of its own assets invested by the fund, greater than the 10% the fund would have earned had it not borrowed the $25 million. However, if the securities the fund holds were to fall by 10% instead of rising by 10%, it would be left with a loss of 12.5% rather than the loss of 10% that an unleveraged fund would have endured.

Though bank-loan funds display less sensitivity to interest-rate shifts than many bond funds, that doesn't mean they can't lose money. In fact, bank-loan funds were the worst performing fixed-income category in 2008, losing a whopping 29.7%. In addition to concerns about borrowers' ability to repay their loans, bank-loan funds also suffered that year because some owners of the loans, especially hedge funds, were forced by redemptions to unload shares at the height of the market panic.

When examining bank-loan funds, be sure you understand the funds' credit profile (Morningstar analysts prefer the more conservative option in the group, watch costs, and be sure you know whether or not the fund uses leverage.

Treasury Inflation-Protected Bond Funds

Treasury Inflation-Protected Securities (or TIPS) are issued by the U.S. government and are designed to offer protection against the ravages of inflation.

Like regular Treasury bonds, TIPS are issued with a face, or par, value of $1,000. And also like regular Treasury bonds, they distribute coupon, or interest, payments that are expressed as an annual percentage rate of the par value. However, unlike regular Treasuries, TIPS promise investors that their principal value will rise in lockstep with the Consumer Price Index. That guarantees investors' principal will keep up with inflation, and because TIPS' coupon payments, which are just the real yield, are still calculated as a percentage of that principal amount, their value can move up with inflation as well.

Although TIPS are perhaps the most direct way that investors can add inflation protection to their portfolios, it is important to understand that TIPS do not directly offer protection from rising interest rates. Interest rates and inflation rates don't have to move in unison, and if rates spike without a corresponding rise in inflation, TIPS can suffer a loss.

Pulling It All Together

Ultimately, the key to bond-fund investing is understanding what your funds can and can't do. A basic high-quality fund can act as a good balance to a stock portfolio, but by its very nature, it shouldn't be expected to outperform stocks over a long period of time. (High-quality bonds offer much more certain returns than stocks, so they don't have to proffer such high returns to attract investors.) And because interest rates almost never stand still, a bond fund shouldn't be expected to turn in positive returns every single year, either. In addition, inflation can quickly eat away at the fixed income payments offered by traditional bonds. That's where bonds with different structures, such as TIPS, or those with some credit sensitivity, such as junk bonds, can prove to be a welcome elixir.

407: Bear-Proofing Your Portfolio

Introduction

The investing world's jargon is sometimes too colorful. For example, there are "bull markets," or periods in which a particular type of investment does exceptionally well. Less pleasantly, there are "bear markets," or times when a particular type of investment performs poorly. Definitions of what constitutes a bull market vary, but a period in which a given market segment drops by 20% is usually considered a bear market.

Now if only we knew when those bears would roar, or what investments would survive the mauling. But because each slump brings its own new twists, yesterday's bear-market hero may not survive the next downturn nearly as well. Besides, even if bear-proofing a portfolio were simple, it may not be smart.

A Bear Is Not a Bear Is Not a Bear

Over the past 20 years, the Dow Jones Industrial Average has slid by 20% a handful of times. That means if you had $100 invested before the slide, it was worth $80 at the end. Each bear attacked in different ways, sometimes doing widespread damage and sometimes focusing on a certain industry or security type.. Technology stocks and funds were the hardest-hit when the Internet bubble burst from 2000 through 2002, while the 2007-2009 bear market was less discriminating, dragging down everything from high-flying growth stocks to commodities to bank-loan funds.

On the other hand, despite recent evidence, high-quality bond funds typically escape major trauma in periods of significant stock-market weakness. Everything else has been less predictable. Small-company funds held up well during one bear market, and then suffered during the next one. Junk-bond funds have wandered all over the map, posting gains in the early bear markets but collapsing in 1990 as the economy weakened and stumbling again from 2000 to 2002 and 2007 through early 2009. Gold has also been mixed: Anyone who came out of the late-1970s bear market believing gold was the place to be on a long-term basis got burned in the early 1980s, when the bear knocked precious-metals funds for a 30% loss. In recent years, however, gold has provided a haven for investors fearing inflation and geopolitical instability. In the new century, cautious investors have flooded the precious-metals category.

Three Varieties of Bear

Many different causes can trigger a bear market, but usually the cause has something to do with the economy. Here are three common causes of bear markets, as well as what types of investments tend to do best in each type of bear market.

Recession. A recession hit the U.S. in late 2007, according to the National Bureau of Economic Research. That's when the spillover effects from the moribund housing market and financial-services woes began to affect consumer spending. What's more, business spending and hiring slowed to a halt as companies pared back their budgets in an effort to slow the deterioration of their profit margins. While inflation remained in check, the economy shrunk all the same.

Firms that deliver inexpensive or staple products, such as food, beverages, cigarettes, and health-care items, tend to do well in a recessionary environment. Other stocks, such as automakers, steel producers, and paper manufacturers--as well as retailers of discretionary goods like clothes and housewares are highly sensitive to economic cycles - hence they are termed cyclicals. High-yield (or junk) bond funds can also be risky when the economy sours, because some companies may have trouble paying back their debtholders.

Rapid Inflation. From the 1960s through the 1980s, many investors viewed inflation as a given. Not even common stocks could protect investors from the price increases of the late 1970s. During normal circumstances, stocks have provided an annual return that has outpaced inflation over the long term, but during the inflationary 1970s, even those stocks struggled. Bonds may also lose value during inflationary environments. as higher prices erode the buying power of their payouts.

As a result, investors in the 1970s flocked to tangible assets such as real estate, art, and gold. Today, investors have even more direct ways to hedge their portfolios against the threat of rising prices, including inflation-indexed bonds and commodities investments, which enable investors to benefit when the prices of hard assets like oil and gas, timber, and metals are on the rise.

Everything else, including regular bonds and stocks not tied to some hard asset such as real estate, tends to lag during periods of rapid inflation.

Deflation. During and after the recession and financial crisis from late 2007 through early 2009, deflation became the economic worry du jour in the United States. Pundits speculated that with anemic consumer spending amid a shaky economy, the prices of goods would drop, sparking a general fall in the U.S. Consumer Price Index - or in other words, deflation. For a variety of reasons, deflation makes it more difficult for businesses to grow their profits, thus weakening stock prices.

Long- and intermediate-term bond funds tend to hold up relatively well in this environment, because their dividends are effectively worth more in this type of economy. A 6% dividend delivers more purchasing power each year if prices are falling by 2% annually. In addition, interest rates often decline during deflationary environments, making already issued bonds with higher interest rates even more valuable. Among equities, look for dividend-rich stocks and the funds that own them.

What suffers? Inflation-indexed bonds, non-dividend-paying stocks, and anything tied to a real asset such as gold, real estate, or commodities do poorly in a deflationary environment. Remember, deflation means a decline in the prices of tangible assets.

What to Do?

Preparing for a bear market is clearly a vexing problem, given the fact that bear markets are usually quite different. Here is what we think:

Don't try to time the market by switching to cash.

Anyone who tries to trick the bear by selling investments and piling up cash will likely suffer less-than-perfect timing and miss out on big stock-market gains. Unless you know something we don't or are extremely lucky, you won't get rich playing the timing game.

Recognize the limitations of bonds and gold.

Given that high-quality bonds and bond funds have evaded the bear in a number of situations, they're a good way to ensure that at least something in your portfolio will perform reasonably well during periods of extreme stock-market weakness. There are some caveats, though. For one, tucking too much money in these bear-market champs is a good way to avoid bull markets for stocks, too. During the bull market of the 1990s, bonds didn't return nearly as much as diversified domestic-equity funds did.

Moreover, these funds aren't completely bulletproof. For starters, being better than everyone else isn't the same as being good. Bonds may have been the best thing going in 1990, but they still lost money as the Persian Gulf crisis unfolded and interest rates spiked. Also, keep in mind that these funds do endure their own separate bear markets from time to time. Investors learned that the hard way in 1994, when long-term Treasury bond funds plunged 7%, and again in 1999 and 2009, when long-term Treasuries lost 9% and 12%, respectively.

Be wary of committing to bear-market funds.

Some funds are explicitly designed to gain money when other assets are losing--so-called bear-market funds. These funds typically bet against an asset class or market sector by shorting that same sector, and many bear funds galloped to robust gains in the recent bear market. However, remember that bull markets won't likely be kind to these funds. It's also worth noting that stocks have increased in value over long periods of time, and bear markets tend to be relatively brief in historical terms. Using a bear-market fund effectively requires that you successfully predict when the market is going to head south, and few, if any investors, have shown any ability to do this consistently.

Grin and bear it.

Let's face it: Investing has its risks, one of which is losing money. It's going to happen from time to time. Diversifying across a variety of fund types and asset classes won't prevent the blow, but it will soften it. Every bear leaves at least a few fund categories with relatively minor injuries.

After setting up a diversified portfolio that meshes with your long-term goals, the best plan is the most obvious one. Stay the course, invest regularly, and promise yourself not to panic when (not if) the market stumbles. The prospect may seem unappealing, but the alternatives can be worse.

408: The Plight of the Fickle Investor

Introduction

In investing, three truths are held to be self-evident:

- Investors should buy low and sell high.
- Investors should not be propelled by panic.
- Investors should not assume past performance guarantees future results.

Or at least that's what everybody says. What fund investors actually do is another matter entirely. They are often fickle, buying funds that have done well (or buying high) and selling in a panic when they stall (that is, selling low). In doing so, investors sabotage their own results. Here's what not to do.

The Tale of CGM Focus

The most recent case of buy high and sell low was CGM Focus. Always volatile, this fast-trading fund grabbed investors' attention in 2007, when it generated an 80% return on the strength of its natural resources bets as well as well-placed short positions in mortgage-related companies such as Countrywide Financial. Predictably, a flood of investor assets whooshed in that year and in early 2008, just in time to see the fund lose half of its value. Through 2008, the fund's 10-year total return was still extremely impressive, at roughly 18% on an annualized basis. But due to poorly timed purchases and sales, the typical investor in the fund actually incurred a 20% loss over that time frame.

History Repeats Itself

Although few funds have cash-flow stories as dramatic as CGM Focus', Morningstar studies have found that investors across all fund types - both stocks and bonds - have paid a price for being fickle.

The damage is greater on the stock-fund side, especially with volatile sector and region-specific funds, in which volatility and temptation are highest. In the natural resources category, for example, Morningstar data show that an investor who bought and held an average-performing fund in the category would have pocketed a very robust annualized total return of 14% in the 10-year period through 2010. But due to poorly timed purchases and sales, actual investors in natural resources funds gained a less impressive 8.7%. Investors in the Latin America and Pacific Asia ex-Japan categories have left even more money on the table due to poor timing decisions. Not surprisingly, both groups have logged periods of exhilarating performance as well as periodic sell-offs. It's easy to get caught up in the excitement of a go-go fund's performance. Don't-don't.

Clearly, emotion has a way of interfering with reason. That's why dollar-cost averaging can be such a good idea. Sure, it's possible to make more money with a lump-sum investment. But it's also possible to make less.

The Lessons

What can fickle mutual-fund investors teach you?

Discipline generally pays.

Because emotions and hype can get in the way of smart investing, systematic dollar-cost averaging--investing smaller sums on a preset schedule--is a sound strategy. Granted, investing a lump sum in the market as soon as you have the cash can be a good approach when the markets just keep going up, or when you are certain you won't give in to the temptation to buy or sell at the wrong time. But in many cases, the dollar-cost average is going to beat the performance chaser.

Don't try to navigate a minefield.

Discipline is particularly important in riskier areas, in which the hope for big gains and the reality of big losses can tempt even well-meaning investors into making trading blunders. If you invest in volatile, aggressive funds such as high-growth, sector-specific, or region-specific offerings, promise yourself you won't back out when returns head south. If the manager and strategy that you originally bought are still there, you should be too.

Don't chase funds.

Of course, even levelheaded, systematic investors need to alter their portfolios from time to time. When moving money or picking new funds, resist the temptation to chase performance. If anything, invest in areas everyone else is ignoring. A regular rebalancing program, whereby you add to holdings that have underperformed and scale back on your biggest winners, can also help you avoid the pitfall of poor timing.

409: Chasing Closing Funds

Introduction

We've all done it. There's a bank of six elevators, yet we'll risk life, limb, and cups of coffee to board the one whose doors are closing. Heaven forbid we wait a whole 10 seconds for the next one to arrive.

Fund investors do the same thing. They hear that a fund is going to stop accepting money from new investors in a few days, weeks, or months, and they immediately write a check, as if there's no other fund that could possibly meet their needs.

Of course, fund closings have their merits. Funds close so their managers can continue to invest in their given styles; too many assets can force managers to compromise their strategies. Morningstar data also show that fund closings can help save investors from their own worst performance-chasing tendencies. If a fund closes pre-emptively, before the manager is forced to put new assets to work in stocks that are overpriced, it will protect both current and prospective investors.

As shareholder-friendly as closings can be, however, there's no evidence that rushing the doors of a soon-to-close fund is a good idea. Here's why fund closings aren't always the magic elixirs they are cracked up to be.

Performance May Take a Hit

In a study, Morningstar examined the performance of funds that closed during a 15-year period. Specifically, we measured performance in the three-year periods before and after the fund's closing. We define closed as barring new investors. Most closed funds allow existing shareholders to send more money, however, so closed funds often continue to get big inflows after closing.

For every fund that saw its relative performance improve, three more suffered a decline in the three years after they closed. On average, closed funds' returns relative to their peer groups fell from top quintile in the three years before their closings to slightly below average in the three years after.

Does that mean closing a fund actually does damage? No. In fact, the performance slump probably has little to do with closing. The explanation is simply that hot funds usually cool off. While a fund may get steady inflows over most of its life, the point at which it closes is usually when inflows become a torrent. And that almost always happens when a fund's strategy or asset class is generating abnormally high returns. Pick any strategy that's producing big returns for a stretch, and it's a good bet performance will slide back to average or worse over the following period.

Scores of technology-laden mutual funds closed in the late 1990s and early 2000s, for example, shortly before the dotcom bust. Investors rushed the doors because they were attracted to the funds' astronomical gains, in some cases higher than 100% in a single year. But those big gains were a red flag that technology-stock prices had reached unrealistic levels. Many just-closed closed funds, such as several from Janus, went down in flames shortly thereafter.

The general performance drop-off for closed funds stands more as further evidence against chasing short-term performance than as an argument against closing. Still, it's sobering to know that a fund's best days are often behind it by the time it closes.

Another reason why closed funds may produce sluggish performance is that fund companies fail to close funds until performance hits the skids or assets are gargantuan. By then, it's too late. If performance is already slumping, then it may be a sign it should have closed billions of dollars ago. Closing off new investment won't slim a fund down to its playing weight from its glory days.

...and Taxes Can Make It Worse

Performance isn't the only factor to bear in mind before rushing the doors of a fund that's about to close. The tax efficiency of closed funds may slump, too. Unlike the drop in performance, however, declining tax efficiency is attributable to the closing itself. While inflows can make trading more difficult, they have a positive effect on tax efficiency. They reduce the tax burden on all shareholders because there are more shareholders to distribute capital gains across. It's worth noting, though, that tax considerations have played a part in at least one fund company's decision-making process on closing funds. Vanguard has closed a few funds from time to time, including Primecap VPMCX, but it has left a number of big funds open. Vanguard officials say that the negative tax consequences of closing outweigh the pluses. Rather than close funds such as Explorer VEXPX, Vanguard has added more managers.

Is Closing Bad, Then?

Closing a fund can enable a manager to stick with the investment strategy that has brought him or her success in the past: Excessive assets may force a change in strategy, a problem we'll explore in greater detail later. Closing is still probably worthwhile for funds with a small number of managers and analysts, a strategy sensitive to asset size, such as high-turnover momentum investing, or a fund that focuses on a less liquid asset class, such as small caps or real estate investment trusts (REITs).

Moreover, a number of fund companies have developed what appear to be effective game plans for closing new funds even before they are rolled out. They make their own estimate of what asset size would be appropriate for the fund and sometimes even make a public pledge to close when assets hit a certain level. (Most of these funds closed before they built a three-year record and were thus excluded from our study of closed funds' performance.) Wasatch serves as a good example of this. Through the years, this small-cap boutique has paid strict attention to fund size to ward against asset bloat, and at various points in time, very few of the firm's offerings have been open to new investors. That vigilance appears to have paid off as Wasatch funds' stellar performance through the years owes at least partly to their manageable size.

Wait. And Other Helpful Hints

Many of the funds that have closed at some point in the past 20 years have later reopened. Fidelity Low-Priced Stock FLPSX has closed a few times, or restricted purchase to certain investors, but then reopened at a later date. The same hot money that forces sizzling funds to shut sometimes flees the fund when performance cools, leading funds to reopen their doors. In fact, reopening might be a sign that an asset class is being overlooked and is worth a second look.

Besides watching for reopened funds, keep an eye out for new funds that promise to close at a point when they still have reasonably sized asset bases. But you still need to make sure that it has all the basics of a good fund: strong management, a good strategy, and low costs. If it doesn't, take a pass. There are thousands of open funds, and at least a few ought to meet your needs.

410: Buying the Unloved

Introduction

It can be hard to turn your back on a winner. Investors usually flock to those parts of the market with great returns. But chances are, those stellar returns won't last forever. Sears is no longer the nation's preeminent retailer, Seinfeld is no longer a top prime-time sitcom, and few of us are still walking around in double-breasted suits with ultra-wide ties.

Play against the crowd, though, and you just may catch a future trend today. Fund investors, as a group, have lousy timing. Most investors buy high and sell low, instead of the other way around. Opportunists can therefore make a bundle by buying what everyone else is selling.

So here's how to be an opportunist, the Morningstar way.

Morningstar's Unpopularity Contest

For our annual Unloved Fund study, we find the three most unpopular fund categories at the end of each year, based on percentage change in cash flows, or how much money is going into and out of mutual funds. We then recommend that you buy one fund from each unpopular category and stick with them for three years. Our study also highlights the most popular equity categories--those that have seen substantial new inflows--and suggests that investors trim back on those areas. Morningstar has featured this strategy to 1994 and found winning results. From the beginning of 1994 to the end of 2010, the unloved categories earned 308% cumulatively or 9% annualized. That's far better than the "loved," or popular fund categories, which earned 157% cumulatively or 6.1% annualized. The MSCI World Index returned 4.6% annualized, and the S&P 500 returned 8% annualized.

The Rules

Putting our unpopular-categories strategy into action is simple. In fact, there are just a fewrules to follow:

Buy one fund from each category.

Staking everything on just one unpopular category can be risky. Not every unloved category will catch fire, and one category can pull the weight for the entire group.

Have at least a three-year holding period.

You need a minimum of three years to employ this strategy. After you've accumulated your first batch of funds from unloved categories, plan to hang on to them for three years. At that point, you can roll the money into a new batch of unloved funds.

Limit your bets.

Resist the urge to put more than 5% of your portfolio into unpopular categories. That way you'll minimize the disappointment in one of those occasions when the strategy doesn't work.

Invest new money.

Maybe your company paid you a nice bonus this year, or maybe you have some cash you have been sitting on. Put that money to work by buying one fund from each of our unpopular categories for the year.

Sell one, buy the other.

If you are strapped for cash, try taking gains on popular fund categories and shifting the gains into out-of-favor categories.

Cut back on the favorites.

You'll do yourself a favor by simply reducing your exposure to popular categories. Do so with care, however, because selling your winners could trigger ugly tax consequences or mess up your asset allocation.

Look for Morningstar's list of popular and unpopular categories on Morningstar.com and in Morningstar FundInvestor (available in many public libraries) in the first quarter of each year.

411: Buying Rookie Funds

Introduction

Colonel Tom Parker had to be one of the smartest people in music history. He knew potential when he saw it. In 1954, Colonel Tom heard a young Elvis Presley singing on Louisiana Hayride, a live Saturday night country music show. He struck up a business relationship with Elvis, snagging some tour dates. Less than a year later, the Colonel took exclusive control of the King's career. The rest is history.

Every mutual fund investor hopes to spot up-and-coming mutual funds and get in on the ground floor of a great new investment. Granted, investing in a new fund is a gamble. Without Morningstar ratings and a few years of return and risk information as guides, how can you be sure you are getting the Next Big Thing? Nothing's certain, of course, so we suggest you ask the following questions before buying a new fund.

Has the Manager Run a Mutual Fund Before?

Favor new funds run by managers with some previous mutual fund experience, and be sure to scrutinize their records. Some prospectuses will include the manager's experience, while others won't. Check out the fund family's Web site for more information, or examine the fund's Fund Report, if available. (Morningstar doesn't always have Fund Reports for brand-new funds.) Be sure that the manager will be practicing a similar style at the new fund as he or she did with their previous fund.

What Is the Manager's Strategy?

You need to understand the manager's strategy to set realistic expectations for your investment. When the market does X, what can you expect from this fund? Also, when those inevitable dry spells come, you'll understand why, and you won't be tempted to cut the fund loose.

Further, you need to know what the portfolio looks like today, because it can give you some idea about the fund's future risks. Remember, since these are new funds, you don't have historical risk measures, such as beta or standard deviation, to serve as clues about riskiness. Funds that feast on expensive, high-growth stocks will probably carry higher betas and standard deviations than those funds that look for underpriced securities. Funds owning fewer stocks will generally be more volatile than those holding many. Finally, managers who concentrate in particular sectors will probably give you some volatility, too. You can find all this information by scrutinizing a fund's portfolio information on Morningstar.com.

How Much Will It Cost?

When stocks are up 20% per year, costs might not seem important. After all, a 2% expense ratio off a 20% return leaves you with an 18% gain - and who would complain about that? But if your stock fund were to return, say, 8%, that 2% expense ratio leaves you with just a 6% gain. One fourth of your return has just gone to cover expenses. Now that's a big deal. And regardless of the level of returns, paying more than you have to can cost you tens of thousands of dollars or more in compounded returns over time. So when evaluating rookie funds, be sure to consider their expense ratios. For some context on whether a fund's costs or on the high side or relative low, look for the "Fee Level" on the quote page for that fund. You'll see a fund's expenses described as high, above average, average, below average, or low.

You'll notice that new funds are more likely to carry "high" or "above average" expense ratios than older funds. That's often because small, new funds don't enjoy the same economies of scale that older, larger funds do: Larger funds have more shareholders to cover expenses. So when buying a rookie fund, you'll want to be sure that the fund's family has a history of bringing down costs as assets rise. You can determine a fund family's practice by examining the expense ratios of the family's more established funds--is the Fee Level "average" or below?

Will This Fund Offer Any Extras?

You want your funds to be dedicated to you. Low costs are one way to express devotion, of course. But also favor rookies that vow to control their asset sizes by closing to new investors at particular asset points. As funds grow, managers can be forced to compromise their strategies to accommodate all that new money. But funds that close before becoming too large don't face that problem.

Look for managers who align their interests with yours by investing in their own funds. At Longleaf Partners, for example, fund managers can't own anything other than Longleaf Funds. Because these managers are shareholders, too, they are likely to keep costs lower and minimize taxable distributions.

New funds can certainly offer opportunity, but we recommend that you build your core around funds that have established track records and use rookies at the fringes of your portfolio. Consider investing a little in a rookie fund and dollar-cost averaging into it over time.

Funds500

501: Avoiding Portfolio Overlap

Introduction

Success! You have determined your investment goals, figured out what you'll need to earn to reach them, and found investments that match those goals and your risk tolerance. Your portfolio is built, and you're ready to relax.

Not so fast.

Face it: Investing is a lifetime activity and you'll need to continue to monitor what you have created. Just as a parent never stops parenting, an investor never stops investing. So even after making all these decisions, you now face a more difficult—yes, more difficult—part of the process: monitoring your portfolio and learning how and when to make changes.

One of the very first problems you may face is the problem of portfolio overlap: You may have one or two individual stocks (such as behemoths General Electric GE or Microsoft MSFT), investment styles, or sectors overrepresented in your portfolio. After investing for a while, investors often find that though their funds come in different wrappers, many have similar content. In other words, these investors have too much of one thing. To gauge how much overlap your portfolio has, you can do some hefty calculations by hand, using shareholder reports. Alternately, you can enter your portfolio in a tracking tool such as Morningstar.com's Portfolio Manager.

To gauge your portfolio overlap, answer the following questions about your portfolio.

Do You Favor One Investment Style over Another?

The Morningstar Style Box can be an investor's best friend when it comes to making sure that your portfolio is still diversified. Based on a fund's most recent portfolio, the style box will not only tell you whether your manager has gone whole hog into large-value stocks, but it can also lead you to funds that bear little resemblance to one another. After all, value funds don't act much like growth portfolios, and small-cap funds behave differently from large-cap offerings. In style-box lingo, opposite corners should attract. If you're too heavy in large value, try increasing your position in large-growth, small-value, or small-growth offerings.

Do You Have Too Much in Any One Stock?

Sometimes, two funds' portfolios may look slightly different, but you need to be aware of how much you own of any particular stock. For example, both fund managers may have made outsized commitments to computer giant Microsoft, increasing your issue-specific risk.

If you invested in only one or two funds, you could determine your portfolio overlap by scouring shareholder reports and punching numbers into a calculator. But if you own more than a few funds or if you want to see just how another fund might change your current portfolio mix, this process is cumbersome. The Morningstar.com Instant X-Ray tool offers an easy way for Morningstar.com Premium Members to check for overlap.

The program examines each fund's top holdings and weights them according to how much you have invested in each fund. If you have included individual stocks in your portfolio, the program can easily consider them in the final balance as well. This is particularly important if you own a significant amount of your employer's stock in your 401(k) plan;

you may find that your mutual funds also own that same stock. There's nothing wrong with holding some of your employer's stock, but you need to balance that investment with the rest of your portfolio.

Do You Favor One or Two Sectors over Others?

Even if you find that you don't have a lot of overlap in individual stock names, you may still be overexposed to one or two sectors of the market.

As an example let's take technology, a sector that has received a lot of attention in the new century. Technology has been a wonderful long-term return story (most of us remember that it seemed like the only story in the late 1990s), so mutual fund managers have often spent a lot of money shopping in this industry. One of the reasons that the market's volatility was so painful for some of us in the last four years is that investors were generally more exposed to this sector than they had realized.

Growth funds, in particular, usually carried large tech weightings with lofty prices and even loftier earnings expectations. The average large-growth fund kept far more of its assets in technology stocks—37% in mid-2000—than in any other sector of the market. (In comparison, the S&P 500 Index had about 30% of its assets in tech stocks at the time.) Mid- and small-growth funds held even more of their assets, about 40%, in tech names. Many investors with multiple growth funds owned a lot more technology stocks than they realized. More recently, exposures to this sector have declined slightly as managers have hoped to find the next big thing in other industries.

The technology example may be overused, but that's partly because it was especially egregious. Keep in mind that at any given time there is likely to be a sector that grows to prominence among growth or value funds. It's a good idea to X-Ray your portfolio regularly to make sure that it hasn't gotten too skewed one way or another.

Do You Own Too Many Large-Cap Funds?

Large-cap offerings make great core holdings, but it's easy to overdose on them. After all, they often get a lot of media coverage, they're easy to buy, and they're pretty simple to understand. It's vital that investors avoid large-cap addiction—especially large-cap offerings from the same fund family. Here's why: The large-cap universe is relatively small. Less than 9% of all stocks can be classified as "large cap." Generally, a fund shop's managers will draw upon a single research pool, so there's a good chance of overlap if you buy multiple large-cap funds from a single family. Incidentally, the odds of duplication increase if you stick to large-blend funds, the universe of the S&P 500. In fact, there is little justification for owning more than one large-blend fund. So once you have picked up a large-value and a large-growth fund—or a single large-blend fund—start looking at options elsewhere in the style box.

Do You Own Multiple Funds Run by the Same Manager?

Zebras don't change their stripes, and fund managers rarely change their investment styles. If you own two funds managed by Famous Manager A, chances are you own two of the same thing. That's because managers generally have ingrained investment habits that they apply to every pool of money they run. So no matter how much you love a particular manager, don't buy more than one of his or her offerings if you are serious about diversification. Owners of Mutual Shares MUTHX, formerly run by Michael Price, wouldn't have gained much from picking up sibling Mutual Beacon BEGRX.

Do You Own Multiple Funds from One Boutique Family?

The Matthews funds are specialists in Asia; Oakmark concentrates on value. Such fund families are excellent at what they do, but it's unlikely that owning three of their funds gives you much more than you'd get with one.

Nevertheless, many of the big firms provide opportunities to diversify, and a handful, such as Fidelity and Vanguard, can truly claim to be one-stop shops. Moreover, many savvy fund families now offer their own fund supermarkets, which allow investors to sample funds from other shops while still remaining loyal to their favorite families. That's a win-win situation.

502: Fund Warning Signs

Introduction

All good things must come to an end. We all know about the shelf-life of television shows, for example. Remember when "Who Wants to be a Millionaire?" was the most exciting thing happening to American audiences?

Mutual funds can also lose their magic. We'd love to say that a good fund will always be good, but funds change. Performance slips. Managers leave. Strategies evolve. That's why funds need to be monitored.

Here are some of the warning signs to watch out for. These aren't sell signals per se: Instead, think of these as signals that change may be on the way-the mutual fund equivalent of dwindling audiences, sour writing, and producer desperation.

Asset Growth

This may seem counterintuitive, but sometimes mutual funds actually need smaller audiences. As funds attract new investors and grow larger, their returns often become sluggish, weighed down by too many assets. They lose their potency and their returns revert to the average for their group. Some funds stop accepting money from new investors when their assets grow too large, but many don't. That explains why so many once-hot funds become mediocre.

There are worse things than being average, of course. But you may still want to keep an eye on your funds as they grow, especially your small-growth funds. Sometimes mutual fund shops will do the monitoring for you. Longleaf Partners Small-Cap Fund, for example, closed in 1997, after asset inflows left the fund with a sizable cash stake that the managers had trouble putting to work. Since its closing, the managers have continued to ply their deep-value style, trawling for small-cap names that are overlooked and misunderstood, and have generated superb, though streaky, results.

Even shops known for their discipline and their great performance can get caught in this trap. American Century Ultra (TWCCX) racked up excellent returns in the 1990s picking small firms with lots of growth potential. The management team was vigilant about selling companies as soon as their share prices increased. Investors flocked to the fund, but returns eventually slowed because the managers just couldn't execute their fast-trading, super-growth strategy with so many assets in tow. So what did they do? They changed their strategy. They now buy larger companies and trade less often, and performance has also moderated.

American Century's strategy change is a perfect example of how asset growth can affect a fund: Fund managers often have to alter their strategies to accommodate new money. Some simply buy more stocks, buy larger companies, or trade less. (When big funds trade frequently, they risk affecting their stocks' share prices as they buy and sell.) No matter what they do, though, they have to make concessions or close the fund. And as a shareholder, you need to be aware of the change and consider whether or not this altered fund fits into your portfolio. American Century Ultra shareholders no longer own a small-growth fund, they own a large-growth fund.

Some types of funds are more hurt by asset growth than others. We'll talk more about this topic in our next lesson.

Manager Changes

Most mutual funds are only as good as the people behind them: the fund managers. Managers decide what to buy, what to sell, and when to make these changes. Because the fund manager is the person who is most responsible for a fund's performance, many investors wonder if they should sell a fund when their manager leaves.

Unfortunately, there is no one right answer to this question. You'll need to consider a few factors. For example, you may have to pay taxes on your sold shares, if they've appreciated since you bought them. And what you give up in taxes may not be offset by future gains in a different fund. You'll also need to consider the record of the new manager-perhaps he or she has already worked on the fund? Perhaps the manager has racked up a solid record at another offering? Keep in mind: A new manager may do just as well as the old.

Further, management turnover won't make much difference when it comes to certain kinds of investing styles. Consider index funds. Managers of index funds are not actively choosing stocks, they're simply mimicking a benchmark. Thus, manager changes at index funds are less important than manager changes at actively managed funds.

Sometimes, it's clear that management turnover is a non-issue. Some fund shops have deep benches, strong analyst training programs, and extensive research support. These firms have historically had plenty of talented managers and analysts who can take over when a manager departs. Similarly, funds run by teams are often less affected by manager changes. If one team member leaves, there are often two or three other managers who will remain behind.

Of course, changes in management can be a crushing blow to funds run by a single fund manager who has proved to be an adept stock-picker or trader in markets in which there are a wide range of possible returns (such as small growth or emerging markets). Manager changes at good funds from families that aren't strong overall are bad news, too.

Fund-Family Growth, Mergers, or Acquisitions

Why should it matter to your fund's performance if the sponsoring fund family decides that it wants to add some new funds to its lineup? Or that it wants to be sold or become independent? It may not seem like much, but those things can distract managers from doing their jobs. After all, if your employer is growing rapidly or is on an acquisition binge, doesn't that affect how you do your core job?

Once-great funds may also stall or lose their focus when their families expand and launch new offerings. Furthermore, funds can be forced to fill a different role as its family grows. Take Oakmark Fund (OAKMX). This one-time small-value fund is now firmly entrenched in mid- to large-cap territory. Initially, that upward shift was an intentional move by the fund's manager. However, as Oakmark expanded, it launched two dedicated small-cap funds, Oakmark Small Cap I (OAKSX) and Oakmark Small Cap II (OARSX). Now, even if current Oakmark manager Bill Nygren wanted to focus on small caps, it's unlikely that the fund would become all small again. The family already has funds that fill that role and the shop can't afford redundancy.

Keeping Watch

How can you find out if your funds are on the verge of change?

First, keep tabs on your fund families using the public information available. Regularly visit their Web sites and look for news of growth plans, mergers, and new fund launches. Get access to information on funds in the pipeline in the EDGAR section of the SEC's Web site (sec.gov), where fund families must register their funds. Finally, always scan the marketing materials that jam your mailbox.

Next, turn your attention to third-party sources, including Morningstar, and learn what these groups have to say about your funds and your fund families. Firms such as Morningstar aren't in the business of selling their own funds and they take their roles as industry watchdogs seriously. Check out our fund news, read our fund analyses, and see what other investors in your funds are saying on our conversation boards. Make sure to read what members of the financial media are saying, too.

Finally, check up on your funds each month to make sure that things are status quo. Have their assets grown rapidly? Are their managers still in place? Is there anything notable going on with the fund family?

If you find that changes may be afoot, ask questions. If you find that your fund family is launching a new fund that sounds a lot like the fund you already own, for example, ask how the funds will differ and if this will mean more work for your fund manager. Or if you're worried about asset size, find out if the family plans to close the fund any time soon.

503: Where and Why Asset Size Matters

Introduction

Bigger is often better. Most people would prefer a rambling villa to a studio apartment. And everyone remembers the popularity of the Super Size meal at McDonald's (MCD).

But as it turns out, the Super Size meal was a disaster for American health; McDonald's discontinued it in 2004. And super sized mutual funds can be just as troublesome. As hot shot funds grow, their returns may become sluggish, weighed down by too many assets. They lose their potency and become average. It happened to Fidelity Magellan (FMAGX), which is no longer the total-return powerhouse it was when it had less than a billion dollars under its belt.

Asset size can impede performance for any fund, but some types of funds are hurt more than others. It depends on a fund's style. (Note that bond funds don't typically struggle with asset growth. Individual corporate bonds may have less of an impact on performance as a bond fund's assets grow, but in general the bond market is sufficiently large that asset growth doesn't hamper many bond fund managers.)

Asset Size and Market Cap

A fund's asset size is simply the total amount of dollars invested in the fund at a certain point in time; it is the fund's NAV multiplied by the number of shares outstanding. Most funds report their assets monthly; the net asset figures on Morningstar's Fund Reports are usually as of the most recent month end.

There's no direct relationship between a fund's size and the size of the companies in which it invests. A fund with a $10 billion asset base, for example, doesn't necessarily own large-cap companies with $10 billion market capitalizations. It can buy stocks of any size-theoretically, at least.

We say "theoretically" because very large funds may have difficulty buying very small stocks. It's tough to put large dollar amounts to work in a small market. Small-cap stocks take up less than 10% of the U.S. market's overall assets; large caps, meanwhile, account for about two thirds of the market. In other words, in terms of number, large-cap stocks are a small part of the market (as you know, there just aren't an unlimited number of GE-size firms). In terms of market cap, though, they dominate. It's therefore easier for a fund manager with a lot of assets to buy bigger companies than to own a small fry.

Let's take an example. If Fidelity Contrafund, with $81 billion in assets in mid 2011, was really bullish on resort owner Gaylord Entertainment (GET) and wanted to make it a large part of its portfolio, it couldn't. The value of all of Gaylord Entertainment's shares combined is about $1.6 billion; if Contrafund could buy all of it-and legally it cannot-Gaylord would still make up just over 1% of the portfolio. A fund with fewer assets would have a much easier time loading up on these shares.

Asset Size and Turnover

It would seem that too many assets pose the biggest threat to small-company funds. But asset size is not a problem for all small-company funds. Instead, asset overload is especially detrimental to small-cap funds that trade a lot.

When most people think of trading costs, they think only of brokerage commissions-less trading, lower costs. But there is a second component of trading costs: the cost of "moving the market." This is a component that is directly affected by asset size. Funds can "move" the market when they are unable to buy stocks without pushing the share price of that company upward as they're buying; likewise, funds that are "market movers" cannot sell stocks without pushing the price downward as they're selling.

Think of the stock market as a giant auction house. In an auction, the price of an object goes up as more people bid for it. As more people enter the bidding, the price rises, making the object more expensive for the eventual purchaser. Now think of each dollar in a mutual fund as another bidder. The larger the fund, the more likely it will be to boost a firm's share price simply by "bidding" on its shares. And the more frequently a larger fund trades, the more likely it is to rack up high trading costs, often called "market impact costs."

Growth and value funds are both affected by this phenomenon, but fast-trading growth funds usually suffer more. That's because growth managers are usually competing with plenty of other buyers for popular merchandise-high-priced, high-growth stocks. They're like the people who go to auctions and bid on Jackie Onassis' jewelry. Value managers, on the other hand, are like shoppers combing through yard sales every weekend. Because there's a lot less competition for a beaten-up lawn chair with hidden potential than for Jackie's string of pearls, prices don't get "moved" nearly as much.

How Funds Can Manage Asset Growth

There are a few things funds can do to manage asset growth. First, they can close. Closed funds don't accept money from new investors, but they'll usually continue to take investments from current shareholders. Their asset bases may grow, but at a more moderate pace than when they were open. Some funds close to current investors, too, which means that even those who own the fund already can't contribute any more to it. But that's pretty rare.

More often than not, fund managers cope with huge asset bases by altering their strategies. Some will buy more stocks. Heartland Value (HRTVX), for example, held about 50 stocks when it had just a few hundred million dollars in assets; when assets topped $2 billion in 1997, the fund owned more than 300 names. (As assets dropped back down, the fund's portfolio has gotten more trim, but it still holds more than 140 names.) Other funds will start buying larger stocks, as American Century Ultra (TWCUX) did. Still others will hold cash, because they just can't find enough stocks to buy.

How You Can Handle Asset Growth

So what does all this mean for your portfolio? Well, you probably don't have to worry as much about your value funds getting too big. But keep an eye out for sluggish risk-adjusted performance from your fast-trading growth funds as their asset bases rise.

And if you want to be proactive, keep an eye out for strategy changes. If you bought a fund to fit a small-growth niche in your portfolio, you might not be happy if it starts buying midsize or even large-cap stocks. A fund with a big cash stake can throw off your own asset-allocation decisions. Even if a growing fund is thriving, asset growth may still mean problems.

504: When to Sell a Fund

Introduction

While most of us can agree on what to look for when buying a fund—good risk-adjusted returns, long manager tenure, and so forth.—we often part ways on when to sell. None of us want to be one of those investors who undermines his or her returns by buying and selling at the wrong times. Yet some situations almost demand that we hit the sell button.

The Fund Loses More than It Should

Suppose a bond fund loses more than 23% in a year in which its average peer suffers a much slimmer loss. That was the case with BlackRock World Income MAWIX in 1998, a multisector-bond fund that made a big bet on emerging-markets debt in general and Russian debt in particular. Shareholders who expected boring bond performance should have sold.

The Fund Gains More than It Should

This might sound illogical—after all, who complains about great returns? But if your "moderate" balanced fund posts a 60% return when its average peer is up 10%, maybe you don't own what you think you do.

The Fund Changes Its Strategy

Presumably, you buy a small-value fund because you want exposure to small-value stocks. If the manager suddenly starts buying large-growth stocks, you may have a problem. After all, you may already have a large-growth fund in your portfolio.

Be careful in how you define a change in style, though. Sometimes a manager's stocks and habits will change, even though his underlying strategy hasn't. Baron Asset BARAX is a case in point. The fund didn't migrate from the small-growth to the mid-cap growth category because manager Ron Baron began buying larger stocks. He still buys small-cap issues; he just holds onto them as they move into mid-cap or large-cap range.

The Fund Underperforms for a Long Period

While one year of underperformance may be nothing to worry about, two or three ugly years can get frustrating. The urge to sell intensifies.

Before pulling the trigger, be sure you're comparing your underperformer to an appropriate benchmark, such as its Morningstar category peers or a suitable index. Before you pass judgment, make sure the manager or strategy hasn't changed.

Your Goals Change

You don't invest to win some imaginary race, but to meet your financial goals. As your goals change, your funds should change as well.

Suppose you start investing in a balanced fund with the goal of buying a house within the next five years. If you get married and your spouse already owns a house, you may decide to use that money for retirement instead. In that case, you might ditch the balanced fund for a pure stock fund. Your goal and the time until you draw on your investment have changed.

You Just Can't Take It Anymore

The point of investing is meeting financial goals, not developing ulcers. If your fund is so volatile that not even the vision of your brand new house calms you down, then by all means sell—as long as you'd never buy the fund or a fund like it again.

The moral: Know your funds, know yourself, and never make the same mistake twice.

505: Rebalancing Your Portfolio

Introduction

So you've built a portfolio that perfectly matches your needs. If only you could kick back and ignore it until retirement. In order to keep your portfolio in shape, you have to monitor it on a regular basis. You'll want to reevaluate all of your funds and make sure that you don't have a reason to sell any of them. You'll also want to make sure that your asset allocation hasn't become lopsided - and if it has, you'll want to rebalance your holdings. In this lesson, we'll examine why rebalancing matters and offer our suggestions for how and when you should rebalance your portfolio.

Why Rebalance?

Say that you originally constructed a portfolio of 60% stocks, 30% bonds, and 10% cash. If left alone over a 20-year period, that portfolio could easily morph into a blend of 84% stocks, 13% bonds, and 3% cash, just because some asset classes will grow faster than others. Presumably, you set up your original allocation to match your needs and your risk tolerance. If neither has changed--or if your asset-allocation parameters have actually gotten more conservative, as is usually the case as people get closer to retirement--your new allocation will be out of sync with your targets. If stocks dominate your portfolio (as they did in our example), your returns may rise but so will your risk. Moreover, you may find yourself with insufficient cash on hand to meet short-term needs. The only way to return the portfolio to the original stock/bond/cash mix is by buying and selling funds until you reach your original allocation. That's what rebalancing is.

Our Rebalancing Principles

If you ever watched the Ed Sullivan Show, you probably remember the plate-spinning act - the guy who kept all that fine china spinning precariously atop long, flexible rods. It was pretty impressive, all those place settings gyrating at once as the performer ran back and forth to give each rod a flick and keep it all from toppling down.

If you were to rebalance your portfolio frequently, you'd feel a lot like this guy. Relax. Rebalancing your portfolio doesn't have to be a juggling act if you follow our guidelines.

Don't rebalance too often.

You needn't worry about rebalancing every quarter, or even every year. Research from Vanguard has demonstrated that investors who rebalanced their investments when their asset-class exposures veered five percentage points from their targets reaped many of the same benefits as those who rebalanced more often. Moreover, investors who rebalance less frequently save themselves unnecessary labor and may even save a good bit of money, both in taxes and transaction costs. That's because rebalancing may trigger commissions to buy and sell. It also requires paring back the winners, which means realizing capital gains and, for the taxable investor, paying Uncle Sam. We're not saying you should tune out your portfolio unless there's been a big market movement; in fact, we think you should monitor your portfolio regularly to watch out for manager or strategy changes at your individual funds. But resist the urge to tinker unless one of your funds has significantly changed its strategy.

If you rebalance just one thing, make it the stock/bond/cash split.

Your cash and bond stakes are vital to keeping your portfolio's risk in check. Because bonds don't generally move in sync with your stock investments, a simple strategy of restoring your cash and bond funds to their original weightings once they veer five or 10 percentage points will dramatically lower your portfolio's overall risk.

Mind the drag of taxes when rebalancing.

Taxable investors take note: Concentrate your rebalancing efforts in your tax-sheltered accounts to avoid triggering taxable capital gains. (Even if you sell winners that you hold within your 401(k) and IRA and use the proceeds to bump up your weightings in laggard holdings in those same accounts, you won't pay capital gains taxes.) And if you must rebalance within your taxable account, consider doing so by adding new money to the asset classes and categories that have lagged rather than selling winning holdings. If you don't have new money to put to work, consider having your funds' income and capital-gains distributions paid into a money market account, then using that cash for rebalancing.

506: Calculating Your Personal Rate of Return

Introduction

Your fund says it finished the year up 15%. The Morningstar Fund Analyst Report says the same. Yet you only made 10% on the fund for the year.

The fact is, returns depend a lot on how you calculate them. Your actual investment or personal rate of return in a fund may be better—or worse—than you think, because of the timing of your purchases and sales. Knowing your portfolio's actual returns can help you determine if you're on track to meet your investment goals, and whether your funds are living up to your expectations.

Reported Returns versus Personal Rates of Return

The simplest way to calculate return numbers—and the way Morningstar and most other sources do it—is to assume you made a single lump-sum investment at the beginning of the reporting period. So the 15% return on your fund assumes that you bought all of your shares right at the beginning of the year.

Often, however, your personal rate of return will be different. If you bought or sold shares during the period for which a return is being calculated, or if you didn't buy exactly at the period's start, your personal return won't match the formulaic return. Put another way: Your fund's trailing 12-month return doesn't tell you how you've been doing if you invested $100 each month rather than $1,200 up front.

Calculating Your Personal Return

You're on your own when it comes to calculating your personal rate of return. If you choose to enter a Transaction Portfolio in our Portfolio Manager, meaning that you enter the date on which you purchased various securities as well as the price you paid for them, you can see your personal gain or loss in individual funds (and in your entire portfolio) since you made an investment. Or you can enter the dates and prices of any purchases or sales into a financial calculator, or use the internal-rate-of-return function included in spreadsheet software.

How to Do It

Here's what you need to calculate personal returns for a single year:

• Your ending balance from the preceding year (for a single fund or for a portfolio of funds). For the sake of our example, let's say the preceding year's balance is $2,500.

• Your ending balance from the year for which you're calculating the returns. In our example, we'll use a final balance of $5,250.

• How much you invested during the year and the months in which you made the investments. In our example, the investments were $1,000 in May and $1,500 in November.

Note that the beginning balance and the investments during the year are negative numbers when you're using a financial calculator or spreadsheet. That's because you're trying to figure out the internal return represented by the difference between the $5,250 you ended up with and the $5,000 you invested ($2,500 beginning balance plus two investments during the year of $1,000 and $1,500).

If you're using a financial calculator, here's what to do:

1. Make a chart of your monthly cash flows. For a portfolio, pool together the cash flows for all of your funds. Assume that all investments during a month are made at the beginning of that month. Sum your initial balance and any January investment for the

first month's entry. Also, determine the value of your fund at the end of the holding period. Locate the cash-flow function on your financial calculator and clear the memory of any old data.

2. As your calculator prompts you, enter cash flows. (Inflows are negative and outflows are positive.) Enter 0 for months with no cash flows and enter your ending balance as the final, positive cash flow.

3. Choose the IRR (internal rate of return—another term for personal rate of return) function on your calculator and compute. The result is your monthly personal rate of return.

4. (1) Divide your monthly IRR by 100. (2) Add 1. (3) Raise the number to the 12th power (12 months in a year). (4) Subtract 1. (5) Multiply by 100 to get the annual percentage.

Calculating IRR with a Financial Calculator

Month	Flow	Calculator Key	Command	
January	0	ENTER	cash flow	-2,500
February	0	ENTER	cash flow	0
March	0	ENTER	cash flow	0
April	0	ENTER	cash flow	0
May	1,000	ENTER	cash flow	-1,000
June	0	ENTER	cash flow	0
July	0	ENTER	cash flow	0
August	0	ENTER	cash flow	0
September	0	ENTER	cash flow	0
October	0	ENTER	cash flow	0
November	1,500	ENTER	cash flow	-1,500
December	0	ENTER	cash flow	0
		ENTER	ending balance	5,250
			Monthly IRR	0.5928
			Annual IRR	7.35%

With a spreadsheet program such as Excel, enter the months and cash flows as follows:

January	-2500
February	0
March	0
April	0
May	-1,000
June	0
July	0
August	0
September	0
October	0
November	-1,500
December	0
Ending Balance	5,250

Select the IRR function, and you'll get the monthly personal rate of return for your portfolio. Follow step four above to calculate the Annual IRR.

What Personal Returns Tell You

Calculating your personal rate of return may not be your top choice for filling your free time on a Saturday afternoon. But doing so not only tells you how you're progressing toward your goals, but it also sheds some light on how well you've been investing.

If your personal returns for an individual investment are significantly lower than those reported by the fund company or shown on Morningstar.com, take a close look at when you've been buying and selling. Maybe you bought hot funds after they had already hit the top, or sold when a fund was bottoming out and therefore missed a subsequent rebound. In that case, a disciplined dollar-cost-averaging program could keep you from sabotaging your results. You'll likely find that making short-term swaps in and out of the market—or between different funds—has hurt you more than it has helped.

507: Calculating Your Cost Basis

Introduction

Leave it to the IRS to complicate things.

The agency has pages and pages of tax laws and more forms than you can shake a stick at. It even has four ways of calculating something as simple as cost basis, or the price you paid for a security, including commissions and other expenses. Cost basis is important because you determine your profit (or loss) when you sell shares by subtracting your cost basis from the shares' current selling price. That difference is the amount the government taxes. (Note that these issues only apply to securities you hold in your taxable account. You can buy and sell shares in a tax-sheltered account like an IRA or 401(k) without facing tax consequences until you begin withdrawing the money.)

Cost basis may seem pretty straightforward—and it is, if you buy a security only at one point in time. But what if you've been investing a little bit in a fund over a period of years? That's when things get tricky. Choose one method for cost basis over the others and you may be able to keep more for yourself and give less to Uncle Sam.

First In, First Out (FIFO)

The most basic method for figuring cost basis is FIFO, or first in, first out. This approach assumes that, as you sell shares of a stock or mutual fund, you do so in the order in which you purchased the shares. While pretty straightforward, this procedure may lead to substantial taxable gains because the longer you hold shares in a rising market, the more they're worth. No wonder the IRS assumes you are using this method unless you indicate otherwise.

Specific Share Identification

Specific-share identification, the second way to calculate cost basis, is for meticulous investors only. If you've kept careful records of when you bought stock or fund shares and how much you paid for them, you can ask a mutual fund or broker to sell specific shares. Normally, these shares would be the ones you paid the most for, since they would generate the smallest taxable gains.

But there's a catch. Gains are taxed at different rates depending on how long you've held the shares. Profits made on shares you've held for a year or less are taxed at rates significantly higher than those levied on shares held longer than a year. So consider the matter carefully before deciding to hawk expensive newer shares.

Single-Category Averaging

Another method for mutual fund investors is single-category averaging. Divide the total cost you paid for your shares by the total number of shares you own and voila, you have your average-cost basis for each share. Single-category averaging is quite popular with investors because it doesn't take much energy to calculate. But once you begin using it to compute cost basis, the IRS prohibits switching to another method without prior approval.

Double-Category Averaging

Finally, there's double-category averaging. Mutual fund shares are divided into short-term and long-term gains and are then averaged for cost basis. Of course, different tax rates apply to each category, and you must tell your mutual fund in writing how many shares from each category you want to sell. Definitely not a process for the faint of heart.

What's the Difference?

Which method works best varies from situation to situation.

Let's take an example. Robert bought 25 shares of the no-load Raging Bull Fund at $9 apiece in 1998. He purchased another 50 shares at $10 apiece in 2000, and 25 shares at $11 each in 2002. In early 2003, he decided to sell 30 of his 100 shares at $12 apiece, for a total sale of $360. Assuming all his gains are long term, which method for calculating cost basis should he use, and what will his taxable gains be?

If Robert uses FIFO, he'd sell his oldest shares first. The calculation:

(25 x $9) + (5 x $10) = $275 cost basis

His taxable gains would be his total sale minus his cost basis, or:

$360 - $275 = $85

If Robert chooses the specific-share identification method, he'd sell his most expensive shares first.

(25 x $11) + (5 x $10) = $325 cost basis

His taxable gains would be:

$360 - $325 = $35

If Robert goes the single-category averaging route, he'd divide the total cost of shares by the total number of shares owned to get his average share price. He'd then multiple by number of shares sold for total cost basis.

(25 x $9) + (50 x $10) + (25 x $11)

x 30 = $300

100

His taxable gains would be:

$360 - $300 = $60

Robert can't use the double-category averaging method, because all his gains are long term.

Robert minimizes his taxable gains by using the specific-shares method: His taxable gains are just $35 versus $85 under FIFO and $60 using the single-category averaging method. With a little effort and a calculator, you can reduce Uncle Sam's take, too.

508: Is Your Retirement Portfolio on Track?

Introduction

You will not work a day beyond your 55th birthday. And you plan to spend your retirement days sipping lemonade on Capri and stiffening your neck by watching two weeks of tennis at Wimbledon. You have no intention of being a stay-at-home retiree.

You might not have much choice, though.

Based on the most recent statistics, many households won't have what they need to maintain their current standard of living in retirement, let alone fund posh trips. According to a study from the Center for Retirement Research, the current gap between U.S. households' retirement savings and the amount they'll actually need in retirement is a yawning $6.6 trillion. (That figure encompasses the savings of both younger individuals as well as those who are closer to retirement.)

Determining whether your retirement nest egg will cover you or fall short is a complicated exercise, and unfortunately, the numbers won't always tell you what you want to hear. However, the advantage of checking up on when and how you might be able to retire is that it can help you determine whether changes are in order while there's still time to make them. You can work longer, save more, or spend less; you can also recalibrate your planned spending during retirement or make changes to your investments in an effort to optimize your returns.

What's Your Starting Point?

The first step in assessing the feasibility of your retirement plan is to find your portfolio's current asset allocation--how your investment assets are apportioned among stocks, bonds, and cash.

If you don't know yours, Morningstar.com's Instant X-Ray tool can help you determine it. Enter each of your holdings into the tool and then click Show Instant X-Ray. (If your current asset allocation is different from what you expect it to be when you're close to retirement, adjust accordingly.)

On the Retirement Income Worksheet http://www.morningstar.com/Cover/income-worksheet.aspx , circle the portfolio mix that most closely matches your own.

Next to the pie chart that matches your asset allocation, circle the number of years that you expect to be retired. Go to the Social Security website for a calculator http://www.ssa.gov/oact/population/longevity.htmlto help to determine your life expectancy. If you're married, use the female partner's life expectancy because it's longer. If you and/or your spouse are in good health, add a few years or more.

Do You Need a Sure Thing?

How much certainty do you need in your life? Are you a "live for today" sort of person, willing to spend now even if it could result in a shortfall in your income later in life? Or are you someone who would rather spend less during retirement if it means a greater degree of certainty that your money won't run out?

The answer to this question will determine the percentage that you mark in the Certainty of Income column on the Retirement Income Worksheet. If you'd like a high degree of certainty that your money will last throughout your retirement years, circle 85% or 95%. If you're willing to tolerate the possibility of a shortfall in exchange for more spending power early in your retirement years, circle 50%.

How Much Can You Withdraw, and Will That Be Enough?

To help determine your optimal portfolio withdrawal rate given the specifics you've just outlined, find the point on the worksheet where Asset Mix, Certainty of Income, and Years Expected in Retirement intersect. For example, someone with a Moderate Aggressive portfolio seeking an 85% degree of income certainty who expects to be retired 30 years would target a 4.8% withdrawal rate. That's the percentage of your portfolio that you can withdraw per year without a significant risk of running out.

Note that these withdrawal rates assume that your withdrawals will step up annually to keep pace with inflation. They also assume that you'll completely deplete your assets during retirement. Thus, if you're hoping to leave assets to your heirs, you'll need to shrink your withdrawal rate, switch to a more aggressive asset allocation, save more, or plan to retire later.

To help determine whether that withdrawal rate amount is enough to cover your spending needs in retirement, look at the second page of the worksheet. Start by totaling up your investment assets, including taxable accounts as well as any company retirement plan assets.

Next, multiply that amount by the percentage withdrawal amount that you came up with in the preceding step. That's the actual amount that you can withdraw from your portfolio during the first year of retirement. (Divide by 12 to arrive at a monthly withdrawal amount.)

If you're retiring and won't have income from other sources--for example, if you don't have a pension and aren't yet eligible for Social Security--decide whether that income--plus an annual inflation adjustment--is enough to sustain you during your retirement years.

After you've figured out how much help you'll get from your portfolio during retirement, take stock of other expected sources of income during retirement--excluding any withdrawals or income from your investment portfolio. Include income from part-time work, pensions, and any annuity income you're expecting. Also estimate your Social Security benefits using one of these calculators. http://www.ssa.gov/planners/benefitcalculators.htmAdd those income amounts together with the income you can safely withdraw from your portfolio. That's the amount of income that you can expect during your first year of retirement.

Finally, adjust your income for taxes. The quick and dirty way to do this is to multiply the income amount by your tax rate. In reality, however, your tax burden may be higher or lower in retirement than it is now..

Making Up for Shortfalls

If it doesn't look like your expected income will cover your spending needs during retirement, spend some time tinkering with the variables. For example, switching to a slightly more aggressive asset-allocation mix could improve your portfolio's return potential (but it could also increase its risk level, so don't go overboard and shift entirely into stocks). And if you're willing to work longer, you could reduce the number of years that you'll spend in retirement (and, in turn, the need for income from your investment portfolio).

Also bear in mind that even though we've discussed a fixed withdrawal rate in this exercise, you of course will be able to withdraw more or less as circumstances dictate. In fact, a 2008 study from T. Rowe Price showed that the best strategy for retirees who encountered a bear market early on in retirement was to reduce their withdrawal rates. Doing so would help them avoid turning paper portfolio losses into real ones by having to sell out of their long-term investments at an inopportune time.

509: Seeking Financial Advice

Introduction

Maybe your nest egg has become larger than you're comfortable managing on your own. Or you need estate-planning advice. Or you could use some tax help. Even do-it-yourselfers sometimes find the need to work with a financial professional. To choose an advisor who suits your financial needs and personality, follow these steps.

Decide What You Want.

Are you looking for someone to handle one part of your financial life, such as taxes or estate planning, or are you seeking a financial advisor who can take care of it all? Knowing the answer to that question helps you narrow your search to those advisors with skills to match your needs.

Once you've set your priorities, begin your search by asking your accountant or attorney for recommendations. Query friends and professional colleagues who work with advisors. Identify a handful of advisors whose services meet your needs, and then call to determine how much money you'll need to become a client. Confirm their services and specialties. After you've found a few good matches, schedule initial meetings, which should be free of charge.

Ask the Right Questions

Bring to that first meeting a checklist of questions, concerns, or issues you want addressed. Ask for and scrutinize a copy of the advisor's resume, known as the ADV form, available on the Securities and Exchange Commission's website http://www.adviserinfo.sec.gov/(S(qj14ek1nj3rfbnwqf3gaueen))/IAPD/Content/IapdMain/iapd_SiteMap.aspx. ADV forms include advisors' educational backgrounds and list which professional designations they hold, as well as information about the firm's typical clients and its overall assets under management. You'll also be able to see how the advisor is compensated.

If you're turning to a commission-based broker for financial help, you'll need to follow a different due-diligence process. FINRA regulates brokers, and its website provides a tool to check up on a broker's credentials as well as whether they've had any disputes with customers or run afoul of any regulations. Bear in mind, however, that brokers aren't always held to the same standards that financial advisors are. Financial advisors are required to be fiduciaries, meaning that they must recommend what they believe to be the best products for their clients and set aside personal financial considerations when doing so. Brokers, meanwhile, are held to what's called a "suitability standard," meaning that the products they recommend must be suitable for their clients but not necessarily the very best options. (The Securities and Exchange Commission is currently reviewing a proposal that would require anyone proffering financial guidance to be a fiduciary.)

Investigate Investment Philosophy

No matter what type of professional you're relying on for investment suggestions—which funds or stocks to buy—be sure the two of you share the same investment philosophy. Ask advisors to walk you through their investment process, and the types of products they typically recommend to people in your situation. Do they use mutual funds, exchange-traded funds, individual stocks, or insurance-based products such as annuities? Ask a prospective broker or advisor to discuss how frequently they trade, as well as to explain thoroughly what would make them sell a stock or fund. Request a copy of a typical financial plan.

Calculate the Cost

Don't leave an advisor's office until you completely understand how the advisor or broker is compensated. Some advisors charge clients a percentage of their assets per year to manage their money--fees commonly range from 0.75% to 1.5% per year, with lower rates for larger accounts and higher rates for smaller ones. Other advisors charge on an hourly or per-engagement basis; such setups can be the most cost-effective for those seeking help with a specific problem rather than soup-to-nuts financial guidance. Brokers will tend to use a commission structure, earning a cut of each transaction in your portfolio.

Once you understand the structure of an advisor or broker's compensation, get those details in writing. Have the advisor estimate what it will cost to create your plan and manage your investments on an ongoing basis, including both fees and commissions, in dollars and cents.

Ask for References

Ask the advisor for references from investment professionals (such as certified public accountants or certified financial planners) or attorneys who have seen the advisor's work before. Such professionals have reputations they won't want to jeopardize.

Bonds Curriculum

Bonds100

101: Bond Market Interest Rates

Introduction

Bonds are very sensitive to changes in interest rates. If you plan to buy and sell bonds on the secondary market, you will need to watch interest rates very carefully. This is because interest rates, more than anything else, determine the prices of bonds. As an educated investor, you need to understand bond market interest rates and how they affect bonds prices of both original issue and secondary market bonds.

Interest Rates and Bond Pricing

When a bond is issued, it pays a fixed rate of interest called a coupon rate until it matures. This rate is related to the current prevailing interest rates and the perceived risk of the issuer. When you sell the bond on the secondary market before it matures, the value of the bond, not the coupon, will be affected by the then-current market interest rates and the length of time to maturity.

Interest rate risk is the risk that changing interest rates will affect bond prices. When current interest rates are greater than a bond's coupon rate, the bond will sell below its face value at a discount. When interest rates are less than the coupon rate, the bond can be sold at a premium--higher than the face value. A bond's interest rate is related to the current prevailing interest rates and the perceived risk of the issuer.

Let's say you have a 10-year, $5,000 bond with a coupon rate of 5%. If interest rates go up, new bond issues might have coupon rates of 6%. This means an investor can earn more interest from buying a new bond instead of yours. This reduces your bond's value, causing you to sell it at a discounted price.

If interest rates go down, and the coupon rate of new issues falls to 4%, your bond becomes more valuable, because investors can earn more interest from buying your bond than a new issue. They may be willing to pay more than $5,000 to earn the better interest rate, allowing you to sell it for a premium.

Bond Yields and Market Pricing

The amount of return a bond earns over time is known as its yield. A bond's yield is its annual interest rate (coupon) divided by its current market price.

There is an opposite relationship between a bond's yield and its price. When interest rates rise, bond prices fall (they are sold at a discount from their face value) and their yields rise to be consistent with current market conditions. The buyer's yield will be higher than the seller's was because the buyer paid less for the bond, yet receives the same coupon payments while the redemption price is higher than the purchase price. For example, suppose interest rates have risen from 5% to 6.25%, meaning bond prices have fallen. You can now buy a bond with a face value of $1,000 and a coupon rate of 5% ($50 per year) for $800, making your bond's yield consistent with current interest rates (50/800 x 100 = 6.25%). The reverse is also true.

When interest rates fall, bond prices rise and their yields fall to be consistent with current rates.When interest rates fall, bond prices rise and their yields fall to be consistent with current rates. Investors selling these bonds can make a profit. For example, the price of the $1,000 bond with a 5% coupon now rises to $1,100 to give it a yield equivalent to current market conditions of 4.6 percent (50/1,100 x 100). Buyers may be willing to pay the extra $100 to take advantage of the higher income generated by the coupons ($50 as compared to $46 from new issues), while sellers are looking to take advantage of the opportunity to make a profit. At maturity, the buyer will receive less money ($1,000) than was paid for the bond ($1,100). This could be claimed as a capital loss, which may provide a valuable tax strategy for the investor.

There is also an opposite relationship between the credit rating of a bond and its yield. The lower the credit rating, the more credit risk that a bond issuer could default on the payment of interest or principal on the bond. The investor requires a higher return on his/her money in exchange for accepting more risk. For this reason, a bond with a low credit rating will demonstrate a higher yield than a bond with a high credit rating. Correspondingly, a changing credit rating for a particular bond issue will affect its yield in the opposite direction.

Bond Maturities and Interest Rates

Changing interest rates affect bonds with varying maturities differently. Bond prices change with changing interest rates, so the effective yield of a previously issued bond will be more in line with that of current issues. Bonds sell for a premium in a declining interest rate environment and sell at a discount in a rising interest rate environment. The redemption value at maturity is less for the premium bond and is more for the discount bond. The difference between the purchase price and the redemption price is a component of the bond's yield. The further a bond is from maturity, the greater will be the difference between the purchase price and the redemption value at maturity. Let's look at an example.

Bonds sell for a premium in a declining interest rate environment and sell at a discount in a rising interest rate environment.

If a bond with a 5% coupon and a ten-year maturity is sold on the secondary market today while newly issued ten-year bonds have a 6% coupon, then the 5% bond will sell for $92.56 (par value $100). The $5 coupon payment (5.4% of the $92.56 selling price) plus the additional $7.44 received at maturity ($100 par value - $92.56 = $7.44) produces a 6% yield-to-maturity. Now what happens if this 5% bond matured in twenty years? It would sell at a discounted price of

$88.44 to produce a 6% yield-to-maturity. So, when interest rates rise, the longer a bond's maturity, the more a bond seller will discount its price. The shorter the bond's maturity, the smaller the discount.

This also means that when interest rates fall and bonds are sold at a premium, bonds with shorter maturities will have smaller premiums than bonds with longer maturities.

Duration, Interest, and Maturity

Investors use duration to predict bond price changes. Duration is a measure of a bond's interest rate risk. It is the weighted average of the time periods until a bond or bond portfolio's interest and principal payments are received, and it's expressed in years. As the value of a bond changes, so does its duration.

When interest rates change, the price of a bond will change by a corresponding amount related to its duration. For example, if a bond's duration is 5 years and interest rates fall 1%, you can expect the bond's prices to rise by approximately 5%. Therefore, if you expect interest rates to rise, you want to invest in bonds with lower durations. Low duration means less volatility or price risk.

In general, the shorter a bond's maturity, the less its duration. Bonds with higher yields also have lower durations. A zero-coupon bond's duration is the time to its maturity.

Watch Bond Interest Rates Carefully

Current interest rates are the key determinant of bond prices on the secondary market. Lower interest rates can mean higher bond prices on the secondary market. Prudent investors buy and sell bonds based on current interest rates, bond coupon rates, and maturity. As a savvy investor, you need to understand how changes to interest rates affect bond prices. You also need to understand the relationships of bond yields, maturities, and durations to interest rates.

102: Bond Duration

Introduction

When you read reports on bonds and bond mutual funds, you will likely come across two apparently similar terms — bond maturity and bond duration. Though related, they refer to two different concepts. As an educated investor, you need to understand these concepts in order to make wise investment decisions regarding bonds and your financial goals.

Bond Values, Rates, and Maturity

A bond is issued with a stated value, known as the par, or face, value. This is the value at which the bond will be bought back by the issuer upon its maturity. Though there are exceptions to the rule, most bonds are issued with a $1,000 par value. While a bond's current value can and usually does fluctuate during its lifetime, this par value remains fixed. At issue, most bonds also offer a fixed interest rate, or coupon rate. This is the annual rate of interest, calculated as a percentage of par, that the holder of the bond will earn. For example, if a $1,000 par value bond has a 5% coupon rate, each year the holder of that bond will earn 5% of $1,000, or $50 (0.05 x $1,000 = $50). Yield-to-maturity is the yield calculation used to compare the values of bonds with different issue and maturity dates, coupon rates, and par values.

There are several yields with which bond investors must be familiar, but the most important is the yield-to-maturity, or YTM. This is the total return an investor receives from a bond, based on the annual interest rate and any profit or loss realized on the sale of the bond. Simply put, YTM is the yield calculation used to compare the values of bonds with different issue and maturity dates, coupon rates, and par values.

Another important bond concept is present value--the assumption that, due to inflation, a specified sum of money received today will be worth more than the same amount received at some point in the future. Because bonds are based on the foundation of "payments over time," investors should be aware of this relationship between the values of money received today and the same amount received later.

Bond Duration Defined

Bond investors are faced with reinvestment--the threat that if interest rates fall, the interest payments and principal that investors receive will have to be reinvested at lower rates. This is important because the yield-to-maturity calculation assumes that all payments received are reinvested at the exact same rate as the original bond's coupon rate. However, this is rarely the case. As a result, brokers and portfolio managers try to account for reinvestment risk by calculating a bond's duration--the number of years required to recover the true cost of a bond, considering the present value of all coupon and principal payments received in the future. Duration can be used to compare bonds with different issue and maturity dates, coupon rates, and yields to maturity. The duration of a bond is expressed as a number of years from its purchase date.

Properties of Bond Duration

By definition, duration measures the number of years required to recover the true cost of a bond, considering the present value of all coupon and principal payments received in the future. Thus, the higher the coupon rate of a particular bond, the shorter its duration will be. In other words, the more money coming in now (because of a higher rate), the faster the cost of the bond will be recovered. The same is true of higher yields. Again, the more a bond yields in today's dollars, the faster the bondholder will recover its cost.

Conversely, longer bond maturities mean longer durations, since the fixed interest payments will be spread over longer periods and will be more greatly affected by inflation. This is best illustrated by imagining a fixed amount of money, for example $1,000, being mailed to you in small payments over time. If these payments are spread over a one-year period, you will "recover" your money faster than if the same dollar amount were spread over a five-year period.

Duration and Bond Interest Rate Risk

Another risk that bond investors face is interest rate risk--the risk that rising interest rates will make their fixed interest rate bonds less valuable. To illustrate this, let's suppose you bought a $1,000 par value bond with a 10-year maturity and a 6% coupon rate. You will earn 6% of $1,000, or $60, each year that you own the bond. Let's further assume that after one year, you decide to sell it, and at that time, new bonds are being issued with 7% coupons. Investors can choose between your 6% bond and a new 7% bond. To entice someone to buy your bond, you will to have to discount its price so that the new owner will earn the same $60, but will have paid less than $1,000 to buy it, thus raising his or her yield closer to 7%.

A bond's duration will determine how its price is affected by interest rate changes. The reverse is also true. Using the example above, let's assume that when you sell your bond, new bonds are being issued with 5% coupons. Investors can choose between your 6% bond and a new 5% bond. Comparatively, your bond is now much more attractive. An investor will be willing to pay more than $1,000 to earn 6% rather than 5%.

Duration is the tool that helps investors gauge these price fluctuations that are due to interest rate risk. Duration is expressed as a number of years from the purchase date. In simple terms, a bond's duration will determine how its price is affected by interest rate changes. In other words, if rates move up by one percentage point--for example, from 6% to 7%--the price of a bond with a duration of 5 years will move down by 5%, while a bond with a duration of 10 years will move down by about 10%. You will notice that all components of a bond are duration variables. That is, the bond's duration, coupon, and yield-to-maturity, as well as the extent of the change in interest rates, are all significant variables that ultimately determine how much a bond's price moves.

Duration Is a Guide to Selecting Bonds

Duration determines the economic life of a bond. It is not expected that you as an individual investor have to necessarily know how to calculate a bond's duration. Rather, your broker, financial advisor, or other financial professional can provide this information. However, once armed with all the right numbers, it is your responsibility to understand that a bond's duration is a clear indication of its interest rate risk (i.e., how much it will move in response to changing interest rates.) You can then buy, sell, or hold bonds according to how you think they will perform.

103: Buying Bonds

Introduction

Although, at first, buying bonds may seem simpler than buying stocks, there are still many factors investors need to consider. The constant changes in the bond market can make it difficult to know where and when to buy. As an educated investor, you need to understand what buying bonds is all about.

Things to Consider When Buying Bonds

Bonds are more stable than stocks but riskier than certificates of deposit or money market accounts. They are not great for making your money grow rapidly, but they can help to diversify your portfolio. Most traditional bonds provide a relatively stable source of interest payments and a return of your principal.

The purchase of a bond is basically a loan to the issuer: a loan that must be repaid to you at maturity. Bonds differ in their maturity.

Maturity is the time at which a bond issuer pays you back the money you loaned. If you hold your bond until it matures, you get back all of the money you paid for it, unless the issuer has defaulted. Shorter-term bonds have maturities of only several years. Long-term bonds take from 10 to 30 years to mature. In general, the longer the maturity, the greater the total of interest payments you will receive from the bond.

If you would like to conservatively invest money for a major purchase to be made within the next few years, consider a short-term bond. These types of bonds will generally maintain your principal without much risk. If the timeline of your investment is longer, you may want to consider a longer-term bond.

Long-term bonds will typically offer a higher yield in exchange for the use of your money for a longer period.

The bond issuer may decide to pay off a bond before its maturity date. This is known as "calling" a bond. Bonds are called because an issuer no longer needs to borrow the money, or because interest rates have fallen and the issuer wants to issue new bonds at a lower interest rate.

A bond's market value is directly related to interest rates. As interest rates go up, the market prices of bonds go down and vice versa. Until a bond matures, its price on the secondary market constantly changes in response to changes in interest rates. If you sell your bond before it matures, the price may be more or less than you originally paid for it, depending on current interest rates.

The other factor affecting the prices of bonds is the credit quality of a bond. If a bond issuer is at risk for default, it will be assigned a low credit rating. Credit ratings are based on a grading system, with AAA being the highest possible mark, all the way down to a grade of C. Rating agencies include Moody's Investors Service and Standard & Poor's.

How to Buy Bonds

Ready to start investing in the bond market? First, you will need to know how to go about trading bonds.

You can purchase U.S. Treasury bonds on the secondary market or directly from the Federal Reserve. When you purchase bonds directly from the Federal Reserve, you must buy new issues, but there are no broker commissions. The Treasury holds regularly scheduled government auctions four times a year: the first weeks of February, May, August, and November. You can enter competitive bids for Treasury securities.

You can also buy new-issue corporate bonds through bond dealers. Corporate bonds are IOUs issued by private and public corporations both in and outside the United States. They are issued by public utilities, as well as private sector firms such as transportation companies, financial services companies, and industrial corporations. The corporate bond market is quite large, with a lot of active trading.

When bonds are first issued, their prices, or face values, are fixed. Once issued, these prices can fluctuate in the secondary market due to changing interest rates. When bonds are first issued, bond dealers assist the issuer (a company or governmental body) in selling the bonds to the public, and for this they are paid a commission from the proceeds of the sale.

Older bonds are sold through brokers on the secondary market. The secondary market consists of the over-the-counter (OTC) market, including the NASDAQ, and stock exchanges such as the New York Stock Exchange (NYSE). Most bonds are sold over the counter. The OTC market consists of hundreds of financial institutions and brokerages that buy and sell over the phone or via computer networks. Brokerage firms that deal in bonds have latitude to set prices for bonds they sell. However, all prices are negotiable. Bonds sold on the OTC market are usually sold in amounts greater than $5,000 at a time.

Financial publications such as *The Wall Street Journal* publish prices of bonds traded on the exchanges each day. However, very few bonds are actually traded on a daily basis. A broker's advice can be invaluable in helping you select and purchase the bonds that meet your investment objectives..

Bond Pricing Terminology

There are many things to consider when judging a bond's market value. Understanding the various factors that impact bond prices can help you track how your bonds change in value, and when the time is right to buy or sell.

The face value of a bond is known as its par. A bond's par is its price when it is issued, which is the same price that will be repaid when the bond matures.

A bond's coupon rate is the annual percentage rate that will be paid to the owner of the bond, based on the bond's original face value. A bond with a coupon rate of 5% pays 5% of the bond's face value each year. Bond interest is usually paid twice a year.

Here are a few more pricing tips:

- You can sell your bond on the secondary market before it reaches maturity. The price you get for the bond before it matures is known as its market price.
- When the price of a bond goes above its face value, it is said to be a premium bond.
- When the price is below its face value, it is known as a discount bond.

When you buy a bond on the secondary market, you are probably going to pay a price above or below the par of the bond. This will affect your yield-to-maturity, a calculation based on the bond's original purchase price, redemption value, time to maturity, coupon rate, and the time between interest payments. For example, if you buy a bond and then sell it after interest rates have risen, you will get a lower price for the bond than what you originally paid for it. The second buyer will get a higher yield than you because he or she paid less for the bond, but the buyer will still get its full par value when it matures.

Bonds that are traded on the secondary market can have prices that are quite different from the prices at which they were originally issued. Traders look at a number of factors when assessing the market prices of bonds.

Bond Trading Transaction Costs

No matter where you decide to buy or sell your bonds, you should be prepared to pay a transaction cost. The costs you will pay depend on the market on which you buy your bonds.

The difference between the price a broker-dealer pays for a bond and the price at which it is sold to you is known as the bond's markup. The markup is a transaction cost. With new issues, the broker-dealer's markup is included in the par value, so you do not pay separate transaction costs.

Everyone who buys a new issue pays the same price, known as the offering price. If you are interested in a new issue, you can get an offering statement describing the bond's features and risks.

Instead of charging you a commission to perform the transaction for you, the broker-dealer marks up the price of the bond to above its face value.When you buy or sell bonds through a broker-dealer on the secondary market, the bonds will have price markups. Instead of charging you a commission to perform the transaction for you, the broker-dealer marks up the price of the bond to above its face value. Markups are usually from about 1% - 5% of the bond's original value. Bond dealers generally charge higher markups on smaller bond sales than larger ones. If you are buying a Treasury bond over the counter, you may have to pay a small, additional flat fee.

If you sell a bond before it matures, you may receive more or less than the par value of the bond. Either way, your broker-dealer will mark down the price of your bond, paying you slightly less than its current value. He or she will then mark up the price slightly upon resale to another investor. This is how broker-dealers are compensated for maintaining this active secondary market.

Bonds bought on the exchanges generally have much higher markups than bonds bought over the counter. It is difficult to know how much of a markup you are paying, because the markup is built into the price of the bond.

Buying Bonds Indirectly

Having trouble choosing the right bonds for your portfolio--or coming up with the funds to buy them all? The answer may be one of the indirect ways for investors to profit from the bond market.

The benefit of a unit investment trust is that you know exactly how much you'll earn from the trust when the bonds mature.One conservative option to explore is a unit investment trust, or UIT. A UIT gives you the opportunity to buy a wide variety of bonds in a portfolio that never changes. Some unit investment trusts also specialize in only one type of bond.

The benefit of a UIT is that you know exactly how much you'll earn from the trust when the bonds mature. You earn interest during the life of the trust on the amount you initially invest as well as on the trust's income. The bonds in the trust remain fixed until your initial investment is completely returned to you when the bonds mature. A trustee supervises the bonds in the trust, but the trustee cannot sell or add new bonds.

Another way to invest in bonds is through a bond mutual fund. A bond fund is a portfolio of bonds managed by an investment professional. The big advantage to a bond fund is that your investment buys shares of a diversified managed portfolio of bonds, which lowers your overall risks. Interest, dividends, and capital gains from a bond fund can be paid or reinvested in the fund. Open-end funds let you buy into or sell out of the fund whenever you wish. Bonds are actively added and sold from the fund by the fund manager. There is no maturity date to a bond fund. Most funds charge a modest manager's fee and some charge for buying or selling fund shares.

UITs and mutual funds offer the benefits of a bond portfolio and more affordable buy-in costs for investors who want the rewards of bonds without having to trade them directly.

Doing Your Homework Before Buying Bonds

As an educated investor, you should know what to look for when buying a bond, what costs to expect, where to buy bonds, and the different ways you can buy them, such as individually, through trusts, or in funds. Depending on your investment needs, you might consider short-term or long-term bonds, and you might choose between new issues and bonds purchased at a premium or discount on the secondary market.

104: Immunization

Introduction

Bond immunization is a passive investment strategy that takes advantage of the duration of bonds. Bond investors wanting to plan their investments efficiently employ it over the long term. As an educated investor, you should know about this investment strategy and how to apply it to your portfolio.

What Is Bond Immunization?

Bond immunization is an investment strategy used to minimize the interest rate risk of bond investments by adjusting the portfolio duration to match the investor's investment time horizon. It does this by locking in a fixed rate of return during the amount of time an investor plans to keep the investment without cashing it in.

Immunization locks in a fixed rate of return during the amount of time an investor plans to keep the bond without cashing it in.

Normally, interest rates affect bond prices inversely. When interest rates go up, bond prices go down. But when a bond portfolio is immunized, the investor receives a specific rate of return over a given time period regardless of what happens to interest rates during that time. In other words, the bond is "immune" to fluctuating interest rates.

To immunize a bond portfolio, you need to know the duration of the bonds in the portfolio and adjust the portfolio so that the portfolio's duration equals the investment time horizon. For example, suppose you need to have $50,000 in five years for your child's education. You might decide to invest in bonds. You can immunize your bond portfolio by selecting bonds that will equal exactly $50,000 in five years regardless of interest rate changes. You can buy one zero-coupon bond that will mature in five years to equal $50,000, or several coupon bonds each with a five year duration, or several bonds that "average" a five-year duration.

Duration measures a bond's market risk and price volatility in response to a given change in interest rates. Duration is a weighted average of the bond's cash flows over its life. The weights are the present value of each interest payment as a percentage of the bond's full price. The longer the duration of a bond, the greater its price volatility. Duration is used to determine how a bond will react to changing interest rates. For example, if interest rates rise 1%, a bond with a two-year duration will fall about 2% in value.

You needn't worry about doing the calculations as you can obtain a bond's (or bond fund's) duration from a broker or advisor. Using bonds' durations, you can build a bond portfolio immune to interest rate risk.

Effects of Bond Immunization

Changes to interest rates actually affect two parts of a bond's value. One of them is a change in the bond's price, or price effect. When interest rates change before the bond matures, the bond's final value changes, too. An increase in interest rates means new bond issues offer higher earnings, so the prices of older bonds decline on the secondary market.

Interest rate fluctuations also affect a bond's reinvestment risk. When interest rates rise, a bond's coupon may be reinvested at a higher rate. When they decrease, bond coupons can only be reinvested at the new, lower rates.

Interest rate changes have opposite effects on a bond's price and reinvestment opportunities. While an increase in rates hurts a bond's price, it helps the bond's reinvestment rate. The goal of immunization is to offset these two changes to an investor's bond value, leaving its worth unchanged.

A portfolio is immunized when its duration equals the investor's time horizon. At this point, any changes to interest rates will affect both price and reinvestment at the same rate, keeping the portfolio's rate of return the same. Maintaining an immunized portfolio means rebalancing the portfolio's average duration every time interest rates change, so that the average duration continues to equal the investor's time horizon.

A more direct form of immunization, "dedicating" a portfolio not only matches its duration to the investor's long-term time horizon, but also matches specific anticipated receipts of cash to the investor's specific anticipated liabilities along the way. To pay for college, for example, a parent might construct a bond portfolio so that interest and principal payments will be paid each year in September, when tuition is due.

Variations on Bond Immunization

The most common way to immunize a bond portfolio is called combination matching. In combination matching, the portfolio not only matches its duration to its time horizon, but also its cash flow and goals. For the first several years of the portfolio, the cash flow from any maturing principal (plus coupon and reinvestment income) is made to equal the intermediate investment goals set for the portfolio. Cash flow is paid out to fund intermediate goal payments, giving the portfolio very little cash to reinvest and thus little reinvestment risk. The low reinvestment risk helps the portfolio to lock in a rate of return regardless of interest rate changes.

Protection from Changing Interest Rates

Immunization can protect you from changes in interest rates, which can affect the prices and reinvestment rates of bonds. In order to immunize, investors match the duration of their bond investments and their investment time horizon--the time when they will need the cash from the investment. Finding bond duration information is as simple as asking your broker or doing a little online research.

105: The Process of Issuing Bonds

Introduction

When corporations or government bodies need to raise money, they may sell bonds to the public. Because this is a highly technical and complicated process, the issuing organizations usually hire special parties to do this work for them.

Investment Bankers Facilitate the Issuing of Bonds

If you needed to borrow money, you would probably go to your banker. Governments and businesses do the same thing. They look to the investment banker for their borrowing needs.

An investment banker serves as an intermediary between the organization issuing the securities and the investors.

When a corporation or government agency is considering issuing bonds--or stocks, for that matter--it usually contacts an investment banker for advice on the marketplace, the possible issuing price, and other factors. An investment banker is a firm that serves as an intermediary between the organization issuing the securities and the investors who purchase them. The bond issuer does not itself sell the bonds.

Investment bankers often begin assisting the corporation or government agency well before the bonds are actually issued. The organization's relationship with the investment banker may continue after the bonds have been issued, and the investment banker may sit on the corporation's board of directors.

Corporations and government units realize that investment banks possess knowledge and expertise they need to reach investors. Investment bankers generally have an excellent understanding of capital markets, relevant government regulations, and other factors affecting a bond issue.

Many investment bankers also offer broker-dealer services and related financial services.

Underwriting Bond Issues

In acting as an intermediary between a bond issuer and a bond buyer, the investment banker serves as an underwriter for the bonds. When investment bankers underwrite the bonds, they assume the risk of buying the newly issued bonds from the corporation or government unit; they then resell the bonds to the public or to dealers who sell them to the public. The investment bank earns a profit, based on the difference between its purchase price and the selling price; this difference is sometimes called the underwriting spread.

When the investment banker works with a client corporation or government unit, it generally also prepares required documents for Securities and Exchange Commission (SEC) filing, helps set a price for the issue, and takes the lead in forming and managing an underwriting group--also known as a purchase group or syndicate. This syndicate spreads the risk of the new issue to a larger number of participating investment bankers and improves the likelihood of selling all of the newly issued bonds.

Sometimes the investment banker markets a new issue but does not underwrite it. The investment banker simply acts as a sales agent under a best efforts agreement, promising to do its utmost to market the bonds. The investment banker has the option to buy the bonds and usually purchases only enough bonds to meet buyer demand, receiving a commission on the bonds sold.

Investment Bankers Locate Bond Buyers

Investment bankers generally have a good understanding of where and how to market newly issued bonds. They may decide, for example, that they can successfully market a certain bond through advertisements in the financial press, including The Wall Street Journal and Barron's.

They usually have well-developed investment banking networks and may identify the brokers and sales forces most able to market a particular bond offering. Investment bankers sometimes have established networks with investors who may be interested in the offering; they may encourage the investors to contact brokerage houses, specifying what they want in a bond.

Investment bankers also may sell newly issued bonds through private placements to large, institutional investors like insurance companies or government unit retirement funds. If the bonds are purchased for investment and not for resale, they do not need to be registered with the Securities and Exchange Commission. A bond that is not registered and that may not be sold in the public marketplace is called a letter bond, or letter security, since the purchaser signs a letter stating that the bonds are for investment purposes and not for resale.

Role of Investment Banker

Investment bankers play an integral role in the issuing of new bonds and other securities. Corporations and government units depend on their skills and expertise to plan the issues, price the issues, file required documentation, and sell the issues. Investors buying newly issued bonds also benefit from the specialized knowledge of investment bankers.

106: The Role of Collateral

Introduction

When you buy a bond or other debt security, it is important to consider whether it has collateral behind it. Many bonds do, but many do not. Collateral plays a role in the value and desirability of a bond. You can choose to buy a bond based on whether it has collateral and, if so, what kind of collateral it has.

Collateral

To guarantee the repayment of a loan or debt security, a debt issuer can provide extra assurance for investors in the form of pledged assets called collateral. Collateral is any asset that secures a loan or debt. If the issuer fails to repay the loan on time, the investor can seize or sell the collateral to recover the balance of the loan.

Adding collateral minimizes the risk of an investment's default, since the issuer does not want to lose the pledged collateral due to nonpayment. This makes the investment more attractive to investors. While collateralizing a loan or debt security does not guarantee that the loan's principal and earned interest will be repaid on time, it is a strong indication that this will occur

Collateral Used to Secure Bonds

In order to secure their investment offerings, some companies use portfolios of securities as collateral. A portfolio of securities is a collection of investments in the stocks, bonds, Treasury notes, etc., of other companies.

One type of investment that uses securities as collateral is a repurchase agreement. In a repurchase agreement, one party, the buyer, is lending money and receiving securities as collateral. The other party, the seller, is borrowing money and selling the securities as collateral for the loan. The seller commits to buying the securities back from the temporary buyer at an agreed-upon price (including interest) at a specific future date. If the seller defaults on the agreement to buy back the securities, the buyer can sell the securities on the secondary market.

Collateral trust bonds also use securities to secure their debts. The securities pledged by the bond issuer are held by a trustee.

Certain types of investments pledge equipment to ease the fears of their investors. Equipment trust certificates are bonds secured by specific types of equipment such as railroad boxcars or airline equipment. These types of collateralized securities are popular with transportation companies. For example, suppose a railway company wishes to finance the purchase of new boxcars. The legal title to the cars is held by a trustee, who leases the cars to the railroad. The trustee then issues equipment trust certificates in an amount almost equal to the cars' purchase prices. The trustee collects lease money from the railroad to pay the interest on the certificates. When the certificates mature, the trustee sells the equipment to the railroad and cancels the lease.

One of the most common forms of collateral is mortgaged property such as buildings and real estate. Mortgage-backed bonds are secured by a pool of home mortgages and are typically issued by federal agencies such as Ginnie Mae. Collateralized mortgage obligations (CMOs) are a special type of mortgage-backed bond that divides its investors into different classes depending on the length of their investment.

When a government wishes to finance projects such as the building of roads or bridges, it can issue revenue municipal bonds. With a revenue bond, the bond issuer pledges the revenue of the project it finances. However, revenue bonds only pay back the bonds' principal and interest if enough revenue is produced by the financed project.

Collateral Reduces Default Risk

Securities that are collateralized have higher credit ratings than those without collateral. A credit rating is a measure of a security's likelihood of default. The higher the credit rating, the less likely the issuer of the security is to default.

A collateralized security offers investors a secure investment. In the event of a default, the investor has a better chance of receiving all or part of the investment that he or she otherwise would be left without.

A collateralized security offers investors a secure investment. Adding collateral to a security also makes it more marketable. This is especially true for issues from small governments or companies that do not have name recognition among investors. Without collateral, many of these securities would not be attractive in the secondary market.

Collateralized Securities May Offer Lower Rates

Because adding collateral lowers a security's risk, it can also affect its return. The more risk an investment has, the more investors expect to be compensated for taking that risk. The higher the quality of the collateral, the better its credit rating and the lower its return need be. Corporate bonds with collateral will generally have lower coupon rates than non-collateralized corporate bonds. Unsecured government bonds may have higher ratings than collateralized government bonds.

Government bonds behave a little differently. The power of a federal or state government to raise revenue through taxation is perceived to be more secure than collateral. Therefore, unsecured government bonds may have higher ratings than collateralized government bonds. For example, municipal bonds not secured by collateral are secured by the government's power to increase taxes and create the needed funds to pay off the bonds. Because government collateralized securities are not backed by the government's taxation power, they have a higher risk than other government bonds and thus may have higher coupon rates.

Advantage of Collateral

Adding collateral to a security can make it more desirable to own. By using a pledged asset to guarantee repayment of a security's debt, an investor does not have to lose any sleep worrying about his or her investment defaulting. However, there is a tradeoff in the yields of corporate securities backed by collateral. Ultimately, your decision will come down to how safe you want to play it.

As an educated investor, you should be able to explain the purpose of collateral, identify the different types of collateral used to secure investments, and understand the pros and cons of collateralized securities.

107: Secured and Unsecured Bonds

Introduction

Bonds are issued as evidence of a loan. They may be backed with collateral or just the good faith and credit of the borrower. As an educated investor, you need to know the advantages and risks of bonds and whether they are secured or unsecured.

Bonds may be secured by collateral, which is the money or physical assets that a bond issuer (borrower) must give to investors if the bond defaults. Securing bonds ensures that capital will be available to pay the principal on a bond. Corporate bonds and municipal bonds may be secured or unsecured.

Federal government bonds, however, are unsecured and only backed by the good faith and credit of Uncle Sam.

Identifying Secured Bonds

Mortgage bonds are secured corporate bonds that are backed primarily by real estate, although they may include other corporate assets as well. They may cover all mortgageable property or just specific pieces.

Because mortgage bond collateral provides a clear claim on a company's assets, mortgage bonds are considered high-grade and safe from default. A trustee acting on behalf of bondholders holds the collateral; if the bond defaults, this trustee may foreclose for the bondholders.

Mortgage bonds may be either first mortgage bonds or junior mortgage bonds. Should an issuer have to liquidate, first mortgage bonds are paid off before juniors are.

To finance projects such as bridges, hospitals, and power plants, municipalities sell revenue bonds (or limited obligation bonds). The anticipated revenue generated by those projects is used to secure them.

Because they are backed with specific collateral, secured bonds are perceived as safer investments than unsecured bonds. Financial assets in the form of a securities portfolio containing stocks and bonds secure collateral trust bonds. A third-party trustee holds the securities.

Equipment trust certificates are backed by company equipment such as trucks, airplanes, railroad cars, etc. They are often issued by airlines and railroads that need to finance new purchases of equipment. The equipment bought may be the same equipment that is collateralized. A trustee for the bondholders keeps the title to the equipment. After all the bondholders have been repaid, the trustee then returns the title to the company.

Because they are backed with specific collateral, secured bonds are perceived as safer investments than unsecured bonds. Because they are perceived as safer, they typically pay lower interest rates. Secured bonds are favored by those who want to protect their investment capital.

Unsecured Bonds

Unsecured bonds, also called debentures, are not backed by equipment, revenue, or mortgages on real estate. Instead, the issuer promises that they will be repaid. This promise is frequently called "full faith and credit."

Why issue unsecured bonds? Some companies do not have enough assets to collateralize. Other companies are established and are therefore trusted to repay their debts. As for governments, they can raise taxes if they need to pay off bondholders.

Unsecured bonds naturally carry more risk than secured bonds; consequently, they usually pay higher interest rates than do secured bonds. If a company issuing debentures liquidates, it pays holders of secured bonds first, then debenture-holders, and then owners of subordinated debentures.

Types of Unsecured Bonds

Below are some common types of unsecured bonds.

To meet its financial needs, the U.S. government issues Treasury bonds. It issues them with the full faith and credit of the federal government. Because the U.S. government, of all issuers, has the best ability to repay, Treasury bonds are considered the safest from default and are very popular with investors.

General obligation bonds (GO bonds) are municipal bonds without backing. The creditworthiness of the issuing city or state is the only security they provide. GO bonds finance municipal operations. In the event that an issuer cannot repay its debts to bondholders, it may have to lay off employees, sell some assets, or raise taxes.

Income bonds are the bonds most junior of all. Their payments are made only after the issuer earns a certain amount of income. The issuer is not bound to make interest payments on a timely or regular basis if the minimum income amount is not earned. The investor is aware of the risks involved and may be willing to invest in these bonds if there is an attractive coupon rate or high yield-to-maturity.

Convertible bonds give the investor the option to convert the bonds into shares of common stock. The conditions, the time frame, and the price must all be set down at the time the bonds are issued.

Risk Tolerance

Bonds are favored by investors seeking current income and safety of principal. Some of these investors are willing to take more investment risk to get higher returns than others. Depending upon your risk tolerance, you may choose unsecured bonds if they offer high current income. Conversely, you may not be able to take much risk with your income. In this case, you would look for bonds that are backed by more than the good faith and credit of the issuers while seeking higher returns.

As a bond investor, you should become familiar with the different ways in which bonds are secured. This will help you choose bond investments best suited to your investment objectives and risk tolerance.

108: Introduction to Government Bonds

Introduction

The United States government issues or backs a number of debt securities referred to as "government bonds." Because they have the backing of the government, government bonds are considered among the most secure investments. However, there is a vast difference among the types of government bonds, and the educated investor picks and chooses from them to select those best suited to his or her investment objectives.

The Basics of Government Securities

To fund government programs and to meet its payrolls, the U.S. government issues its own bonds from the Treasury and from several government agencies. Institutional investors trading very large blocks of bonds do most of the trading in these securities. Most individual investors invest in government bonds through mutual funds. Overall, U.S. government bonds are very popular with investors worldwide.

Many people consider U.S. government bonds the safest of all because of the creditworthiness of the U.S. government.

Government bonds offer fixed interest rates. Most government bonds do not have specific collateral backing them. Instead, they are backed by the full faith and credit of the U.S. government.

Government bonds have maturities ranging from one to 50 years. Although some government securities mature in less than one year, those securities are really not bonds but are part of the money market.

Treasury Bonds

Treasury bonds (T-bonds) are very long-term US government bonds. Once issued, they mature in from 10 to 30 years and pay interest semiannually. Because the full faith and credit of the federal government "backs" them, they are considered the safest of investments. Treasury bonds are issued in denominations of $1,000.

Treasury bonds have fixed coupon rates that specify how much interest will be paid semi-annually. However, Treasury bonds may be sold through the auction process, which affects the actual rates and yields. T-bonds issued today are non-callable. This means that the government cannot require their redemption earlier than maturity time.

Interest is taxable on the federal level but not on the state and local levels.

Treasury Notes

Treasury notes (T-notes) have middle-range maturities lasting from one year to 10 years. They are essentially the same as Treasury bonds except for the shorter maturities. T-notes are taxed federally, but not statewide or locally. They are no longer callable if issued today, although many T-notes issued before 1984 are. Treasury notes are sold through auctions using the bidding process. These securities pay fixed coupon rates of interest every six months.

Treasury notes with two-year or three-year maturities are sold in $5,000 denominations. All others are sold in $1,000 units.

Collateralized Mortgage Obligations

On the market is a recently introduced mortgage-backed security called the collateralized mortgage obligation (CMO). This security was created to relieve investors of prepayment uncertainties that arise when homeowners refinance their mortgages.

Mortgage pool payments are divided into sections called tranches (French for "slices") of principal and interest payments. Individuals invest in these tranches based on their desired maturities. This way, CMOs pay interest to all their investors, but principal payments are paid out in the order of maturity.

The collateral on these bonds is a pool of mortgages that a trustee holds. Collateralized mortgage obligations are complex investments with varying degrees of risk.

Agency Bonds and Mortgage-Backed Securities

Agency Bonds and Mortgage-Backed Securities

Agencies of the federal government raise money to help certain areas of the economy. Various government-sponsored organizations also do. Together, their securities are called agency bonds. These groups sell their own securities as one way to raise money. The U.S. Treasury does not issue any agency bonds.

Agency securities are considered very safe from default. Should they ever default, the government would probably use its creditworthiness to guarantee investors' payments of interest and principal. This is generous protection, since the U.S. government does not fully guarantee most agency securities.

Most agency bonds are in the form of mortgage-backed securities. These securities represent investments in pools of mortgages.

Agency bonds provide yields that are higher than those of Treasury securities. This is because they lack explicit guarantees of safety. Their maturities range from one year to fifty years. Denominations vary from $1,000 to $50,000.

Some well-known agencies that issue securities include the following:

- The U.S. Postal Service, which raises funds to help its mail-delivery operations
- The Federal Land Banks, which raise funds for agricultural projects
- The Government National Mortgage Association (Ginnie Mae), which finances housing projects
- The Federal National Mortgage Association (Fannie Mae), which finances mortgages for the Federal Housing Administration and the Veterans Administration
- The Federal Home Loan Mortgage Corporation (Freddie Mac), which finances federally chartered thrift institutions

The last three on the list--Ginnie Mae, Fannie Mae, and Freddie Mac--issue mortgage-backed securities. They issue the vast majority of them.

U.S. Savings Bonds

U.S. Government securities can be divided into those that can be traded and those that cannot. The bonds that can be traded are called marketable: after they are bought, investors can sell them on the secondary market through exchanges or over the counter. The secondary market is very active, and bond prices fluctuate with the prevailing interest rates. There are also non-marketable government securities. Only the federal government can redeem these. They do not trade on secondary markets. These are the U.S. savings bonds.

Only the federal government can redeem U.S. savings bonds.

The three types of non-marketable bonds are called Series EE, Series HH, and Series I bonds.

Series EE Bonds
Series EE bonds are the savings bonds that have been popular for decades. They do not distribute interest periodically, as many other bonds do. They are purchased at a discount from the face value, also called "par." The discount is calculated using the bond's interest rate and years to maturity. Investors purchase them for less than their face value and let them build up to full face value at maturity.

The minimum face value of a Series EE bond is $50. The maximum face value possible is $30,000. One can purchase Series EE bonds at banks or through payroll deduction plans. The investor can allow the accrued interest to be taxed each year, or he or she can defer it until the bond is redeemed. Tax may even be deferred beyond this date if the investor exchanges his or her bond for a Series HH bond.

Series HH Bonds
Series HH bonds are savings bonds that do pay interest and are sold at their face values. Interest is paid twice per year. The denominations range from $500 to $10,000. Series HH bonds may be redeemed after six months. They normally mature in ten years but can be extended to twenty. Series HH bonds can only be obtained as exchanges of Series E or Series EE bonds. They come with fixed rates of interest. These are no longer available as of August 2004.

Series I Bonds
Series I bonds also are sold at their full face value, beginning with a minimum denomination of $50. Other denominations are $75, $100, $200, $500, $1,000, $5,000, and $10,000. Like Series EE bonds, you receive the interest earned when you cash the bonds; however, you must hold EE and I bonds at least six months (12 months if purchased in February 2003 or after). I bonds earn interest for 30 years.

You Can Invest in Your Government through Government Securities

U.S. government securities are considered the safest investments because of their backing by the United States government. Yet they are not without their own risks. For this reason, it is important to know the distinctions among different issues of government bonds.

Investing in government bonds that are not suited to your investment needs and goals can be risky business. You should know the many characteristics of government bonds so you can pick those that are right for your portfolio.

109: U.S. Government Agency Bonds

Introduction

While many people are more familiar with U.S. savings bonds and Treasuries, U.S. government agency bonds can also contribute to your investment portfolio. As a savvy investor, you should be familiar with three key members of the government agency bond family--Ginnie Mae, issued by the Government National Mortgage Association (GNMA); Fannie Mae, issued by the Federal National Mortgage Association (FNMA); and Freddie Mac, issued by the Federal Home Loan Mortgage Corporation (FHLMC).

What Is an Agency Bond?

You can buy various securities issued by government-sponsored and government-owned corporations that--strictly speaking--are not actually a part of the U.S. government. These agencies are affiliated with, but separate from, the U.S. government.

Three of these agencies are the Government National Mortgage Association (GNMA), the Federal National Mortgage Association (FNMA), and the Federal Home Loan Mortgage Corporation (FHLMC). There are other agencies, including World Bank-related agencies and those that package student loans, that also issue bonds, but we will focus on the first three due to their notoriety. The three agencies' nicknames--Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC)--refer to the agencies' bonds as well as to the agencies themselves. Agency bonds are very secure, essentially backed by the full faith and credit of the US government.

Because of their government affiliation, agency bonds are very secure, essentially backed by the full faith and credit of the U.S. government. Also, thanks to their government affiliation, agencies receive favorable treatment in several arenas: they receive low interest rates on money they borrow, have low capital requirements, and are exempt from most state and local taxes. As a result, government agencies sometimes can offer investors more favorable bond earnings than would otherwise be possible.

GNMA, FNMA, and FHLMC all buy mortgages from financial institutions that make loans, and then they group them into pools. They then sell unit shares in these pools to investors. For example, suppose you buy a house or apartment building, taking out a mortgage loan to complete the deal. The term of the loan may vary from 15 to 30 years, and the interest rate may be fixed or adjustable. A government mortgage agency then may buy your mortgage from your bank and combine it with other mortgages to create a pool of $1 million or more. The agency then may issue bonds on these pools through financial institutions, marketing them through brokers. The bonds thus raise additional capital for the agency to replenish its resources, as well as to buy and support additional mortgages.

Agency bonds generally offer a higher return than Treasury securities, along with higher volatility as the market for mortgage-backed securities responds to changes in mortgage rates. If you invest in agency bonds, you receive earnings when the mortgages in the pool are paid off. The minimum investment requirement may be $25,000 or more.

What Is a Ginnie Mae?

The Government National Mortgage Association (GNMA) operates as an agency of the U.S. Department of Housing and Urban Development.

It buys home mortgages from the financial institutions that made these loans and groups them into pools of $1 million or more. Ginnie Mae either keeps these pools to sell directly to investors or sells the pools to mortgage bankers and other institutions, which market them to investors.

Ginnie Mae or the mortgage banker continues to collect mortgage payments from the homeowners in each pool, and when you invest in a Ginnie Mae, you usually receive a monthly payment that includes both interest and a portion of the outstanding principal. Alternatively, you may receive monthly payments including only interest, and then receive the principal back when the mortgage matures.

These government agency bonds are also sometimes called Ginnie Mae pass-through securities, since the mortgage payments pass through a bank, which takes a fee before passing the remainder of the payments to investors.

Besides providing a higher return than Treasury notes and having the U.S. government's backing against default, Ginnie Maes have another advantage: they are highly liquid and can be resold on the secondary market.

The minimum investment for a Ginnie Mae is generally $25,000. Thereafter, the securities are available in increments of $1. Of course, you sometimes can buy Ginnie Maes that are selling for less than $25,000 at a discount on the secondary market, if their interest rates are low compared to more recent issues or if their principals have been substantially reduced. Finally, you can purchase shares in Ginnie Mae mutual funds for less than $25,000. Ginnie Mae funds or investment trusts buy these government agency bonds and offer shares to the public.

In addition to individual investors, a wide variety of organizations buy Ginnie Maes--for example, retirement pension funds, credit unions, real estate investment trusts, commercial banks, insurance companies, and corporations. Likewise, many different types of institutions issue Ginnie Maes--including mortgage companies, banks, and credit unions. Ginnie Maes are readily available and easy to add to your portfolio.

What Are Fannie Maes and Freddie Macs?

Fannie Mae (Federal National Mortgage Association--FNMA) and Freddie Mac (Federal Home Loan Mortgage Corporation--FHLMC) are operated through the U.S. Department of Housing and Urban Development. They are former federal agencies that became independent entities and are now even listed on the New York Stock Exchange (NYSE). Yet they retain many government connections and support in the form of favorable interest rates, low capital requirements, and tax exemptions.

Fannie Mae got its start during the Great Depression, when Congress created the Federal National Mortgage Association in 1938 to make more dollars available for home loans to middle- and low-income citizens. In 1960, FNMA became partially separated from the government, then later went public and was listed on the NYSE in 1970. Yet, some government connections remain, and five of Fannie Mae's 18-member board of directors are appointed by the U.S. president.

Congress chartered Freddie Mac in 1970, and it went fully public in 1989. The youngster in the family, Freddie Mac has a smaller share of the mortgage market. But partly because of its smaller market share, it is currently growing faster than Fannie Mae is.

Freddie Mac and Fannie Mae create mortgage pools that are somewhat larger than those of Ginnie Mae (Government National Mortgage Association--GNMA), and investors look to them to also provide a relatively high return compared to other government securities.

What Can You Expect to Earn from Agency Bonds?

Investors who purchase U.S. government agency bonds often point out that, over time, they tend to perform somewhat better than Treasury securities. Yet when fewer U.S. Treasuries are issued, government agency bonds also can fill the need for these types of investments.

Contrarians will argue that the volatility of government agency bonds makes them a poorer investment than, say, blue chip stocks. This volatility stems from the possibility that a number of homeowners represented in the mortgage pool might decide to prepay their mortgages for any number of reasons: they may sell their home, refinance it if mortgage interest rates fall, or simply decide to pay down the principal.

When a number of mortgages in the pool are paid before maturity, the investor receives payments of interest and principal sooner than planned. This can be a problem if the investor had counted on a certain fixed rate of return, and if the investment matures early at a time when interest rates on similar investments are low.

Yet many investors continue to purchase Ginnie Maes, Fannie Maes, and Freddie Macs, attracted by their respectable long-term performance and low risk of default.

Government Agency Bonds and Safety?

While government agency bonds are extremely solid investments, backed implicitly by the U.S. government, they are, of course, slightly less solid than investments in Treasury securities. And because Ginnie Mae is operated through a U.S. agency--the Department of Housing and Urban Development--its bonds are considered slightly more solid than those of Fannie Mae and Freddie Mac. Both Fannie Mae and Freddie Mac are former government agencies that now are publicly traded companies chartered by Congress. For all practical purposes, however, all of these securities are as strong as Plymouth Rock.

Yet investors in U.S. government agency bonds still face certain risks. Perhaps the biggest of these is prepayment risk. Prepayments directly affect an investment's average life and yield. And accurately predicting the home mortgage interest rates five or more years out is as much of a challenge as correctly forecasting a bull or bear market.

Just the opposite happens when mortgages in the pool mature more slowly. If fewer homeowners sell their home or refinance, for instance, the average life of the investment grows longer than planned. This extension risk reduces the amount of money with which the investor has to buy other securities at a time of high interest rates.

Investors who trade U.S. Government agency bonds on the secondary market also face market risk--much as they would with common stocks. The value of their investment can vary according to such factors as changing interest rates, time to maturity, and liquidity.

Despite these risks, many individual investors and organizations buy U.S. government agency bonds. They believe that the low likelihood of default coupled with a generally reasonable return compensates them for the potential volatility and other risk factors.

Invest in Federal Agencies with Government Bonds

Looking back, U.S. government agency bonds have evolved considerably over the years. Ginnie Mae, Fannie Mae, and Freddie Mac all began their existence as federal agencies. While the first of the three is still operated under the U.S. Department of Housing and Urban Development, the latter two have become much more independent entities. And the future promises additional changes. Among the possibilities Fannie Mae and Freddie Mac are considering: mortgages that could be portable from one house to the next or mortgages with rates that drop when the owner regularly pays on time. Stay tuned. The world of personal finance continuously offers new landscapes and shifting panoramas.

110: U.S. Savings Bonds

Introduction

Remember when you were growing up and a favorite aunt regularly gave you a savings bond for your college education? Or maybe you received a savings bond as a school prize for winning a debate or an essay contest. Savings bonds were a good investment a few years back. They still are, even though it is easy to lose sight of their tried and true benefits in the current economy, where almost everyone seems to be investing in the stock market--either through a broker, via their mutual funds or 401(k) plans, or online.

Let's start with the most fundamental question: What exactly is a savings bond?

What Are Savings Bonds?

Occasionally, you may come across an old movie or poster that portrays a World War II bond drive or urges citizens to "Buy bonds!" The United States established savings bonds, known then as "war bonds," in 1941 to help pay for the huge expenses it would incur during World War II. Today, savings bonds still help keep the government wheels running smoothly.

Savings bonds are a debt instrument of the U.S. government, issued as savings certificates to individual investors in small amounts. Savings bond certificates bear face value denominations ranging from $50 to $10,000.

Since they are backed by the full faith and credit of the federal government, savings bonds are among the safest investments you can find. The U.S. government is unlikely to default; and even if you lose your savings bond certificate, the government will often replace it--especially if you can provide such information as the serial number, issuance date, and address and Social Security number of the owner.

Another major advantage of savings bonds is that they are an accessible investment for almost anyone, since you can buy savings bonds in amounts as low as $25. For instance, you can buy a $50 Series EE bond for $25, and at maturity, you can redeem it for $50. As a result, savings bonds still make good gifts for children planning to attend a college or technical school.

That's not all. Savings bonds have at least two more advantages. They can provide a tax shelter--you don't pay income tax on the earnings of Series EE bonds until you redeem them. In addition, savings bonds are easy to acquire from a variety of sources.

Besides offering several tax advantages, savings bonds can provide a reasonable, inflation-indexed return and a steady investment vehicle for the long term--not to mention the safety and backing of a U.S. government-issued security.

Where Can You Buy Savings Bonds?

While you still cannot buy savings bonds at the corner convenience store, you can purchase them in a wide variety of places. Savings bonds are sometimes available through a payroll deduction plan at work. You also may purchase them at a variety of government offices and financial institutions:

- Banks
- Credit unions
- Federal Reserve banks and branches--by phone or mail only. The Federal Reserve no longer provides a walk-in service.
- Bureau of Public Debt--for more information or to buy bonds online, visit www.publicdebt.treas.gov. (You even can set up a program of regular deductions via electronic transfer from your checking account.)

If you lose a savings bond, you can request Form PDF 1048 from a participating financial institution or Federal Reserve Bank. Provide as much information as you can--such as the lost bond's serial number and issuance date as well as the owner's name, address, and Social Security number. When you have completed the form, mail it to:

Division of Transactions and Rulings
Bureau of Public Debt
P.O. Box 1328
Parkersburg, WV 26106-1328

Besides being extremely easy to acquire, a savings bond offers another attractive purchasing feature: no seller's fees. Unlike stock purchases, there are no fees or commissions that add to the purchase price.

What Types of Savings Bonds Are Available?

There are three types of U.S. savings bonds today, distinguished by the ways in which they pay interest.

If you bought or received a savings bond before 1980, you would have owned a Series E or Series H savings bond. That year, Series EE and Series HH bonds replaced the original series. The two current series offer different maturities and interest rates. In 1998, the U.S. government introduced inflation-indexed Series I bonds.

Savings bonds offer people with limited resources a way to begin an investment program. The U.S. government issues Series EE bonds at one half their face value, which ranges from $50 to $10,000. At maturity, you can redeem the bonds at their face value. You may buy up to a face value maximum of $30,000 in Series EE bonds annually. Series EE bonds earn interest for 30 years.

Series HH bonds earn interest for 20 years. You were able to acquire Series HH bonds only through an exchange of your Series E or Series EE bonds; however, as of September 2004, HH/H series bonds are no longer available for purchase. Existing bonds have denominations of $500, $1,000, $5,000, and $10,000. Unlike Series EE bonds, Series HH bonds were acquired at their full face values and thereafter receive regular interest payments.

Series I bonds also are sold at their full face values, beginning with a minimum denomination of $50. Other denominations are $75, $100, $200, $500, $1,000, $5,000, and $10,000. Like Series EE bonds, you receive the interest earned when you cash the bond. I bonds earn interest for 30 years.

You can use all types of savings bonds in several ways --for example, as a regular savings program through payroll deductions and as a very safe instrument that provides stability to your investment portfolio. Because of the low minimum investment requirements, they also offer people with limited resources a way to begin an investment program.

How Much Money Do Savings Bonds Earn?

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How Do You Redeem Savings Bonds?

While savings bonds are intended to be long-term investments, eventually the time will come when you want to redeem them. Maybe you need the money to return to school, for a long-awaited retirement cruise, or for a hundred and one other reasons. Generally, the easiest way to redeem savings bonds is through your local bank, credit union, or other financial institution, although you also can contact the U.S. Bureau of Public Debt or the nearest Federal Reserve Bank.

Redeeming savings bonds at your local financial institution is a simple and straightforward process. If you are not a regular customer or member, you may have to show your driver's license or other identification. If you are not the owner of the bonds, you will also have to establish that you're entitled to cash them. For example, you may be listed as a beneficiary on the bonds of someone who has died and in addition can provide a death certificate of the former bond owner. You also can cash bonds for your children. In some cases, the request to cash a bond may have to be sent to a Federal Reserve Bank; your financial institution can help process this request.

You can redeem your bonds for their full value, unless you have held them for less than five years. In that case, there is a penalty equaling three months' interest. For example, if you redeemed a Series EE bond that you had held for two years, you would receive interest for 21 months--not 24 months. Note: Series HH/H bonds have not been available for sale or exchange since August 2004.

What Taxes Apply to Earnings from Savings Bonds?

While savings bonds do not earn high interest, the low interest rate is sometimes compensated by favorable tax terms. Remember, you can use the money you do not spend on taxes to purchase an item you want or to invest in other instruments.

What specifically are the tax advantages? For starters, you do not pay any state or local taxes on the earnings of any savings bonds you own--ever. While you must pay federal taxes on the earnings of Series HH bonds in the year that you receive the interest, you can defer earnings and taxes on Series E, EE, and I bonds for long periods.

Remember, you can hold Series EE and I bonds for 30 years. After that period, you can exchange Series EE bonds for Series HH bonds and then hold them for another 20 years. After 20 years, you must redeem the HH bonds and finally pay any taxes owed on the earnings from the old EE bonds. Note: Series HH/H bonds have no longer been available for sale or exchange since August 2004.

If you buy Series EE or Series I bonds in the name of your child and redeem the bonds while the child is still your dependent, you will pay taxes on the earnings at the child's rate. The child's rate may be 0% if the child's total income is $850 or less; in any case, it is probably less than your tax rate.

In 1990, the Treasury department established the Education Bond Program, which exempts savings bond earnings from federal tax if the bonds are redeemed to pay for qualified education expenses. To qualify for this program, you must be 24 or older when buying the bonds. You then must redeem your bonds and document tuition and certain other education-related expenses (room, board, and books are not qualified). If the value of the bonds redeemed is greater than the qualified expenses, only the proportion used for qualified expenses is tax-free.

The full exclusion is also only available to single taxpayers with annual income below $78,100 and married persons filing jointly with income below $124,700. Within these limits, the exclusion is gradually phased out. You can find more information about the program at the Savings Bonds for Education web site. http://www.treasurydirect.gov/indiv/planning/plan_education.htm

The tax advantages of savings bonds can offset their generally low returns, so that savings bonds can form a valuable portion of your investment portfolio.

Savings Bonds Have Been American Favorites for Decades

There can be many advantages to Old Aunt Agatha's practice of giving all of her nieces and nephews savings bonds each year. Besides offering several tax advantages, savings bonds can provide a reasonable, inflation-indexed return and a steady investment vehicle for the long term--not to mention the safety and backing of a U.S. government-issued security.

U.S. savings bonds have gone without due recognition as a savings and investment vehicle. Yet they have some distinct advantages. They can provide a guaranteed way to accumulate funds that will mature on a given date. They provide income tax advantages when used correctly in savings for education. And they can provide a very fine emergency fund.

As any other investment vehicle, they have a place in a portfolio. Review your investment goals and objectives to see whether U.S. savings bonds might not fill a certain niche.

Bonds200

201: Junk Bonds

Introduction

Are you a risk-taker? Do you like the thrill of the unknown? If so, junk bonds, also known as high-yield bonds, may be the investment for you. Junk bonds, at one time euphemistically called "junque" bonds because of their cache, offer higher interest rates because of their lower risk ratings. Some investors feel that the higher interest makes the risk worth taking. As a savvy investor, you should be aware of the risks and rewards of high-yield bonds and how they work as individual bonds and in bond mutual funds.

What Are Junk Bonds?

When you buy a bond, you are lending your money to someone (the government or a private company) who promises to pay you back the money when the bond matures, plus interest. The ability of the bond issuer to meet its obligation is expressed in the bond's credit rating. Whether a company defaults on its bonds or not depends on its ability to pay back its debt.

Bonds that have a high credit rating are known as investment-grade bonds. Bonds that are likely to default are called speculative or non-investment grade. Low-grade bonds may be issued by companies without long track records, or with questionable ability to meet their debt obligations. Because most brokers do not invest in these low-grade bonds, they are known as junk bonds. However, because of the very high interest rates these bond issues typically offer, they are also referred to as high-yield bonds.

Because junk bonds have a high default risk, they are speculative. Default risk is the chance that a company or government will be unable to pay its obligations when the bonds mature. Defaults on bonds most often occur within the first several years of a bond's issue.

Even when a junk bond defaults, it might still keep some of its value. The impact of a default on a bond's price is known as its default loss rate. Sometimes a bond's actual price loss is not the same as its rate of default loss. A default due to bankruptcy will probably reduce a bond's price more than a default due to a company changing its strategic direction.

Default risk is determined by a credit rating system. A bond's credit rating is based on the risk of a bond issuer not making its payments on time, or at all. A bond's credit rating is measured by a grading system that starts with a rating of AAA for bonds least likely to default, all the way down to "D" for bonds that default. Junk bonds have a rating of BB or lower.

Junk Bond Creditworthiness

Researching the credit of a company issuing junk bonds is the key to determining whether the bonds are a wise investment. This process is called credit analysis.

A company with strong management and sound financial strategy can overcome a weak credit rating. Looking at a company's profitability and asset value are good places to begin your research. It is also helpful to see how the rest of the company's industry is doing. Compare the credit statistics of the issuing company with those of other companies in its industry.

Various ratios are also used in credit analysis. One example is the current ratio, the ratio of a company's short-term assets to its short-term debts. The higher the current ratio, the lower the credit risk. A second example is the debt-to-equity ratio, a comparison of a company's total debt to its overall stock value.

Before buying a junk bond, you should also consider its maturity date, the time at which the bond must be repaid by the bond issuer.

The reason junk bonds offer higher yields is their greater likelihood of default. To avoid losing your money, it is important to have a clear understanding of the creditworthiness of the issuing firm and the factors that will impact its performance.

Market Behavior of Junk Bonds

High-yield bonds, also known as junk bonds, may be actively traded on the bond market. However, their market performance can be quite different from that of higher-grade bond issues.

In general, secondary market bond prices move in the opposite direction of interest rates. Whether interest rates go up or down depends on many factors, including the policy of the Federal Reserve Board.

However, junk bonds are less affected by interest rates than are other bonds. This is because they have higher yields and shorter maturities. Interest rates are apt to change less over a shorter period. The market behavior of junk bonds is more in tune with overall changes in the economy, such as a recession.

Junk bonds tend to act more like stocks in their market behavior than other bonds. This is because the strength of junk bonds is connected to the strength of the company that issues them.

In a recession, when interest rates fall, junk bonds might also fall in value because the companies issuing them earn less and are unable to pay off their debts. A rise in company revenues is more important to the health of a junk bond than interest rates are. A strong economy means fewer defaults and more junk bonds that are successful.

Likewise, junk bond prices depend more on the overall health of the U.S. economy than do higher-grade bonds. When the stock market is doing well, companies can replace debt with equity, lessening their chance of bond default and possibly increasing bond prices.

In short, while most bond investors focus on how changes in interest rates will affect the market price of their bonds, high-yield bond investors must also understand the default risk of the issuing firm. They must understand how the company's performance and changing economic conditions impact the risk of default.

Junk Bonds Are Known for Their High Yields

Junk bonds, also known as high-yield bonds, offer investors higher yields than more highly rated bonds in exchange for taking on greater default and liquidity risks. Because they have shorter maturities and higher yields, the prices of junk bonds on the secondary market are less affected by interest rates than the prices of most bonds. Before you take the plunge, you should carefully analyze both the credit and the industry of companies that are making high-yield bond issues.

202: Callable Bonds

Introduction

Owning a bond does not always entitle you to sit back and collect interest. If your bond is callable, it may not live to see maturity. That is why it is important to understand the callability feature of bonds. Callability can benefit both the investor and company.

What Is Callability?

When you were growing up, were you ever called home for dinner? Companies can sometimes "call home," or redeem, bonds they have issued prior to the bonds' maturity dates. Callability is the ability of a bond issuer to redeem its bonds early.

Callability is the ability of a bond issuer to redeem its bonds early. Some bonds--but not all--are issued with a call provision, described in the indenture, or agreement between the bondholder and the bond issuer, as well as in the bond's prospectus. The call provision outlines when the issuer may call the bond; often this date is 10 years after the bond has been issued.

For instance, a company may be able to call its 20-year bonds after 10 years. The call provision also outlines the price at which the bond will be called; generally this price equals or somewhat exceeds the par value, or face value, of the bond.

When you buy a bond, you will want to check whether the bond is callable. If it is, you also will want to learn the price the issuer will pay for a bond that it calls. You also should check the precise call date, since you cannot be sure of receiving interest income after that date.

The Characteristics of Callable Bonds

When a company may redeem a bond after a certain date, this callability is sometimes termed a deferred call. For instance, if you own a bond that may be called after five years, you own a bond with a deferred call provision. You may want to look for bonds that offer call protection--or some measure of time during which the bond may not be called.

If you own a bond that may be called at any time, you own a freely callable bond. In contrast, noncallable bonds cannot be called until maturity, and bonds with this feature offer the investor non-callability.

When you are considering purchasing a bond, you may want to determine the yield-to-call, which is the calculation of the bond's rate of return if it is called as soon as possible--in other words, at the call date. The yield-to-call takes into account the purchase price, redemption price, annual interest payments, and amount of time remaining to the call date.

For example, say that you purchased a $1,000 bond paying 10% interest, and that you paid a discounted price of $800 for the bond. It has a call date five years hence, when the company will pay you the bond's par value. To calculate the yield-to-call:

- Subtract your price from the par value ($1,000 - $800 = $200)
- Divide this figure by the number of years to callability ($200/5 = $40)
- Add the annual interest payments ($40 + $100 = $140)
- Add the price you paid to the par value, then divide by 2 (($800 + $1,000)/2 = $900)
- Divide this figure into your answer for step 3 ($140/$900 = 15.5%)

Occasionally, a municipal bond might be redeemed through a catastrophe call, for example, following the destruction of a toll bridge that served as a revenue source to back the bond. In this extraordinary case, investors likely would be paid from funds received from an insurance policy on the bridge.

When deciding whether to invest in callable bonds, you will want to check for a call premium, the call date, yield-to-call, and other key factors before making up your mind.

Why Companies Issue Callable Bonds

The primary reason that companies issue callable bonds rather than non-callable bonds is to protect them in the event that interest rates drop. For instance, if a company issues bonds that pay investors the going rate of 7% annually in interest, and then the going rate declines to 6%, the company may redeem its callable bonds, replacing them with new bonds paying 6% annually.

This is especially crucial for bonds with maturity dates 20 years or more into the future. Without callability, a company might issue bonds with a high interest rate and not be able to change the rate for 20 years. The company could find itself locked into a high rate for many years at a time when new bonds are being issued with much lower interest rates. The company would be at a competitive disadvantage if it continued to finance its debts at the old, higher rate.

Companies are often willing to pay a premium to redeem the bonds before maturity, to avoid the above scenario. Callability enables the company to respond to changing interest rates, refinance high-interest debts, and avoid paying more than the going rates for its long-term debts.

Investor Benefits of Callable Bonds

For the investor hoping to receive interest from a bond for many years, a bond call can present a challenge. Now the investor must find another investment to replace the high-interest bond, at a time when the going interest rate is lower. While the investor may be able to find another type of investment paying a comparable return, he or she is unlikely to find a similar bond paying a comparable return.

The bond issuer sometimes pays the bondholder more than the par value of the bond when it is called.

To compensate the investor for this loss of income and the lost opportunity of owning the bond to maturity, the bond issuer sometimes pays the bondholder more than the par value of the bond when it is called. The amount that the issuer pays above the par value is termed the call premium, and often it is part of the price issuers pay for callability. The existence and amount of the call premium usually can be found in the bond prospectus and bond agreement. The amount of the call premium often approximates one year's interest at the call date. For example, if you own a $1,000 bond paying 9% interest annually and the company calls your bond at the call date, you might expect to receive $1,090 for the bond (par value plus $90). Sometimes, the amount of the call premium is reduced each year past the call date.

Bond Buyer Beware

Some investors may decide never to buy a callable bond; however, this isn't always practical. When deciding whether to invest in callable bonds, you will want to check for a call premium, the call date, yield-to-call, and other key factors before making up your mind. You may want to create several scenarios that compare your earnings for different call dates.

When you have completed your analysis, you will not be caught off guard if your bond is called. You will be prepared and know what steps to take to keep your investment plan on track.

203: Collateralized Mortgage Obligations

Introduction

Mortgage-backed securities, or pass-throughs as they are sometimes called, provide an investment that has the security of bonds but with a higher yield. Unlike bonds, however, you never know when the home mortgages that back pass-throughs might be prepaid, introducing a note of uncertainty to your investment. Collateralized mortgage obligations, or CMOs, are mortgage-backed instruments that make the term of your investment more reliable.

What Are Collateralized Mortgage Obligations?

The "mortgage" in collateralized mortgage obligation (CMO) refers to the home mortgages on which these securities are based. Like other mortgage-backed securities--Ginnie Maes, Freddie Macs, and the like--CMOs are based on the performance of home mortgage loans that are sold by their lenders to an intermediary company. This company packages the loans as certificates that investors can buy. The interest and principal payments on the mortgages go from the homebuyer through the intermediary and then to the investor--which is why they are called pass-through securities.

With other kinds of pass-throughs, the performance of your investment depends on how and when the homebuyer pays the mortgage. CMOs are fundamentally different in that they are based not on one mortgage but on a pool of loans that are categorized based on the payment period of the mortgages in the pool. In this way, CMOs seek to limit the uncertainty that can be caused when mortgages are prepaid--a problem for pass-through investors when declining interest rates lead many people to refinance their home loans. They also spread the risk of default among a number of investors.

The mortgage pools that underlie CMOs are divided into categories called tranches based on the repayment schedules of the mortgages. Bonds are then issued on each of the tranches, each with a differing maturity date and interest rate. CMO bonds are issued with maturities of 2, 5, 10, and 20 years. Coupon payments from the mortgage pool are paid to the bondholders for each tranche while principal payments are applied first to the bonds with the shortest maturity (the first tranche).

CMO bonds are highly rated; because they are often based on government-backed mortgages and other top-grade loans, there is little default risk involved.

CMO bonds are issued by the Federal Home Loan Mortgage Corporation (FHLMC), the federally sponsored corporation that also issues Freddie Mac pass-throughs. CMOs are also issued by other government-sponsored agencies as well as private issuers. Some investors hold CMO bonds to maturity; they can also be sold and bought on the secondary market, where their prices fluctuate with changes in interest rates.

Companion Bonds and PACs

Collateralized mortgage obligations may issue special classes of bonds that can either increase or decrease the risks involved in CMO bonds, allowing investors to opt for increased security or the potential of higher returns.

Companion bonds are a special class of CMO bond that is paid off first when the underlying mortgages in a CMO pool are prepaid. Prepayments tend to occur when interest rates fall, so the payment rate on the companion bonds varies with interest rates. As a result, companion bonds absorb much of the prepayment risk in the CMO and display greater volatility on the secondary market. The potential of higher yields is the investor's reward for taking on these risks.

On the other hand, planned amortization class bonds, or PACs, work to reduce risks for investors. Some of the income from the mortgage pools that underlie PACs is diverted into a sinking fund--a special account used to help pay off the PACs. The availability of this sinking fund makes it more likely that the bonds will perform as expected, except in cases of extreme prepayment situations. In return for lower prepayment risk, PACs tend to pay lower interest rates than other classes of CMO bonds.

Strategic Considerations for Collateralized Mortgage Obligations

The main advantage that collateralized mortgage obligations offer over other kinds of mortgage-backed pass-through securities is protection from the prepayment uncertainties caused by changing interest rates. With Ginnie Mae and Freddie Mac bonds, a drop in interest rates could cause the mortgage you bought to be paid off early, shortening the term of your investment and diminishing your overall yield. CMOs offer a degree of protection that makes the income they produce more reliable than returns from other pass-throughs. This protection is not iron-clad, however. Even a relatively low-risk PAC bond might suffer in the event that plunging interest rates cause a rush of mortgage prepayments.

CMO bonds typically receive AAA ratings, largely because they are based mostly on government-backed mortgages. Another advantage CMOs offer investors is a lower minimum cost to buy into the investment. It is possible to buy a CMO bond for as little as $1,000, compared with a $25,000 minimum for other newly issued pass-through securities.

Because of their relative safety from mortgage prepayment, CMOs tend to offer lower yields than other pass-through securities. However, they still tend to perform better than other kinds of fixed-income securities such as U.S. Treasury bonds. And default risk is low: CMO bonds typically receive AAA ratings, largely because they are based mostly on government-backed mortgages.

While returns from CMOs are taxed as regular income, it is possible to include these instruments in tax-deferred retirement accounts. Also, as with most fixed-income securities, CMOs offer little protection against the detrimental effects of inflation.

Are They For You?

Collateralized mortgage obligations are bonds based on pools of home mortgages arranged to minimize the impact of loan prepayments on investment returns. Special classes of CMO bonds, such as companion bonds and PACs, either increase or decrease the prepayment risk--and the risk premium--for investors. While CMO bonds tend to pay lower yields than other pass-through securities, they still tend to outperform other kinds of low-risk debt securities such as U.S. Treasury bonds.

204: Zero-Coupon Securities

Introduction

Zero-coupon bonds offer you a deal: give up the interest payments you would get from owning other kinds of debt instruments and get a hefty guaranteed lump sum at the end--as long as the issuer does not default!

What Are Zero Coupons?

Like bonds, zero-coupon securities are debt instruments issued by the U.S. Treasury, municipal governments, corporations, and brokerage firms.

With traditional bonds, the coupon rate is the rate of annual interest the issuer pays to the bondholder. The "zero" in "zero coupon," then, means that this kind of security does not make any interest payments, as bonds do.

Why would anyone go for that deal? Because zero coupons are issued at discounts usually far below the face value, or par, of the security. For example, if a company sells you a $1,000 bond for only $700, it's a zero-coupon bond.

As with bonds, the issuer pays the holder the par value when the instrument reaches its maturity date. So, while your zero coupon will not make regular interest payments while you hold it, it will pay out much more than you paid for it when it matures. While this growing value appears to be similar to the capital appreciation of an investment in stocks, it is essentially compounding interest income, not a capital gain.

Types of Zero-Coupon Securities

There are as many kinds of zero-coupon securities as there are bonds, plus a number of interesting variations.

Corporate zeros: These are corporate bonds, done zero-style. Because you are buying into the credit risk of the corporation, corporate zeros are the most risky kind of zero coupon. These are even riskier than a corporate coupon bond (or registered bond), because if the issuing company defaults on the zero, the holder receives no interest at all.

Strips: Strips are zeros that are backed by government securities and offered by brokerage houses. Brokerages are proliferating their own proprietary brands of strips under a dizzying array of acronyms: TIGRs, CATS, and other species. Each has different features but works in a similar way. The brokerage buys either U.S. government or municipal securities and holds them in escrow. It then separates--strips--the principal from the interest and markets zero certificates based on one or the other. One example is the Salomon Brothers CATS (Certificate of Accrual on Treasury Securities), a zero in which the face value is based on the accrued value of the underlying Treasury securities.

STRIPS: The Treasury also offers STRIPS--which stand for "separate trading of registered interest and principal of securities"--based on Treasury bonds. Some of the venerable U.S. savings bonds are actually forms of zeros as well.

Municipal zeros: Municipal and state governments also issue zeros in the form of zero-coupon municipal bonds, which frequently have lower returns but are generally tax-free on the federal level.

Zero-coupon convertibles: Finally, zero-coupon convertible bonds can be changed from zeros to other kinds of securities. Companies may issue zero-coupon bonds that may be converted into shares of common stock in the company. Convertible municipal zeros can change from zero coupon to regular interest-paying bonds at some time before maturity.

Strategic Considerations of Zero Coupon Securities

Zero coupon bonds share many of the characteristics of other types of bonds, with one important exception. Since they do not feature regular interest payments, they are not an income investment, as other bonds are, but should be considered an appreciation investment.

It is important to remember, however, that unlike the growth in value of a stock portfolio or mutual fund, the appreciating value of a zero is really a representation of accrued compound interest, and is taxed as such--not as capital gains, which are taxed at lower rates. There are, however, a variety of tax-free government zeros available. Zeros are also suitable in an IRA or other tax-deferred or tax-free plan since they make no distinction between capital gains and ordinary income for tax purposes.

Since zeros are debt instruments, the risk involved depends largely on the credit strength of the issuer. Zeros backed by government securities like U.S. Treasury bonds have very low credit risk, while corporate zeros can be much riskier. If the issuer does default, you may be out quite a bit, because you have not received any interest payments. Also, as with other bonds, the real values of zeros depend on how the returns compare with prevailing interest rates--a factor that makes zeros quite volatile on the secondary market. As a result, most investors hold zeros to maturity.

Zeros Are a Unique Twist on Bonds

Zero-coupon securities offer investors good returns and the security of bonds at a significant discount from their par value. There are special risks and tax considerations that go with zeros, and the ever-proliferating variety of zeros requires careful study of a number of strategic considerations.

205: TIGRs, CATS, and LIONs

Introduction

TIGRs, CATS, and LIONs--no, you will not encounter them in The Wizard of Oz. You cannot find them in a zoo, either. These things with the catchy names are actually bonds. There are other animal-named bonds as well--dealers have sold RATs, COUGARs, GATORs, EAGLEs, and even DOGs. As an educated investor, you shouldn't be put off by the "cutesy" acronyms used by the brokerage community--after all, they are entitled to an inside joke. Instead, you should know what they are and how they might fit into your investment objectives.

What Are TIGRs, CATS, and LIONs?

TIGRs, CATS, and LIONs--actually referred to as "felines" by some--are acronyms for securities issued by private companies but derived from U.S. Treasury bonds. The catlike appellations are brand names belonging to the brokerage firms that first created them. For instance, Salomon Brothers invented CATS--Certificates of Accrual on Treasury Securities. Merrill Lynch introduced TIGRs (Treasury Income Growth Receipts), and Lehman Brothers created LIONs (Lehman Investment Opportunity Notes).

Introduced between 1982 and 1986, the felines are zero coupon instruments based on Treasury bonds the brokerages held in escrow. They were created through a process known as coupon stripping: the brokerage would separate—strip--the bond's interest (or coupon) from its principal, and issue bonds based on the interest separately.

Unlike regular bonds, CATS don't make regular payments of interest to their holders. Instead, investors buy them at a deep discount from their face value, which is the amount the investor receives when the bond matures. The difference between the face value and the actual price of the zero-coupon bond represents the interest earnings of the investment.

In 1986, the Treasury instituted its own STRIPS system for backing zero coupons with Treasury securities, one that made it easier for private firms to issue them and that was safer for investors. As a result, our menagerie of feline bonds is no longer being issued. However, they are still available on the secondary bond market.

Evolution of TIGRs, CATS, and LIONs

The investment firms that designed the "felines" in the mid-'80s did so by purchasing U.S. Treasury bonds and stripping the interest from the principal. The interest payments were then divided into units, which became the basis of zero-coupon bonds.

For example, a firm might purchase a 20-year Treasury bond, which it would place in escrow. It would then strip the interest from the principal and divide it up into 40 units based on the semi-annual interest payments of the Treasury bond.

It could then issue 40 zero-coupon bonds, each with a face value that equaled the interest payment on which it was based. The zeroes would be sold at deep discount: A 20-year bond that paid $1,000 at maturity might cost about $300.

These Treasury-backed zeros offered investors a financial instrument that had abundant supply, no default risk and, best of all, no chance of being called--paid off before maturity, reducing the investor's return.

Comforts of TIGRs, CATS, and LIONs

The popularity of zero-coupon bonds based on coupon-stripped Treasury securities led to a proliferation of animalesque brand names in the few years they were being created, and moved the Treasury to create a system to make issuing them safer for investors and easier for brokerage firms. The felines were popular because they allowed investors to participate in the earnings and safety of Treasury bonds without the expense and potential shortcomings.

Even though the feline bonds were issued by private firms, which ultimately had the obligation to repay them, the fact that they were backed by U.S. Treasury bonds gave them a relatively high degree of security. And that security could be yours at a price you could afford--a fraction of the tens of thousands of dollars needed to purchase Treasury bonds.

There was another degree of comfort added by the fact that the felines were zero coupons--they could never be called, meaning that you could count on your return if you held the bonds to maturity. (These bonds were noncallable for a period, but they may now be called.) But of course, you did not have to hold them to maturity. An active and volatile secondary market exists for

Treasury-backed zeros, which is why those TIGRs, CATS, and LIONs that have not matured still stalk the bond markets today.

TIGRs, CATS, and LIONs Are a Twist on a Popular Kind of Bond

TIGRs, CATS, LIONs, and the rest of the menagerie of proprietary names that came out of the mid-1980s, were zero-coupon bonds based on the interest of U.S. Treasury securities. Brokerage firms held the Treasury bonds in escrow and issued new bonds based on their interest payments in a process known as coupon stripping. Though they are no longer issued, they are still traded on the secondary market, where they are prized for their low risk and reliable returns.

206: STRIPS

Introduction

STRIPS are relative newcomers to the investment scene. They are a twist on Treasury notes and bonds, and they represent a way to buy these securities indirectly. The investor in Treasury securities can find a number of advantages to investing with STRIPS. This course will introduce you to these securities and the potential reasons for buying them.

What Are STRIPS?

Let's start with a few definitions. STRIPS (Separate Trading of Registered Interest and Principal of Securities) are debt securities that are created through the process of coupon stripping. They are essentially traditional Treasury bonds, except that the bond's principal (its corpus) has been separated--stripped--from its interest (its coupon). Investors may then choose to purchase securities based on either the principal or interest of the bond.

STRIPS take the form of zero-coupon securities. That is, they make no periodic interest payments, as most bonds do. Instead, you buy them at a deep discount from their face value, which is the amount you receive when they mature. This means that investors know exactly how much they will earn from their STRIPS investments. This, along with the high security of the bonds that back them, make STRIPS popular with some investors.

Before 1986, a number of brokerage firms created their own zero-coupon securities by stripping the coupons from Treasury bills and bonds they purchased and held in escrow. They went by a number of feline acronyms: CATS, TIGRs, LIONs, etc. Then the Treasury introduced the STRIPS system, in which brokerages create zero coupons based on book-entry receipts for Treasury instruments. While STRIPS are based on underlying Treasury instruments, they are sold by brokerage firms.

How Do STRIPS Work?

STRIPS are zero-coupon securities issued by brokerage firms and based on receipts for Treasury securities. Any Treasury issue with a maturity of 10 years or longer is eligible for the STRIPS process.

Here is how the process works. Brokerage firms purchase Treasury securities through the means of book-entry receipts; that is, the Treasury records the firm's ownership of the bonds or notes, but the firm does not actually hold certificates that later need to be redeemed. Based on its receipts, the firm then strips the principal from the interest and creates zero-coupon securities based on portions, or units, of the principal or interest of the security.

For example, let's imagine a 20-year bond with a face value of $20,000 and a 10% interest rate. A brokerage could purchase a receipt for the bond and strip the principal from its 40 semiannual interest payments. It would then sell to investors 41 separate zero-coupon securities, each with different maturities based on when the interest payments on the Treasury bond were due. The zeros would be discounted to the present value using the prevailing interest rate and term to maturity. If the principal unit of $20,000 was discounted by 10% for 20 years, it would sell for $2,973 (ignoring any markup or commissions). Upon maturity, the principal would be worth $20,000, and each of the interest-backed securities would pay $1,000 (one half the annual interest on the bond). The brokerage would use its earnings from its Treasury bond to pay the holders of the STRIPS as they mature.

Of course, as with other debt securities, investors do not have to hold the STRIPS to maturity to cash in. An active secondary market exists, on which individual STRIPS may be traded at market value until maturity.

Why Are STRIPS Popular?

There are a number of reasons why STRIPS are popular with investors. To begin with, the fact that STRIPS are backed by U.S. Treasury securities makes them very high-quality debt instruments. Even the slight default risk that was possible with privately issued zeros in the 1980s was removed with the book-entry STRIPS system.

Second, STRIPS allow investors to take advantage of the earnings of Treasury bills and bonds without a large outlay of capital. While it takes a minimum investment of $10,000 to purchase Treasury bonds, for instance, a STRIP based on the interest of the T-bond may cost only a few hundred dollars.

The fact that STRIPS are zero-coupon securities means that you know in advance what the future value of your investment will be. The STRIP will always pay its face value at maturity, and your return will be the difference between the face value and the discounted price you paid for it. By contrast, if a standard bond issue is called, the investor loses the amount of interest the bond would have paid until maturity. The predictable returns of STRIPS can be beneficial in planning for specific goals.

Another advantage of STRIPS over the Treasury securities they are based on is the variety of maturity dates available. Since STRIPS can be based on interest payments, there is no need to wait decades for maturity, and you can choose from a range of maturity dates that will offer differing returns. The returns on STRIPS also represent an automatic reinvestment of interest. There is no reinvestment risk--the risk that the cash flow produced by an investment would have to be reinvested at a lower rate of return.

There is an active secondary market for STRIPS, where their prices can be quite volatile based on returns, maturity, and changes in general interest rates. Also, STRIPS are eligible for inclusion in tax-deferred retirement plans, in which their value would grow tax-free until your retirement.

STRIPS Meet the Demand for Zero Coupon Debts

Now let's review what you have learned.

STRIPS are zero-coupon securities based on U.S. Treasury bills and bonds. Brokerage firms strip the bonds' interest from their principal and issue separate securities based on units of principal or interest. STRIPS permit investors to take advantage of the performance of high-quality Treasury instruments without the risk of bonds being called, and at a much lower cost than purchasing Treasury bills and bonds.

See the other courses on bonds in the Investing Classroom for more types of coupon-stripped securities.

207: Treasury Inflation-Adjusted Securities

Introduction

People often choose to invest in United States Treasury-backed securities because of the bonds' safety from default. One disadvantage of investing in bonds had always been the risk of losing purchasing power as the result of inflation. For this reason, the U.S. Treasury developed a new type of security--the inflation-adjusted bond.

Bond and Inflation Basics

Here are a few terms common to all types of bonds.

The principal is the amount you originally invest in the bond, which represents a loan made to the organization issuing the bond. The face amount of a bond is due to be repaid when it matures. If you hold your bond until it matures, you get back your entire principal unless the bond defaults.

Treasury inflation-adjusted bonds are adjusted based on the Consumer Price Index (CPI-U). The CPI-U measures the average change over time in the prices urban consumers pay for a given "basket" of goods and services. As prices continuously increase over time, the purchasing power of the consumer's dollar declines. This is called inflation. The CPI-U is the most widely used measure of inflation. The Bureau of Labor Statistics of the US Department of Labor publishes the CPI-U monthly.

What Is an Inflation-Adjusted Security?

Because the purchasing power of your dollar decreases over time as a result of inflation, the rate at which your investments grow must exceed the inflation rate in order for you to experience real gains. Straight bonds pay their interest on a fixed principal amount. The principal amount is repaid at maturity. By the time this happens, this amount will not be worth as much in "real" dollars as it was when you first invested it. Inflationary risk is a major concern for investors of regular bonds because the purchasing power of the principal will decrease over time.

An inflation-adjusted security remedies this problem by adjusting the dollar value of the bond's principal to inflation. The bond increases its principal by an amount based on the non-seasonally adjusted CPI-U. The inflationary level when a bond is first issued is known as a bond's reference CPI-U. Because inflation for a given month is not actually known until two months later, a bond's reference CPI-U is the same as the CPI-U three months before the bond is issued. To arrive at the bond's inflation-adjusted value, the bond's principal is multiplied by the CPI-U index ratio (the current CPI divided by the bond's reference CPI).

For example, you buy a 10-year, $1,000 Treasury inflation-adjusted bond in April. The CPI reference rate is taken from January's CPI (three months earlier), which is 100. Six months later, inflation has risen 1% and the current CPI is now 101. This gives you a CPI index ration of 101/100, or 1.01. Your bond's principal is now worth $1,010, or 1,000 x 1.01.

At its maturity, the bond pays either the inflation-adjusted principal or the original principal amount, whichever is higher. The bond's semi-annual interest payments are calculated with a fixed rate of interest on its inflated principal, guaranteeing that the investor earns, on the original investment amount, a rate of return higher than inflation. The interest rate of the bond is established at issue.

Characteristics of Inflation-Adjusted Securities

What happens to an inflation-adjusted bond if the economy experiences decreased prices over time? If there is deflation, the bond's principal will decline, but not below its par value. Remember that when the bond matures, you are guaranteed to receive either its inflation-adjusted principal or its original principal, whichever is higher.

Treasury inflation-adjusted securities are issued in denominations and multiples of $1,000. So far, the Treasury has issued inflation-adjusted securities with maturities of only five or ten years, but will be adding thirty-year maturities in the future. Like other Treasury bonds, new inflation-adjusted bond issues are sold by auction through the Treasury Direct program on a quarterly basis. There is no certificate issued when you buy one of these bonds from the U.S. Treasury. The Treasury issues and maintains the bonds at their par value in bank accounts through accounting entries or electronic records.

Treasury inflation-adjusted securities will soon be eligible to participate in the Separate Trading of Registered Interest and Principal of Securities (STRIPS) program. Through this program, the bond investor "strips" the coupon interest payments from the bond and sells them, leaving the principal of the bond to be sold at a discounted price.

Advantages of Inflation-Adjusted Securities

Treasury inflation-adjusted bonds are backed by the full faith and credit of the US government. Because the principal is protected from inflation by being indexed with the CPI-U, the real purchasing power of your investment will keep up with rising prices. The market prices of these bonds can be affected only by changes to real, rather than nominal, interest rates. Real interest rates are those that are adjusted for inflation.

The second advantage to these bonds is that the principal of a bond at the time of purchase is guaranteed to an investor who holds the bond until maturity. An investor who buys a bond at a price equal to its inflation-adjusted par can expect its real yield to equal its coupon rate if it is not sold.

The safety of inflation-adjusted securities makes them an especially worthwhile investment for long-term investors who wish to live off the steady interest income and maintain the purchasing power of that income. Similarly, the investor is assured to receive back the principal with the same purchasing value it had when it was originally invested.

Issuing inflation-adjusted securities also benefits the Treasury department because it reduces its initial interest costs.

Taxation of Inflation-Adjusted Securities

Interest income earned on an inflation-adjusted bond is taxed as ordinary income by the IRS. There is no distinction between inflation-adjusted income and nominal income. The appreciation of principal and the semi-annual fixed interest on these bonds are taxed in the year they are accrued (earned), even though an investor will not actually receive the principal increases until the bond matures. These increases are sometimes referred to as "phantom income." This means that when inflation increases, so do the taxes on inflation-adjusted bonds. There is a risk that in years of high inflation, tax liability could exceed your coupon interest income, wiping out your yield.

If the economy experiences deflation, the deflation offsets interest earned on the bond. If deflation is greater than the interest earned, the unused portion of interest can be carried forward to offset future income. If the deflation amount is not used by the bond's maturity, the bondholder may claim it as a capital loss.

Like other Treasury bonds, Treasury inflation-adjusted bonds are exempt from state income taxes.

Invest in the Treasury and Beat Inflation, Too

The market for U.S. Treasury securities is actively and highly liquid. As a new type of security, inflation-adjusted securities may not be as well developed and understood as other types of Treasury securities. This could result in larger spreads between what a dealer is willing to pay for an inflation-adjusted security and what sellers are willing to sell them for, leading to higher costs for the common investor. There are still unknowns associated with Treasury inflation-adjusted securities not ordinarily associated with other Treasury notes.

For example, what happens if the structure of the CPI-U index is changed? But regardless of the uncertainties, there is no doubt that these unique bonds are one of the safest types of investments you can buy.

208: General Obligation Bonds

Introduction

There are two types of municipal bonds--revenue bonds and general obligation (GO) bonds. The difference between the two types is the kind of collateral used to secure their payments of interest and principal. General obligation bonds offer investors a relatively safe investment vehicle while providing states and local governments with funds for community improvement.

What Are General Obligation Bonds?

General obligation bonds are debt instruments issued by states and local governments to raise funds for public works. What makes general obligation bonds (or GO bonds for short) unique is that they are backed by the full faith and credit of the issuing municipality. This means that the municipality commits its full resources to paying bondholders, including general taxation and the ability to raise more funds through credit. The ability to back up bond payments with tax funds is what makes GO bonds distinct from revenue bonds, which are repaid using the revenue generated by the specific project the bonds are issued to fund (fees from a public parking garage, for example).

GO bonds give municipalities a tool to raise funds for projects that will not provide direct sources of revenue--roads and bridges, parks and equipment, and the like. As a result, GO bonds are typically used to fund projects that will serve the entire community; revenue bonds, on the other hand, are used to fund projects that will serve specific populations, who provide revenue to repay the debt through user fees and use taxes.

General Obligation Bond Payments

The principal reason municipal general obligation bonds are such low-risk investments is that they are backed by the full faith and credit of the municipalities that issue them. This means that municipalities can apply funds raised from various kinds of taxes; the default risk of GO bonds is low, since the municipality has the option of raising taxes to meet its obligations.

Most cities, towns, and villages typically rely on various kinds of ad valorem taxes to pay GO bond interest.

States and local municipalities that levy income or sales taxes may apply the revenue they generate to pay principal and interest on GO bonds. Various kinds of fees, such as license fees, can be used as well. Most cities, towns, and villages, however, typically rely on various kinds of ad valorem taxes--taxes based on the value of private and business holdings within the municipality. Property and real estate taxes are the most common types of ad valorem taxes available to municipalities. For example, if a town creates a bond issue to fund a new school building, it may increase the property tax rate in order to ensure that it will have sufficient income to meet its obligations to bondholders.

It is also possible for municipalities to repay bondholders by borrowing more money. When interest rates fall, municipalities may call a bond issue--i.e., repay the principal before the bonds mature. The municipality may then re-fund the debt by making a new bond issue at a lower rate of interest, saving itself some money in the process.

Advantages and Disadvantages of General Obligation Bonds

General obligation bonds are prized for their relative safety as investments. Because the credit of a municipality stands behind them, GOs typically have high bond ratings, higher than revenue bonds tend to. The reason is the municipality's power of taxation: a city or town always has the option of raising tax rates or levying new taxes in order to meet its obligation to bondholders. As a result, it is rare for a municipality to default on its GO bonds. GO bonds typically rate with U.S. Treasury securities and high-grade corporate bonds for investor confidence. With revenue bonds, by contrast, if the project the bonds fund does not raise sufficient revenue, there is at least the possibility that the municipality may default on the bond issue.

As with other examples of low-risk investments, the tradeoff for safety is lower returns. GO bonds typically pay lower interest than revenue bonds, precisely because the credit behind them makes the possibility of default so remote. However, many GO bonds offer federal-income-tax-free returns, which can make up for lower interest rates, especially for investors in higher tax brackets. For example, if you were in a 28% tax bracket, a 4% yield from a tax-free municipal issue would be equivalent to a 5.56% yield from a taxable bond issue. Keep in mind that general obligation bonds and other municipal securities may indeed be subject to state and local taxes, as well as the federal alternative minimum tax.

Buying General Obligation Bonds

General obligation bonds, like most municipal bonds, are typically sold in denominations of $5,000. While it is sometimes possible to buy directly from the municipality that issues them, most GO bonds are purchased on the secondary market. If you buy through secondary dealers such as brokers, you may be required to make a minimum purchase of from $10,000 to $25,000 or more.

For those who want the benefits of GO bonds without the high purchase prices, there are several opportunities to buy into pools of GO bonds. A number of mutual fund companies offer shares in managed open-end or closed-end municipal security funds. Another alternative is a unit investment trust, an unmanaged pool of GO bonds. These pooled funds give investors a chance to participate in a diversified portfolio of municipal bonds without the need to lay out thousands of dollars initially. A typical minimum purchase for these pooled investments is $1,000.

Community Resources Financed by General Obligation Bonds

That school, streetlight, or public park in your neighborhood was probably built with the help of a general obligation bond issue. Sold to raise funds for works that benefit the entire community, GO bonds are backed by the full faith and credit of the municipality, which allows the state or local government to raise taxes to ensure that the bonds are paid. While other investments may pay higher interest rates, GO bonds offer the advantage of solid security, and many offer tax-free returns as well. Investors can participate in diversified portfolios of GO bonds with a relatively small investment by buying shares in mutual funds and unit investment trusts based on these securities.

209: Revenue Bonds

Introduction

Revenue bonds make up the vast majority of municipal bonds. They are available in a variety of issues, with each issue varying by what it finances. Investors who want to buy revenue bonds need to know the varieties on the market, as well as how the projects they fund will produce income.

What Are Revenue Bonds?

Revenue bonds are municipal bonds that are secured by specific income of the issuer. The method of securing the loan is what distinguishes them from their municipal cousins, the general obligation bonds (or GO bonds). GO bonds are secured by the full faith and credit of the municipality that issues them.

States, cities, and municipal subdivisions issue municipal bonds. Their purpose is to fund municipal projects, such as housing, hospitals, lighting systems, parking ramps, stadiums, factories, sewer systems, and dozens of other community enterprises. Revenue bonds are municipal bonds that finance income-producing projects. The income generated by these projects pays revenue bondholders their interest and principal. Projects funded by revenue bonds serve only those in the community who pay for their services. GO bonds, in contrast, finance projects that do not produce income but provide services for the entire community.

Most revenue bonds are sold in $5,000 units and mature in 20 to 30 years. However, not all the bonds in the issue mature at the same time; they may have staggered maturity dates. Bond issues with staggered maturity dates are known as serial bonds.

Income from a municipal enterprise is put into a revenue fund. From this fund, expenses for operations are paid first. Only after operations expenses are paid do revenue bondholders receive their payments.

Because they are not backed by the full faith and credit of a municipality as are general obligation bonds, they carry a somewhat higher default risk for which they offer higher interest rates.

Revenue Bond Security

Unlike unsecured general obligation bonds, revenue bonds are secured by specific collateral--the income produced by the projects they fund. The revenues (fees, tolls, concessions, rent, etc.) produced by the projects are used to pay investors. Revenue bonds are not paid by taxes as general obligation bonds are.

Some municipal projects receive additional funding from endowments. The interest from these endowments is sometimes used as revenue bond collateral. Revenue bonds offer higher interest than do general obligation bonds. This is due to the fact that the income from the projects they fund cannot be predicted with certainty. This adds to the perception of lower safety. If the projects do not produce enough revenue, the bonds may default. In that case, the issuer will defer payments to bondholders.

Investors who are willing to risk the possibility of default may choose revenue bonds over general obligation bonds. Some investors protect themselves from default by insuring their revenue bonds.

Ratings firms rate revenue bond issuers for their ability to pay back interest and principal. Bond analysts study the issuers' ability to produce income sufficient to make payments to investors. They also evaluate the cash flow of the income sources, since the success of the bonds ultimately depends on the projects' ability to produce revenue.

Types of Revenue Bonds

The types of municipal revenue bonds are as numerous as the kinds of projects they are used to fund. As you can see, most of them are named for the projects that they finance. Here are the major types:

- Airport revenue bonds fund the construction of airports. Landing fees, fuel fees, and lease payments secure these bonds.
- Industrial revenue bonds finance public projects such as factories, industrial parks, and stadiums. Fees, concessions, and lease payments provide the backing.
- Public power revenue bonds pay for power plants. The sale of electricity provides the revenues.
- Hospital revenue bonds fund construction and renovation of hospitals and the buying of equipment. Hospital revenues, such as those from Medicare, are used to repay bondholders.
- Housing revenue bonds fund the construction of housing. They may cover single-family or multi-family housing units. Mortgage payments are the security. New Housing Authority bonds finance low-income housing.
- Student loan revenue bonds finance loans taken by college and university students.
- Transit revenue bonds pay for public transportation. Fares and government subsidies secure them.
- Water revenue bonds finance water and sewer projects. Connection fees and usage fees provide the revenues.

- Highway revenue bonds are used to build revenue-producing facilities such as bridges and toll roads.
- Toll road bonds are a sub-type, the revenues of which come from tolls. Gas tax revenue bonds are another sub-type of highway revenue bonds. Gas taxes, license fees, and other non-toll sources secure them.
- Special tax bonds are backed by excise taxes such as those on cigarettes and alcohol. They may also be backed by special assessments on those who will benefit directly from a particular project.
- College and university revenue bonds finance the construction of centers of higher learning. Bondholder payments include dorm fees and tuition payments.
- Double-barreled bonds receive backing from both revenue and the municipality's creditworthiness. They are a hybrid, and they may finance a variety of projects.

Revenue Bonds Finance Revenue-Paying Projects

Revenue bonds are municipal bonds that are collateralized by revenue produced by the projects they fund. Because they are not backed by the full faith and credit of a municipality, the way general obligation bonds are, they carry a somewhat higher default risk, but pay higher yields in return. To evaluate a revenue bond, it is important to understand the type and cash flow of the project that will be providing the revenue.

For more information on municipal bonds in general, and about their tax advantages, consult Investing Classroom's other bond courses.

210: Municipal Bond Insurance

Introduction

Owners of municipal bonds can purchase insurance on them. Although municipal bonds are considered safe, some investors sleep better at night knowing that their investments are protected against loss. As a wise investor, you should know about municipal bond insurance and its pros and cons. By knowing the advantages of insuring, you should be able to choose whether you want your own insurance or not.

Why Insure Municipal Bonds?

A municipal bond is an obligation of debt issued by states and city and local governments to raise money for the public funding of projects and services such as schools and housing. Municipal bond insurance is an insurance policy on the bond and is underwritten by a private insurance company.

Insurance provides investors with the security that no matter what happens to the finances of the government that issues the bond, the bond's interest and principal payments will be made.

Like other bonds, municipal bonds have certain risks associated with them. A bond's primary risk is that it could default. If a bond defaults, it means the government that issued the bond does not have the funds to make timely payments of interest and principal.

Municipal bonds also count on the projects they finance to bring in expected revenues. The governments that issue municipal bonds often rely on these revenues to pay back the bonds they issue. Municipal bonds therefore also run the risk that these projects will fail to produce the revenue needed to pay off the bonds. Insurance provides investors with the security that no matter what happens to the finances of the government that issues the bond, the bond's interest and principal payments will be made.

Bonds with low default risk are given high credit ratings, which influence the market prices of the bonds. A bond that is insured will have a higher credit rating than a non-insured bond. Insured bonds receive the highest credit rating possible: AAA. The higher credit rating enables the bond issuer to pay a lower interest rate on the bonds when they are sold. There are four major agencies that provide bond credit ratings. These agencies are the following:

Moody's Investors Service
Standard & Poor's Corporation
Fitch IBCA, Inc.
Duff & Phelps Credit Rating Co.
Insuring a municipal bond also increases the bond's marketability. The insurance helps smaller issuers who are unknown or do not issue bonds frequently to be taken seriously by investors.

[subsection What Does Municipal Bond Insurance Cover?

Municipal bond insurance companies guarantee that the interest and principal of a municipal bond will be paid on time if the bond issuer is unable to do so. In the event of a default, the insurance company makes the payments to ensure that investors receive their principal and interest earnings promptly. This guarantee generally lasts for the entire life of the bond and cannot be canceled by the insurer. An exception to this rule is in the case of unit investment trusts. With unit investment trusts, the bonds can be insured either for their lives or for the life of the trust only. Insurance companies usually insure only municipal bonds with credit ratings of BBB or higher. Policies can also be taken out on municipal bond funds.

When a municipal bond is first issued, it may come with a condition called a sinking fund requirement. To pay off its bond debts, a municipal bond issuer may be required to make regular cash payments to a sinking fund trustee. This condition requires the bond issuer to pay off a certain amount of the bond debt each year by making payments to the fund's trustee. Municipal bond insurance also covers sinking fund payments, making sure the fund is kept up to date and that no payments are missed.

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How Municipal Bonds Are Insured?

Before a municipal bond is insured and sold, it is purchased by an underwriter firm (or financial guaranty company), insured, and then resold to investors. Underwriting is a risk assessment process by the insurance company. In the underwriting process, the insurer decides whether and on what basis it will issue a policy on a bond. Most insurance companies that insure municipal bonds are called "monoline" insurers. This means the insurance company insures only debt securities, eliminating the risks that come from insuring any other types of products or services. These insurance companies are closely scrutinized by the same credit rating agencies that rate the bonds.

Once a bond is insured, its performance is closely monitored by its insurer through a process called surveillance. During surveillance, the insurer examines the financial statements and reports of the bond issuer to make sure the issuer's credit will remain stable.

After the underwriting process, which takes about a month, the bond is given a new rating by a rating agency. It is also assigned an identification number called a CUSIP. The CUSIP number is used to identify the security when it is traded and settled.

Drawbacks of Insuring Municipal Bonds

Municipal bond issuers must pay an insurance premium to obtain insurance coverage for their bonds. Although investors do not pay these premiums directly, the fact that issuers and investment firms pay them means that these costs get transferred to investors. These costs are passed on in the form of lower interest rates on insured bonds. Issuers reduce their borrowing costs because insured bonds are rated AAA. Bonds rated AAA generally yield lower interest rates than lower-rated bonds. The higher the risk of a bond (the lower its credit rating), the more investors expect to be compensated for putting their money into the bond. For the insured municipal bond to be profitable for its issuer, the savings the issuer makes by offering lower interest rates must be larger than the premiums it pays to the insurer.

An insurance policy on a municipal bond also does not guarantee that a bond will reach a certain price in the marketplace. Insured bonds are still subject to changing interest rates, which affect bond prices inversely. A bond sold before it matures may be worth more or less than its par value.

Municipal Bond Insurers

The majority of municipal bonds are insured by several large financial guaranty agencies. The world's largest insurer of municipal bonds is the Municipal Bond Insurance Association. (MBIA). MBIA provides financial guarantee insurance, investment management services, and other municipal services to the public, private, and not-for-profit sectors.

Another one of the largest municipal bond insurers is the American Municipal Bond Assurance Corporation (AMBAC). AMBAC insures municipal and structured finance debts and is the successor of the oldest municipal bond insurance company, which wrote the first municipal bond insurance policy in 1971. AMBAC became a subsidiary of Citibank in 1985 and went public in 1991. In 1995, AMBAC and MBIA started an international joint venture called MBIA-AMBAC International.

Since 1984, the Financial Guaranty Insurance Company (FGIC) has insured more than 13,500 municipal bonds. The FGIC also provides public entities with services such as liquidity facilities and investment products.

Governments can also get their bonds insured by a wide variety of smaller financial guaranty agencies.

Should You Buy Insurance?

Insured municipal bonds have higher credit ratings than noninsured municipal bonds. They are one of the safest investments you can buy. If the bond issuer defaults, your principal and interest payments are guaranteed by the insurer. However, this security comes with a price: lower interest payments. The decision to buy an insured bond will ultimately come down to your risk tolerance. Is it worth it to you to lose a little return for that extra protection? If it is, then insured municipal bonds may be a good investment for you.

Portfolio Curriculum

Portfolio100

101: Steps to a Suitable Portfolio

Introduction

There's more to successful portfolio building than picking good investments.

Putting together a portfolio of securities is like building a home. Even if a house is filled with beautiful rooms that may not be enough: All those rooms need to work together to form a pleasing and useful whole. Investment portfolios are the same way.

This track of the Investing Classroom will show you how to design a successful portfolio of investments that work together to help you reach your goals. In this course, we'll introduce the five essential steps to tailoring your portfolio and keeping it in good shape. We'll expand on these steps in subsequent courses.

Create a Blueprint

Just as building a home begins with a blueprint, you need a pattern for your portfolio. The blueprint tells the builder to build a structure of a particular size and shape, with specific features, to suit the needs of its future owners. Similarly, your portfolio should suit your needs and specifications.

The best starting point when creating your portfolio blueprint is to focus on your investing goal. Maybe you're investing for retirement, for your child's education, or for a vacation home. We'll cover goals at length in Portfolio 102: Determining Your Goals and What They'll Cost.

Whatever your goal, it gives you vital information. It tells you how long you'll be investing (your time horizon), and how much of your investment you can put at risk. The closer your goal or the less you can afford to lose, the more you should focus on preserving what you've made rather than on generating additional gains.

How much should you put into cash, bonds, and various types of stocks? One rule of thumb is to use your age as a guide. For instance, if you're 33 years old, put 33% of your portfolio into cash and bonds and the rest into stocks.

Some investors might find that figure conservative, though. Others might find that it's too aggressive for their particular goal. Such rules are like buying a home without taking a tour inside. Sure, it looks good from the outside, but does it really suit you and the way you live? Maybe not. We'll show you how to determine what cash/bond/stock mix is right for you in Portfolio 105: Determining Your Asset Mix.

Discover What You Already Own

Maybe you can name all of your stocks and mutual funds off the top of your head and detail how each one performed last week. Good for you. But can you explain how they work together? Which are your core investments? Are you diversified? Do you have a lot of overlap? You must be able to answer those questions before you can see how (or even if) your portfolio fits your pattern.

To figure out exactly what you own, you could buy a financial calculator or investing spreadsheet, haul out the latest shareholder reports for your funds and account statements for your stocks, and calculate how much you have in cash, bonds, and various types of stocks. What a job! No wonder people don't know what's in their portfolios.

Use Morningstar's Instant X-Ray instead. Simply enter the tickers of all of your investments and how much you have invested in each, either in dollar or percentage terms. Then click "Show Instant X-Ray."

You'll discover your portfolio's asset mix, style-box breakdown, sector weightings, regional exposure, and much more. Then, for ongoing monitoring, just click to save your Instant X-Ray holdings as a Portfolio on Morningstar.com.

Make Your Portfolio Fit Your Blueprint

Now that you know what you have, it's time to find out whether your current portfolio fits your blueprint.

Begin by checking your portfolio's asset allocation. If that doesn't match the asset allocation you laid out in your blueprint, shift assets among funds and stocks to tailor the mix. If your investments are in taxable accounts, however, you might not want to sell any of them--you may pay commissions to trade out of them, and you may also owe taxes if your funds or stocks have gained in value since you originally purchased them. We'll talk about sell strategies in Portfolio 304: Strategies for Selling.

Next, weed out redundant investments. If you have three large-cap growth funds, for example, they probably aren't all equally good. Refer to Morningstar.com's Fund Reports to see which fund has the lowest expenses and longest-tenured fund manager, as well as a strong long-term risk/reward profile. Morningstar.com Premium Members can also read the Morningstar Analysis for insight into the funds' strengths and weaknesses.

Be sure that your portfolio includes core holdings, those investments on which you're relying most to help you meet your goals. Core investments should be the biggest part of your portfolio. We'll discuss how to choose them in Portfolio 106: Core vs. Noncore Investments.

Finally, fill any portfolio holes, such as a lack of value or foreign exposure, with new investments.

Schedule a Time to Rebalance

By following the first three steps, you've crafted a portfolio that you can live with. You'll want to make sure that it continues to fit your goals and needs, though. That requires occasionally rebalancing, or restoring the original blueprint. We'll cover the ins and outs of this in course 305: Rebalancing Your Portfolio.

Stocks often gain more than bonds or cash. Over long periods of time, stocks will probably take up more of your portfolio than they did in your original blueprint. Because stocks are riskier investments than bonds, your portfolio is becoming riskier as your stock position rises. That's why it's important to rebalance and restore your portfolio to its original pattern.

Similarly, not all stocks do well at the same time. Maybe your value stocks are outpacing your growth investments. If you don't restore your portfolio's original balance between the two styles, your investment success will become increasingly dependent on your value investments.

When you rebalance, keep your goal in mind. As you get closer to needing the money you've invested, the pattern you originally drew should change. Your portfolio should become more conservative as you approach your goal.

Monitor Your Investments

In addition to rebalancing your portfolio, you'll want to keep tabs on your individual investments. You need to make sure they're still filling their original roles in your portfolio.

Let's say you're monitoring your mutual funds. What types of things should you look for? Make sure your funds stay in the same Morningstar category; if a fund's style has changed dramatically, the fund may no longer meet your needs. Examine the fund's category rating--is it still competitive? Watch out for manager changes, too.

With stocks, you'll want to keep tabs on price, and where that price is relative to the sell target you've established. Changes at the top matter, too--new management can mean new strategy. Profitability, financial health, and growth prospects all matter, too.

We'll discuss these and other portfolio-monitoring issues at length in Portfolio 301 and 302.

102: Determining Your Goals and What They'll Cost

Introduction

We'd never show up at a party without knowing beforehand what type of party it was. Is it a formal dinner party for a dozen close friends or a frat-house kegger?

Yet we regularly invest, squirreling away as much as we can, without knowing whether we're saving enough for our goals. That's because most of us have no idea what our goals will cost.

For example, some financial-planning experts say we'll need 80% of our pre-retirement income to live comfortably once we stop working. In reality, thrifty retirees make do on less. Others, meanwhile, spend their retirements traveling, or taking up expensive hobbies. (Golf, anyone?) They spend more in retirement than they did while working.

This course will give you some idea what your goals may cost.

Annual Cost of Retirement

Sometimes the goal's annual cost is easy to estimate. Think of your yearly mortgage tab. Annual college costs aren't that tough to tabulate, either: Add together what the average college student pays for the cost of classes, books, and room and board each year, multiply by four (or however many years you think the child will be in school), and you're at least in the ballpark.

Projecting your retirement living expenses is another matter entirely--especially if your retirement is decades away. It involves some dreaming, that's for sure. Ask yourself what type of lifestyle you want. Do you want to spend your retirement building birdhouses in your garage, or do you want to move to South Carolina and play golf every day? The first lifestyle will certainly cost less than the second.

To get a grip on what you might spend, analyze what you currently spend each year, and try to project what those costs will be in retirement. This isn't an exact science. Remember that you're just trying to get your arms around the issue. Some expenses that will likely change in retirement:

Housing costs. Most of us assume our mortgage will be paid off by the time we retire. That may be true. But what if we take out a line of credit on our home to install that new deck and swimming pool? Or what if we buy a second home in wooded Wisconsin or sunny Arizona? Housing costs don't always decline in retirement. Conversely, maybe we'll sell our homes and move into condominiums that not only cost less, but also require less upkeep.

Health-care bills. For most Medicare-qualifying retirees, health-care insurance isn't exorbitant. A good supplemental insurance plan (to cover what Medicare doesn't) may cost less than $200 per month. But not all plans cover prescriptions. Further, if you retire early and can't continue to participate in your former company's group insurance plan until Medicare kicks in at age 65, watch out. Long-term-care issues, such as living in a nursing home or hiring in-home care, should be accounted for, too.

Recreation. For many of us, retirement is about enjoying the things we denied ourselves while we were raising children or working. And those things--whether traveling across the country in an RV or taking up tennis--cost money. We'll likely eat out more, travel more, and see more movies, plays, and sporting events once we've left the working world. Those tickets aren't free.

Children. By the time most of us retire, our children will be on their own. We hope. Maybe you'll want to help your son with the down payment on a new home. Or maybe your thirtysomething daughter has returned home, forcing you to put off dreams of condo life for a few years. Once a parent, always a parent--so budget like one.

Other items to include in a retirement expense form: transportation costs, which include cars, gas, and insurance; taxes, which, thankfully, should decline for many of us; and those monthly bills for cable television, Internet access, or cellular telephones. It all adds up.

Number of Years in Retirement

Next, project how long you'll need to be paying for your goal.

Say for a moment that your goal isn't retirement, but sending your child through college. Will that expense stretch out over four years? Or is postgraduate study in the little one's future, too? Or maybe your goal is saving for a home and paying off a mortgage. The easy part is figuring out what you'd like to put down. But do you plan to use your investments to help pay your mortgage? If so, the goal for this pool of money may extend over 20 or 30 years, depending on the terms of your mortgage.

Back to the mother of all financial goals, retirement. Here, you need to consider just when you want to bid the working world farewell. Have you dreamed of an early retirement, or are you someone who can't imagine not working at least part time?

Then, unpleasant as it is, you'll need to project when you'll bid the world adieu. When it comes to life expectancy, think long. While most of us won't become centenarians, it's better to err on the side of longevity. Otherwise, you may run out of money.

103: How Much Risk Can You Tolerate?

Introduction

Husbands endure Saturday-evening dinners with their in-laws in exchange for a Sunday of uninterrupted football. Kids pass up watching television to take out the trash and wash dishes because they want spending money. And parents extend Friday night curfews as a reward for good behavior during the week.

Life is about trade-offs. So is investing.

The investment trade-off is between risk and return. Getting a return on your investment means accepting risk, at least to some extent. But what, exactly, is risk? And how much of it can you tolerate?

This course will review the types of risk involved in investing, and show you how to develop your philosophy about investment risk.

Two General Risks

Investors face two general types of risk.

First, there's the risk of losing money over the short term. Over the last 85 years, the stock market has returned around 10% per year, on average. However, looking at individual years over that time period, about one out of every four was a down year in the market.

And over shorter time periods--a few weeks or months--investments can be even more volatile.

Investors focus almost exclusively on this type of risk. It's easy to do. Every day you hear about how the market is doing on the radio and television. And if that's not enough, you can check your stock prices throughout the day.

Don't let volatility get the best of you, though. If you do, you'll virtually ignore the second and perhaps even greater risk that comes with investing: the risk that you won't meet your goals.

How can obsessing about volatility get in the way of your goals? It may cause you to invest too conservatively. Volatility also may lead you to buy or sell an investment based on short-term performance rather than on how this purchase or sale will help you reach your goal. In short, volatility can prevent you from seeing the forest for the trees.

Weigh how important reaching your goal is against how much short-term volatility you're willing to accept.

Contributors to Volatility

The main way to reduce day-to-day and week-to-week volatility is to diversify your portfolio across different types of securities. By putting together varying investment types, you can reduce the impact of any one of risk factor and therefore limit your short-term volatility.

Market risk. Market risk comes with exposure to a particular asset class or sector, such as U.S. equities or emerging markets bonds. It's the threat that the entire market segment will lose value. For example, U.S. stocks might slump if investors think that the U.S. stock market has climbed too high given slowing economic growth. Alternatively, emerging markets bonds may slump in value because investors expect that inflation will jump up, prompting interest rates to rise. (Rising interest rates tend to be bad news for bonds.)

To limit market risk, diversify into various markets and sectors that will behave differently under different economic scenarios. By doing so, you're reducing your portfolio's dependence on a single market segment. For example, high-quality U.S. bonds generally perform well when investors are feeling fearful about the health of the economy, so they're a good counterbalance to stocks. *In a similar vein, high-yielding securities (such as utilities stocks and real-estate investment trusts), generally perform poorly when interest rates rise; balance those investments with low- or no-yielding choices.*

Company-specific risks. Operating risk and price risk are two factors contributing to short-term volatility of individual stocks.

Operating risk is the risk to the company as a business and includes anything that might adversely affect the firm's profitability. Price risk, meanwhile, has more to do with the company's stock than with its business: How expensive is the stock when you consider the company's earnings, cash flow, or sales?

To limit company-specific risk, own a collection of stocks rather than just a few. Owning mutual funds, which are diversified baskets of investments, helps mitigate company-specific risks.

Country risk. Whether you invest only in U.S. stocks or put some dollars outside the U.S. market, you're exposing your portfolio to the risks of investing in that country. There's political risk, or the risk that the current leadership will change for the worse, as well as the threat that economic conditions in that country could make it hard for companies to grow. And if you're investing in securities denominated in a currency other than your home currency, as is the case when you invest in most foreign-stock mutual funds, there's a chance that the foreign currency could lose strength versus your home country's currency.

To limit country risk, do one of two things. If you own both U.S. and foreign securities, invest in a variety of markets, not just a few. If you invest strictly in U.S. securities, be sure your investments aren't overly reliant on just the U.S. for their success. For example, make sure some of your companies have expanded internationally, even though they're headquartered in the U.S. They'll probably be more resilient than less-diverse companies when the U.S. economy slows.

How Much Volatility Can You Take?

Diversifying your portfolio across stocks, bonds, and funds that will behave differently at various points in time can help reduce short-term volatility. It may also help to remember that putting up with day-to-day gyrations in your portfolio is likely to help stave off that biggest risk of all: not having enough money when it comes time to tap your portfolio. By doing that, you’re acknowledging that In the ideal world, your time horizon and your goal would determine how much volatility you'd tolerate.

You're not an emotionless robot who doesn't react to volatility, though. You're human. As such, consider how volatility may interfere with you meeting your goal. Then do whatever you can in your portfolio to thwart the factors that lead to volatility. In other words, limit your risk by diversifying across a variety of markets and companies.

Finally, answer these questions to develop your investment philosophy about volatility and risk.

• How much of a loss can you accept from your portfolio each year?
• How much of a loss can you accept over a five-year period?
• How much risk can you accept from your individual investments?
• How do you plan to diversify your various investment risks (market, company-specific, economic, and country)?
• What risk-related test will an investment have to pass before making it into your portfolio?

104: Building Your Emergency Fund

Introduction

You've figured out your goals. You know what they'll cost. So you've put all of your money into your investment portfolio.

Then you lose your job. Where will you get money for food, rent, your bar tab?

You don't want to dip into that investment portfolio. After all, you've built it with a particular goal and time frame in mind. Touch it now and risk making your future dreams unattainable.

That's why it's important to set aside money in an emergency fund before you begin investing. Here are some pointers for what your emergency fund should cover, how long it should last, and where to put it.

What to Include

Don't assume that any future unemployment insurance payments can take the place of an emergency fund. Think of collecting unemployment as a way to strengthen the safety net you're constructing. It shouldn't be your sole support. And if you do collect unemployment, your emergency fund simply will last longer.

We recommend that you cover all conceivable expenses in your emergency fund.

Food and Shelter
How much do you spend on groceries each month? If you don't know, now is a good time to start tracking that. And if you eat out a lot, you'll either need to include that, or plan on higher grocery bills. If you have pets, include the cost of their food and care in the tab.

Unless you're ready to move into your brother-in-law's basement, be sure to cover your rent or mortgage payments, too. And don't forget utilities--gas, electric, water, phone, and even cable and Internet.

Transportation
Unless you plan on never leaving your house, set money aside for your car payments and public transportation. Of course, you'll also need money for filling up your car, for routine maintenance, and for more serious problems.

Insurance and Health
Be prepared to meet your insurance payments. That means home, auto, life, and especially health insurance.

Insurance premiums are often the first things to go when money gets tight. They shouldn't be. One of the quickest roads to penury is to let your health insurance lapse and to find yourself with a serious health condition.

Set aside money for routine dental and eye care, for prescriptions, and for any other health expenses your insurance doesn't cover. Once again, if you have pets, put their vet bills on the tab.

Taxes
Uncle Sam won't care that you're unemployed--you'll still have to pay income and property taxes. Here's some consolation, though: Your emergency fund also protects you from additional taxes. After all, your tax bill could be much stiffer if you had to sell profitable investments to cover your living expenses.

Finding a New Job
It can cost money to make money--finding a new job won't be free. Consider the cost of producing and sending out resumes. You might want to meet with a career consultant, or even take some kind of training. Take those possibilities into account.

How To Estimate What You'll Need

That's a long list to compile and come up with hard numbers for. The good news is that you don't have to try to brainstorm every conceivable expense.

Instead, track what you spend in the next few months and use that as your baseline. Then add in any other possible expenses, such as taxes or finding a job, that didn't pop up during those months.

If you spent money on movies or your health-club membership, include that. If you're out of work, taking in an occasional flick and working out may help relieve some of your stress.

How Long Should It Last

Most financial planners recommend setting aside six months' worth of living expenses in an emergency fund.

What if your "emergency" ends up lasting longer than six months? If you take the liberal view of living expenses that we've been taking so far, your emergency kitty likely will last a little longer. Further, we haven't included payments from unemployment insurance. If you do collect unemployment, your emergency fund should last longer, too.

Of course, you may not be able to pull all of your emergency-fund money together at once. Treat it as a goal. Maybe you can cover one or two months' expenses now. Add to that kitty over time. If you get a tax refund, put it in your emergency fund. A bonus at work? Sock at least part of that away.

But in general, don't invest elsewhere until you have a full emergency fund. (The exception to this may be your 401(k) plan. If your employer offers matching funds, you should strongly consider contributing at least enough to maximize your company's match. Otherwise, you are leaving money on the table with every paycheck.)

Where to Put the Emergency Fund

Keep your emergency fund separate from your regular bank account. That way, you may feel less of an urge to tap into it in normal times. But thanks to automatic teller machines and online transfers, you'll have easy access to the money if you do need it.

A money-market fund is a great place for your emergency dollars. Money-market mutual funds invest in super-short-term, high-quality debt and are among the most conservative funds available. Their prices (or net asset values) don't move around much. In fact, because they invest in bonds issued by extremely stable debtors, such as the U.S. government and large, financially sound companies, money-market funds can maintain a steady $1 net asset value, making them ideal for investors who don't want to risk their principal.

Money-market funds also offer several features designed to help investors manage their cash reserves. Most offer limited check-writing privileges. It doesn't take much to start out, either. Many money-market funds have low minimum investment requirements.

Why not just stick with a bank? Money-market funds often pay as much as a percentage point more than banks' money-market accounts do. You'd get even less interest than that if you stashed your cash away in a checking or savings account.

There's a minor catch: Unlike consumer bank accounts, money-market funds are not FDIC insured. That means that the government won't step in if something goes haywire and your money-market fund loses money.

However, that danger is minimal. Money-market funds are regulated by the Securities and Exchange Commission, which enforces strict limits on the types of investments that these funds can make. Thus, it is unusual for a money-market fund to "break the buck," or fall below its $1 net asset value.

Unusual--but not unheard of. For instance, during the credit crisis of 2007, reports indicated that some money market managers were holding stakes in problematic securities, including so-called SIVs (structured investment vehicles), which have taken a hit amid the market turmoil. But even in cases such as these, the funds' parent companies typically steps in to support the funds, and no investors lose money.

Investors can take the safer route by choosing a money-market fund that invests exclusively in the direct obligations of the U.S. government. The drawback is that these funds typically pay out less income than those investing in corporate debt, too.

Choosing a money-market fund doesn't have to be hard.

- Go bargain-hunting. There's little that a money-market fund manager can do to improve yield and returns, so low-expense funds have an edge that's hard to beat.
- Find a package that works for you. Check-writing privileges and minimum investment requirements vary from fund to fund.
- Start close to home. If you have a brokerage account, check out the associated money-market funds. But don't assume that the money fund that your money automatically gets swept into is the best deal. It's worth shopping around within your account's options.

105: Determining Your Asset Mix

Introduction

You've built your emergency fund, determined your goals and their costs, and thought about how much risk you can take. But how do you know which securities to buy? Which ones are going to get you where you need to go?

Before you begin choosing individual mutual funds and/or stocks, you need to think in broader strokes. You need to consider your asset allocation.

Your asset allocation is your portfolio's blend of stocks, bonds, and cash. Finding the best asset mix is crucial if you want to meet your goals. In fact, most financial advisors agree that setting up the right asset mix is more important than choosing great investments.

Determining your asset allocation is easier than ever before, thanks to a variety of online calculators and tools.

This course will show you what you need to know before determining your asset mix. It will also discuss the limitations of online asset-allocation tools.

What You Need to Get Started

No matter which asset-allocation tool you use, you'll need to know a few bits of information first. For starters, you need to know your goal. Let's say it's to have $1,000,000 when you retire. You then need four pieces of information about that goal to determine your asset mix.

1. The number of years until your goal is reached. You want to retire in 30 years. That's the number of years to your goal.

2. How much money you need for your goal. You want to have a $1,000,000 lump sum when all is said and done.

3. How much money you can invest right now. You have $20,000 set aside, so that's your starting amount.

4. How much money you can contribute each month. You can invest $800 per month.

While some online asset allocation tools will require additional information, many will get you in the ballpark with these key pieces of data.

Improving the Odds

Most online tools will give you some idea of your likelihood of meeting your goal, given the inputs of time horizon and your contributions today and in the future. However, you may find that your goal is unattainable with the inputs you submitted. There are some things you can do to improve your chances of meeting your goal.

Invest more now. If you can invest $30,000 now instead of just $20,000, your odds of having $1 million in 30 years improve.

Increase your monthly contributions. Maybe you can't come up with an extra $10,000 now. But if you invest an extra $200 each month, your chances of reaching your goal improve.

Extend your number of years. Maybe you can't put in more money at all but can wait an additional five years before retiring. That would help, too.

Become more aggressive. If you can't invest more money or time, try changing your portfolio mix by increasing your weightings in equities. But be sure to notice what becoming more aggressive means to your portfolio's volatility over time.

Limitations of Asset-Allocation Tools

While online tools certainly make asset-allocation decisions easier, they have their limitations.

For example, if you use six different online asset-allocation tools, you're likely to get six different recommendations for what your asset mix ought to be. Why? Because every tool uses a different set of assumptions.

For example, different tools use different inflation rates, and some will even allow you to choose your own rate. Different assumptions lead to different results. Online asset allocation tools must also make assumptions about what various asset classes will return in the future.

Further, most online asset-allocation tools don't take taxes into account. That's because each investor's tax situation is different. But in the real world of investing, taxes are a huge issue. Realize that the final portfolio values you get from these various tools are generally pretax.

Despite these limitations, sampling an array of online asset-allocation tools, as well as seeing what asset mixes target-date funds employ for people with your same target date, is a good way to get your asset allocation in the right ballpark.

106: Core vs. Noncore Investments

Introduction

The core-holding concept has to be one of the most exciting investing ideas since Christopher Columbus started cold-calling potential backers.

Okay, that's sarcasm. "Core holding" and "exciting" don't go together. But what core holdings lack in thrills, they make up for in importance.

A core holding is just what it sounds like: It's the central part--or maybe even the only part--of your portfolio. The core requires investments that will be reliable year in and year out. They're the solid foundation for the rest of a portfolio.

Once you've built your portfolio's core, you can then reach for noncore investments to augment those core holdings. Noncore investments might focus on an individual sector, such as health care, or a single region, such as Latin America. Because they're more focused, noncore investments have the potential to increase returns, but they may also jack up a portfolio's volatility level.

What Makes a Core Mutual Fund?

The stock market is dominated by large companies; such firms account for roughly three fourths of the value of the U.S. market. Assuming that you'd like your portfolio to participate in the movements of the broad U.S. market, as opposed to just a small sub-section of it, you'll want to use a large-company-focused fund as your core stock holding.

Large-cap blend funds, which own big companies with middle-of-the-road stock prices, are core stalwarts. Large-blend funds usually don't lead performance lists, but they're even less likely to bring up the rear. They're boring, which makes them ideal core choices.

For cautious investors, a conservative large-value fund may be an even better option. These funds invest in big, well-established companies with stocks that are cheap relative to those of other large caps; they may also focus on dividend-paying firms. Historically, that focus on slow-growing, generally steady companies has earned large-value funds the lowest risk scores of any of the Morningstar style categories.

But wait. If large-cap funds are good core holdings, why not large-growth funds? These funds typically focus on large companies with the potential to grow more rapidly than the broad market.

Although there are exceptions, large-growth funds don't have the best temperament for core holdings; they tend to have bigger mood swings than their blend or value counterparts. Their highs are nice--they mean higher returns at certain points in time--but when they're down in the dumps, that spells bigger losses than you might want at the heart of your portfolio.

If the allure of large-growth funds is just too powerful, go ahead and invest in one. But invest in an equal amount of money in a large-value fund, too. Owning both is about the same as investing in a large-blend fund.

You might want to include a foreign-equity fund as a core holding, too. That way, you aren't staking everything on the U.S. market. The fund should focus on the world's developed markets, investing in leading companies, just as your core U.S. funds do. Before investing in a foreign fund, be sure to take Funds 305: Choosing an International Fund, Part 1 and Funds 306: Choosing an International Fund, Part 2.

Finally, a bond fund might make a good core holding if your asset allocation calls for it. Stick with bond funds that invest in high-quality securities. Focus on those that favor intermediate-term bonds. Why? Because the longer a fund's maturity, the more volatile its returns generally are. You can capture much of the return of a long-maturity fund with an intermediate-maturity fund, but with a lot less volatility.

Before investing in a bond fund, be sure to take Funds 307: Examining a Bond Fund's Portfolio, Part 1 and Funds 308: Examining a Bond Fund's Portfolio, Part 2.

What about Core Stocks?

If you're more into stock investing, your core should be made up of stable, blue-chip companies. As with funds, big and boring is the key to a core investment.

Great core stocks share a handful of qualities. For starters, they're profitable, consistently earning great returns on the money (or capital) shareholders have invested. The way we measure return on capital for companies is return on equity, or ROE. It's easy for a company to generate a large ROE in one year, though. Core holdings offer impressive ROEs year in and year out.

Core stocks are reliable growers. They may not be growing at the same pace that a new company is. But their earnings are predictable year in and year out, and they may even pay out earnings to shareholders in the form of a dividend.

Finally, core companies are also financially healthy. In other words, they don't take on a lot of debt. Moreover, they generate gobs of free cash flow, or cash flow after spending.

You can find many great core stocks among Morningstar's classic-growth stock type (particularly those that Morningstar has also rated as having "wide" economic moats, which is how we designate firms that have sustainable competitive advantages). These types of companies have mature and solidly profitable businesses. You can learn more about classic-growth stocks on Morningstar.com.

How Big Your Core Should Be

Clearly, a fund that is a core holding for one investor may not be a core holding for another investor. However, Morningstar analysts do discuss what role a fund may play in a portfolio--core, supporting, or specialty--in the Analysis section of a Morningstar Fund Report. (Note that Morningstar Analyses are available only to Morningstar.com Premium Members. Nonmembers can take a free trial of Morningstar.com's Premium Service.)

Core holdings take up 100% of some portfolios. In others, these investments account for 70% to 80% of assets. There's no rule for how large your core ought to be. But we suggest that core holdings take up at least two thirds of your portfolio. After all, you are relying on these solid, long-term investments to help you reach your goals.

Use noncore investments for diversification and growth potential. For instance, if your core is made up exclusively of large-cap stocks, you might want to add small-cap or international stocks to the noncore portion of your portfolio for diversification.

As long as you limit the more risky portion of your portfolio, you aren't likely to threaten the bulk of your nest egg--and your investing will be more adventurous.

Just don't forget to put together a reliable core first. You don't want more thrills than your portfolio can stand.

107: A Simple Portfolio

Introduction

A purple-gold sunset. A perfectly grilled hamburger. Laughter. Scratching an itch.

The simple things in life can bring great joy. And a simple investment portfolio can bring great profits.

Choosing investments doesn't have to be complicated. By estimating the cost of your investment goal, articulating your risk philosophy, building your emergency fund, establishing your asset allocation, and conceptualizing your core portfolio, you've already done the hard work.

Now, you merely need to select some core investments to get you where you need to go. Here's a simple way to do just that.

Mutual Funds: The Simple Choice

Thanks to Portfolio Course 105: Determining Your Asset Mix, you already know about the importance of setting your portfolio's weightings in the three basic asset classes: stocks, bonds, and cash. You also know if your portfolio will have any small-company or foreign-stock assets. Now, you need to fill in the specifics by choosing actual investments.

Investors seeking simplicity should go directly to mutual funds. Do not pass go, do not collect $200, and do not buy stocks and bonds directly.

Why? Funds generally require less monitoring than individual securities do. Further, funds are well diversified--one fund can own hundreds of securities. As a result, they're less volatile than individual securities are.

Moreover, simplicity seekers should think only in terms of core holdings. As we explained in Portfolio 106: Core vs. Noncore Investments, all you really need are core holdings. The rest is often frills.

For your U.S. stock exposure, low-cost index funds can be a great choice. To kill two birds--your large- and small-company U.S. stock exposure--with one stone, choose a fund that invests in the entire U.S. stock market, such as Vanguard Total Stock Market (VTSMX).

For foreign stocks, consider Morningstar's foreign-stock category picks, such as those in the foreign large-blend category. Here again, an index fund that provides inexpensive market exposure in a single shot can make a solid core foreign-stock fund choice, as can an actively managed fund provides geographically diversified exposure.

For bonds, focus on the options that favor high-quality intermediate-term bonds and carry low expenses--no need to take on extra interest-rate or credit risk for a shot at a modestly higher return. If you're in a high tax bracket and investing in a taxable account, consider a municipal-bond fund, because income from munis is typically exempt from federal and in some cases state income tax.

Build a Simple Portfolio

Now let's build a diverse yet simple portfolio using Morningstar.com's Instant X-Ray.

Michael has $10,000 to invest. He wants to retire in 35 years.

After tinkering with his asset mix, Michael decides to be aggressive: he wants his asset allocation to be 0% bonds and cash, 70% large-cap U.S. stocks, 10% small-cap U.S. stocks, and 20% foreign stocks.

He decides to put $8,000 in Vanguard Total Stock Market VTSMX to cover the large- and small-cap allocations and $2,000 in American Funds EuroPacific Growth AEPGX to cover the foreign position.

You can enter Michael's portfolio into Morningstar.com's Instant X-Ray tool. After inserting the information, click "Show Instant X-Ray" at the bottom of the screen to see the results.

Given that Michael has many years until he draws on his portfolio, this mix looks good. It's diversified by investment style, with roughly three fourths of his assets in large-cap stocks and the rest in mid- and small-cap stocks. The portfolio isn't terribly overweight or underweight in a single sector, nor is it overexposed to one type of stock relative to the market.

Pretty simple, huh?

108: Creating Your Investment Policy Statement

Introduction

Big organizations create them for their company retirement plans. Financial advisors craft them for their clients. They require some philosophizing and number crunching. And when done thoughtfully and comprehensively, they can be 15 pages long.
What are "they"? Investment Policy Statements, or IPSs.
An IPS isn't only for the well-heeled who love paperwork. It's a must for all investors. That's because creating an Investment Policy Statement forces you to put your investment strategy in writing and commit to a disciplined investment plan. It's both a blueprint and a report card.
We can't cover everything that you'll need to include in your Investment Policy Statement in just one class. But by downloading, printing, and filling in Morningstar's Investment Policy Statement Worksheet, you'll have a good start. Download the worksheet here. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.)
If you've been taking classes in the Portfolios Track of the Investing Classroom in order, you'll already know the answers to many of the questions that the Investment Policy Statement includes. Don't worry if you haven't taken previous classes, though. We'll tell you which classes you'll need to review to answer these questions.

Executive Summary

The Executive Summary provides an overview of your current situation and what you expect from your portfolio. It's a snapshot in time. Update your Executive Summary whenever you rebalance your portfolio.
Here are the questions to answer:

- What are the current assets of my portfolio today?
- How much do I plan to invest each month?
- How many years will I be investing?
- How much do I expect my portfolio to return each year over inflation?
- How much of a loss can I accept over a three-month period, a one-year period, and a five-year period?
- What is my target asset allocation?
- What are my benchmarks for my portfolio?

To help you answer the first six questions, review the following classes:
Portfolios 103: How Much Risk Can You Tolerate?
Portfolios 105: Determining Your Asset Mix
When it comes to answering the final question, choose your benchmarks wisely. Say you have a portfolio that's 40% invested in U.S. large-company stocks, 10% in U.S. small-company stocks, 30% in bonds, and 10% in foreign stocks. Don't use the S&P 500 as your portfolio's benchmark. It's inappropriate. After all, the S&P 500 is made up strictly of U.S. large-company stocks. The S&P 500 may be a suitable benchmark for the 40% of your portfolio that's comprised of U.S. large-company stocks, but not for your entire portfolio.
In most cases, you'll need to use a combination of benchmarks to measure the success of your portfolio as a whole and the success of your individual investments.
You'll also need to decide over what time periods you want to benchmark your portfolio and your investments. Do you want to benchmark your portfolio's annual returns? Its three- or five-year returns? Some combination thereof? We recommend keeping abreast of your returns yearly, but focusing mostly on longer-term results.

Investment Objectives

The Investment Objectives portion of your Investment Policy Statement details what you're trying to achieve with this portfolio and in what time frame.
Answer the following questions:

- What is my financial goal?
- How long will I be funding this goal?
- How much will this goal cost every year?

To help you answer these questions, review Portfolios 102: Determining Your Goals and What They'll Cost.

Investment Philosophy

In the Investment Philosophy section of your Investment Policy Statement, you'll articulate what's important to you as an investor. These are the theories you believe in and plan to follow.
Here are just a few questions to consider:

- What's my philosophy about risk?
- What's my philosophy about core versus noncore investments?
- What's my philosophy about diversification?
- What's my philosophy about trading?
- What's my philosophy about costs?
- What's my philosophy about taxes?

Before you buy or sell any securities, make sure that your actions reflect your philosophy. If they don't, ask why. Maybe you shouldn't be buying or selling that security. Perhaps your action is based on short-term performance, or a hunch about what the market is going to do. But your actions should be based on your Investment Philosophy.

Investment Selection Criteria

The Investment Selection Criteria section of your Investment Policy Statement includes your rules for choosing investments. These rules will vary significantly from investor to investor, based on each investor's Investment Philosophy. Think of these criteria as a means of quantifying your philosophy.
To determine what qualities an investment must have before joining your portfolio, consider reviewing some of the classes in the Mutual Funds and Stocks tracks of the Investing Classroom.
Some criteria to consider for mutual funds:

- Minimum category rating
- Minimum total return % category rank over various periods
- Maximum bear-market rank
- Maximum percentage of assets in top-10 holdings
- Maximum percentage of assets in any one sector
- Maximum expense ratio
- Minimum or maximum asset size
- Minimum manager tenure
- Minimum tax-efficiency ratio

Some criteria to consider for stocks:

- Maximum price for each stock
- Minimum return on equity
- Minimum free cash flow
- Minimum forecasted five-year earnings-growth rate
- Maximum leverage
- Minimum dividend yield
- Minimum market capitalization
- Maximum price/earnings ratio
- Minimum revenue growth rate

Any new investment that you're considering for your portfolio should meet these criteria. If it doesn't, why not? Do your criteria need to be altered? Or is this an investment that you shouldn't make given your philosophy?

Monitoring Procedures

The Monitoring Procedures portion of your Investment Policy Statement details your plan for keeping tabs on your investments. It's your blueprint for rebalancing, and for determining what investments, if any, you should sell.
Answer the following questions:

- How often will I monitor my portfolio?
- How will I determine how well my individual investments are doing?
- How will I determine how well my overall portfolio is doing?
- How will I determine if my portfolio is meeting my expected return?
- How will I determine whether losses fall within my accepted range?

To determine how well your individual investments and overall portfolio are doing, be sure to use the benchmarks you chose in the Executive Summary section of the Investment Policy Statement. If you find that your portfolio is not meeting your expected return, or that losses are falling outside of an acceptable range, you may need to adjust your investments.
When monitoring, don't focus only on performance, though. Make sure the reasons you chose these investments in the first place still apply. To do that, check the status of each investment against your Investment Selection Criteria. If a stock or fund no longer meets your criteria, it may be a sell candidate.
For more about portfolio monitoring, skip ahead to Portfolios 301: How to Monitor Your Portfolio and Mutual Funds and Portfolios 302: How to Monitor Your Stocks.

Revisiting Your IPS

Once you've created your IPS, sign it, date it, and come back to it in a year. The Investment Policy Statement isn't only your investing blueprint. It's also your portfolio's report card.

109: How Many Investments Should You Have?

Introduction

Most of us collect something. For some, it's rare coins. For others, it's baseball cards. Still others collect clothes.

Some people collect investments. They may own a dozen funds in their 401(k) plan, another half dozen funds outside of it, and 10 or 15 stocks. In a recent poll of Morningstar.com users, the median number of holdings was 29. That's a lot of investments.

The problem with owning too many funds and stocks is that you can easily lose sight of the forest for the trees. You start out as an investor with an investment goal and a portfolio tailored to you and turn into a collector who has forgotten what your goals are.

This course will cover how to know when enough is enough.

How Many Stocks You "Need"

Diversification seekers always want to know what the optimal number of investments is. They want to have enough holdings to moderate the volatility of their portfolios. But they don't want too many holdings, because they think they're diluting their possible returns and overcomplicating their investing lives.

When it comes to stocks, various studies have suggested that you can build an adequately diversified equity portfolio with 15 to 30 stocks. In his 1930s classic, The *Intelligent Investor*, Benjamin Graham said that the magic number was somewhere between 10 and 30 names. In the late 1960s, John Evans and Stephen Archer concluded that 10 stocks were enough. And in the 1970s, Burton Malkiel said 20 stocks will do in *A Random Walk Down Wall Street*.

Don't let these numbers mislead you, though. For starters, most of these "how many stocks" stories assume random investing--and investing is anything but random, unless you're the type who chooses investments by throwing darts at stock tables. We all have our own investment styles. For example, an aggressive investor may end up with a portfolio that skews toward growth stocks, or someone in the health-care industry may end up with a heavy weighting in that sector. Their portfolios, while diversified across many names, may not be as diffuse as they look.

Perhaps more important, some studies, including one by Malkiel himself, show that the volatility of stocks has risen over the past few decades. As a result, the number of stocks you need to mute volatility likely is far greater than 15.

How Many Funds You "Need"

What about mutual funds--how many mutual funds do you need to have a diverse enough portfolio? The answer is—you guessed it—it depends. Some funds, such as target-date funds, can deliver a lot of diversification in one package, providing exposure to stocks and bonds as well as U.S. and foreign securities. Investors can arguably obtain adequate diversification by buying a single target-date fund and calling it a day.

Meanwhile, an investor could build a 10-fund portfolio and still not achieve adequate diversification, assuming all the funds focused on a similar part of the market. That may sound farfetched, but it was actually the case in the laste 1990s, when many investors amassed multi-fund portfolios with a strong bias toward growth stocks, especially technology names. Seven large-growth funds simply won't diversify a portfolio the same way owning one large-blend fund and one small-value fund and one small-growth fund would.

What You Really Need: Diversification

Simply put, the number of securities you own is less important than how diverse those securities are.

Use Morningstar.com's Instant X-Ray tool to analyze your current portfolio, if you have one. Use the same tool as you're assembling a portfolio, too, to see if your choices are as diverse as you think they are.

You're looking for two things: A heavy emphasis on a single security type or industry, such as growth stocks or energy names, and holes in your portfolio. More than one large-growth fund or energy stock, for example, won't add much to your portfolio.

The odds are pretty good that if you own multiple investments doing the same thing or you are considering investments that do the same thing, one is better than the others. Focus your money on the best choices.

Don't forget that you can have overlap even though you own just a small number of securities. Conversely, even if you own a lot of investments you could still have gaps in your portfolio.

The bottom line: Don't obsess over the number of securities that you own. Instead, concentrate on their diversity.

110: Avoiding Overlap When Building a Portfolio

Introduction

Investments often come in different shapes and packages, but many have similar contents. For example, two seemingly different mutual funds can own the same stocks. In September 2012, for example, the top 10 holdings of Fidelity Magellan (FMAGX) and Fidelity Growth & Income (FGRIX) had five stocks in common.

There's nothing wrong with such portfolio overlap per se, and there's no saying that two funds with heavy overlap at the top can't ever be complementary. However, any time you see that much redundancy in two funds' top 10 lists, it's wise to ask yourself if you're not using two investments to do the job that one could do just as well. And if both funds emphasize large positions in the same names, you may have built a portfolio that's overly dependent on a few stocks. Overlap flies in the face of diversification. Here are some suggestions for how to avoid stock overlap in your portfolio. For more information about portfolio overlap, check out Funds 501: Avoiding Overlap When Building a Portfolio.

How to Avoid Overlap

If you're worried about duplication, remember these tips when building your portfolio.

1. *Don't buy multiple funds run by the same manager*. Zebras don't change their stripes, and managers often gravitate to the same stocks for multiple portfolios. That's because fund managers have ingrained investment habits that they apply to every pool of money they run. So if you buy two funds by Famous Manager A, chances are you'll own two of the same thing.

2. *Don't overload on one boutique's funds.* Some fund families, such as Fidelity, T. Rowe Price, and Vanguard, offer lineups of funds that span a variety of investment styles. Other shops, called boutiques, prefer to specialize in a particular style. Royce is a small-cap specialist, Oakmark means value, and Matthews equals Asia. Boutique families are often excellent at what they do, but it's questionable whether owning three of their funds gives you anything you won't get with one.

3. *Take the four-corners approach.* Using the Morningstar Style Box can be a diversifier's best friend. The style box will not only tell you whether your manager is snapping up large-value stocks, but it also can lead you to funds that bear little resemblance to one another.

Value funds don't act much like growth portfolios, and small-cap funds behave differently from large-cap offerings. In style-box lingo, opposite corners attract. If you own a large-value fund from your favorite fund company, try one of its large-growth, small-value, or small-growth offerings.

Don’t assume that your portfolio’s weightings must be evenly dispersed across the style box, though. Although the U.S. market has a fairly even distribution across value, blend, and growth investing styles, large-cap stocks make up roughly 75% of the value of the U.S. market.

4. *Manage your sector weightings.* If two funds from the same category sport similar sector weightings, they may own many of the same stocks.

5. *Determine how much overlap you might have*. You've followed these tips and have put together a portfolio of investments or possible investments. To test for overlap, you could enter all of the investments--both the stocks you've bought directly and every stock that your mutual funds own--into a spreadsheet and sort by stock name. That's a lot of work. Morningstar.com offers a Portfolio X-Ray feature called Stock Intersection that can do this overlap analysis for you. (Note that Portfolio X-Ray is a feature available only to Morningstar.com Premium Members, but you can take advantage of a free 14-day trial.)

Using Morningstar.com's Portfolio X-Ray

Here's what you need to do to X-ray your portfolio for stock overlap on Morningstar.com. (Feel free to print out this class and hold on to these directions for future reference.)

1. Sign up for Morningstar.com's Premium Membership.

2. Click on Morningstar.com's Portfolio Manager.

3. Click on Create New Portfolio.

4. Name Your Portfolio.

5. Choose either a Watch List or a Transaction Portfolio. A Transaction Portfolio is far more precise than a Watch List Portfolio, and is the better choice overall, because it allows you to more effectively monitor your actual purchases over time.

6. For each of your funds and stocks, enter the ticker and the amount of money you have invested.

7. Click the Save Portfolio button at the bottom of the page.

Now it's time to X-ray. Click on the X-Ray tab and then click the Stock Intersection button. (The other buttons, X-Ray Details and X-Ray Interpreter, are different ways to examine how your portfolio fits together.)

The program examines each fund's top 50 holdings (a fund's 51st and succeeding holdings aren't likely to be significant stakes) and weights them according to how much you have invested in each fund.

So what did you find? Higher weightings in certain stocks than you wanted?

Remember, outsized positions—say, those that account for 5% or more of your total assets—can add return potential to your portfolio, but they can also contribute outsized volatility.

Portfolio200

201: How to Juggle Different Investment Goals

Introduction

The 100 Level of the Investing Classroom's Portfolio track covered setting goals, getting a handle on risk, and building a portfolio. But as your life changes, so will your goals.

Say your financial goal right now is retirement. But what happens if you have a child two years from now? Paying for college will become a goal, too. And maybe buying a larger home three years after that. Or paying for a parent's long-term care. Most investors eventually have multiple investment goals.

The 200 Level of the Portfolio Track will cover many of the issues you'll face when investing for different goals, as well as how to invest for various time horizons.

This course, in particular, offers general guidance for how to invest for more than one goal.

Map Out What Each Goal Will Cost

The first step when juggling various goals is to determine what each goal is and what it will cost.

Review Portfolio 102: Determining Your Goals and What They'll Cost, which discusses in detail how to calculate the cost of your retirement. Then, begin work on the costs of your other goals.

Whether you're saving for retirement, for a home, or for your child's education, goal setting comes down to answering a few key questions:

- How much will the goal cost each year?
- How many years will I be tapping into this portfolio to pay for the goal?
- What will the total cost of the goal be?
- What will inflation do to that total cost?

Once you've answered these questions, you'll know how much you'll need to accumulate to fund each goal.

You may not be happy with the numbers. You may be trying to save $1 million for your retirement in 30 years, $200,000 to send your daughter to college in 15 years, and $20,000 for a down payment on a home in five years--all at the same time. How can you do that without working three jobs, investing every penny, and obtaining an unrealistic 30% return on your investments every single year?

Maybe you can't do it all. Perhaps you can only fund half of your son's education--loans, scholarships, and work-study programs may need to play a part. And maybe that much-bigger home will need to be scaled down to a somewhat-bigger home instead. Or maybe you'll need to put off retirement for a few extra years.

Investing is all about trade-offs. By looking at all of your investment goals together, you can determine which trade-offs you're willing to make.

Recognize Your Options for Each Goal

Before building your portfolio, consider the special vehicles you can use for each goal. They can make reaching that goal a whole lot easier.

For example, let the IRS and your employer lend a hand with your retirement. Both 401(k) plans and some individual retirement accounts (IRAs) allow you to save for your retirement with pretax dollars. And employers often match some or all of an employee's contribution to his or her 401(k) plan. Portfolio 202 and 203 cover the ins and outs of employer-sponsored retirement plans while Portfolio 204 delves into IRAs.

College planning has its own set of investment vehicles. Coverdell education savings accounts, 529 plans, prepaid tuition plans, and trusts can all play a part. Learn more about these options in Portfolio 210: How to Invest for College.

Craft a Portfolio for Each Goal

Different goals require different portfolios and therefore they usually demand a distinct assortment of investments. Unless you plan to send your child to college at the same time you buy the new house, you'll need the money for those goals at different times. One portfolio won't serve both goals equally well because a portfolio should change shape as its goal nears. At that point, you should be protecting what you’ve made rather than trying to eke out further gains.

If you're buying that house in three years but your daughter won't start college for another decade, you should be conservative with your home investment and aggressive with your education one. And if you have children who will be starting college at different times, you'll probably want to set up separate portfolios for each of them, too.

Take the following steps for each portfolio:

- **Determine your asset allocation for each portfolio.** Each portfolio will need a different mix, depending on your time horizon and final portfolio value for each goal. For tips on how to do this revisit Portfolio 105: Determining Your Asset Mix.
- **Conceptualize each portfolio.** Figure out what types of investments will form the core of each portfolio and what, if anything, will fill out the edges. To find out what makes a core holding, review Portfolio 106: Core versus Noncore Investments.

- **Draft an Investment Policy Statement (IPS) for each portfolio.** While many parts of the IPS may repeat from portfolio to portfolio--your investment philosophy may be the same regardless of the goal, for example--some parts will differ. Creating different statements for each portfolio makes monitoring each portfolio easier, too. Use our Investment Policy Statement Worksheet for each portfolio. Download the worksheet from Portfolio 108: Creating Your Investment Policy Statement. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.)
- **Select investments for each portfolio based on the criteria you laid out in your IPS.** Choose your investments for each portfolio, then enter each portfolio separately into a portfolio tracking tool, such as Morningstar.com's Portfolio Manager. Portfolio Manager allows you to enter up to 25 different portfolios. That's enough for one retirement portfolio for you and one for your spouse, a college-savings portfolio for each of your kids, a home-buying portfolio, and even a "model" portfolio of investments you'd like to make someday.

When Is Enough Enough?

We've talked in previous classes about the dangers of becoming a collector of investments. Not only is it more difficult to keep tabs on a large number of investments, but oftentimes "collectors" make investments for the wrong reasons and lose sight of their goals.

So are investors with multiple portfolios prone to become collectors? Not necessarily. True, investors with multiple portfolios may have more investments than investors with one portfolio. But if their goals are the driving forces behind their portfolios, multi-portfolio investors will not become collectors, no matter how many investments they actually own.

Further, multi-portfolio investors don't have to own dozens of investments across a variety of portfolios. They can choose a handful of securities that they like and understand and use these securities in their retirement, college-saving, and other portfolios.

For example, you may like TIAA-CREF Growth & Income (TIGRX) for exposure to U.S. large companies, Harbor International (HAINX) for foreign stocks, and Vanguard Total Bond Market (VBMFX) for bonds. You could plausibly use only these funds in all of your portfolios (if they're available in your retirement plan, that is). You'd simply adjust your weighting in each depending on your time horizon.

In fact, depending on how many investment goals you have, you could have more portfolios than you have investments. That's fine. It all depends on your goals.

202: 401(k) Plans

Introduction

The retirement savings landscape is increasingly cluttered. It includes Social Security, different types of employer-sponsored plans, individual retirement accounts, and taxable accounts.

The next few classes are going to cover the retirement-savings terrain. We'll explore two of the most-popular types of employer-sponsored retirement plans, the 401(k) and the 403(b). Afterward, we'll compare traditional and Roth IRAs.

We'll begin with what is quite possibly the easiest money in retirement planning: the 401(k) plan. If your company offers a 401(k) plan, contribute to it. With a little effort, the payoff can be considerable.

401(k) Plans Versus Traditional Pensions

The pension is fast becoming a thing of the past. These days, more and more companies are adopting cryptically titled retirement packages called 401(k) plans.

A 401(k) plan (as well as its cousin, the 403(b) plan) is a defined contribution plan. This means that the amount you receive in retirement is based on the amount that you (and your employer, if there's a match available) contribute to the plan, in addition to the investment returns you earn on those contributions.

In contrast, "defined benefit" plans, such as pensions, generally pay a guaranteed sum based on your wages and years of service.

As investment programs, 401(k) plans have several great features:

They're automatic.
You can't forget to invest--your employer deducts your contribution from each paycheck. This forces you to invest regularly, even when the markets are down.

They invest pretax dollars.
Your investment doesn't take as big a bite from your paycheck as you might imagine, because you're investing pretax dollars in your 401(k) plan. As a result, a $100 contribution doesn't result in a $100 reduction in your take-home pay. In fact, you can save money on your income taxes now by investing in your 401(k): The income figure that the IRS uses is income *after* 401(k) contributions.

You don't pay taxes on investment gains until later.
Mutual funds make distributions, bond funds pay income, and equity funds often distribute capital gains. Unless you hold your mutual funds in a tax-deferred account (such as a 401(k) plan), you're responsible for paying taxes on these distributions, as well as on any gains you realize by selling an investment.

By investing in a 401(k) plan, however, you don't have to come up with more money for the tax man right now. You won't pay taxes until you begin withdrawing money from the plan.

Many employers match all or part of your contribution.
For every dollar you contribute to your plan, your employer might invest an additional 50 cents. Some plans are more generous and match "dollar for dollar" on at least a portion of the employee contribution. That's like getting an instant 100% return on your investment.

Say you earn $35,000 a year and contribute 10% of your income to your 401(k) plan. If your employer matches 100% on the first 4% of your contribution, your total contribution to the plan is $4,900. That's $3,500 from you and $1,400 from your employer. Over 10 years time, that $1,400 per year really adds up.

Given that this is really free money, try to contribute at least enough to your 401(k) plan to get the full employer match.

You control your own investments.
401(k) plans have shifted the risk of getting good investment results from employers to employees. You choose your own investments from a menu of options. 401(k) plan participants have greater freedom to control their financial futures than pension recipients do.

If you're an aggressive investor with a long time horizon, you can opt for the plan's racier options. Or, if you're near retirement age, you can be as conservative as the plan allows. It's up to you.

Understanding the Details of Your 401(k) Plan

Every 401(k) plan has an excruciating legal description, called the Plan Document. No need to pore over that. Focus instead on the Summary Plan Description (SPD). That document explains how your plan operates.

Look for the answers to these questions:

1. How long do you have to work for your employer before you're eligible to participate in the 401(k) plan? Some companies let you start immediately, while others make you wait.
2. How much of your salary can you contribute? The limit is set by law, but some plans have a lower ceiling based on a percentage of employees' salaries.
3. How much of your contribution will the company match? Most employers complement what their employees stash away.
4. What are your investment options? Most plans include mutual funds, and some have individual stocks--usually the employer's.

Finding the Right Mix

What do people do when they don't know which investment options to pick? They choose them all.

That's a bad idea. Your 401(k) plan isn't like a smorgasbord where you can try a little of everything. It's important that you understand your investment choices and that you choose the ones that will allow you to reach your investment goal.

Many 401(k) plan sponsors offer retirement-planning tools. This can make finding the right mix of funds for your retirement plan easy.

All you typically have to do is answer some questions about your age, how much you're currently contributing to your retirement plan, your income goals in retirement, whether you'd be willing to work part time when retired, and a few questions that will help the program gauge how much risk you're comfortable with.

Retirement-planning tools can analyze that information and the funds your retirement plan offers, weighing their strategies, risks and returns, and expenses. They often give you the odds that you will meet your goal and recommend a mix of funds to get you there (put 45% in Fund Z, 23% in Fund Y, and so on). If the chances of you achieving your goal are poor, you will have the option of revising some of your parameters to improve your odds.

203: 403(b) Plans

Introduction

We covered the basics of the 401(k) plan in Portfolio 202. Now it's time to explore the cousin of the 401(k) plan: the 403(b) plan.

403(b)s versus 401(k)s

Not-for-profit organizations, such as schools and hospitals, generally offer 403(b) plans rather than 401(k) plans to their employees. Both plans allow participants to save dollars direct from their paychecks into retirement accounts and both defer taxes on any investment gains. That's where the similarities end.

403(b) plans can differ significantly from the better-known 401(k) plans, and not in good ways. For instance, employers offering a 403(b) plan rarely match their employees' contributions, which is a common practice among 401(k) plans. Employers offering 403(b) plans aren't responsible for running the plans, either.

Handling the Shortcomings

Do those shortcomings make 403(b) plans worthless? Not necessarily. But if your company offers a 403(b) plan, consider the following.

Investigate the Options
As with any investment plan, you should learn what you can about your plan options. 403(b) plan participants often find a lot of annuities and very few mutual funds on their list of options. That's because annuities were the only choices the law allowed until the early 1970s. As a result, insurance companies selling annuities established a stranglehold on the 403(b) market.

Here's how an annuity works. A variable annuity ties its returns to the performance of a mutual fund, while a fixed annuity delivers fixed returns. With either, you sign a contract to make regular contributions for a period of time, and the annuity will provide regular payouts when it comes due. The annuity also carries insurance so that you or your beneficiaries won't receive less than what you contributed.

That guarantee might seem compelling, but it hardly makes annuities no-brainers. In fact, most 403(b) participants would be better served by mutual funds.

Funds benefit more than annuities do from the main advantage of 403(b) plans: Gains aren't taxed until participants start drawing money from the plan. Even outside 403(b) plans, annuities avoid taxes. There's no extra benefit in keeping them in a tax-deferred account. What's more, mutual funds often offer higher returns than annuities do. You'll find out why in Portfolio 401, which focuses exclusively on these investments.

Check the Fees
There's a simple reason why funds often perform better than annuities: They cost less.

For example, an annuity may charge twice as much in percentage terms as the underlying fund. Over long time periods, these higher expenses have a dramatic effect on returns.

Let's assume you contribute $5,000 a year to an annuity that charges 1.77% annually. Let's also assume that its average annual return will be 12%. After 30 years, you'll have $947,018.87.

That's not chump change, to be sure. But if you instead put the same amount each year directly into the underlying mutual fund--which charges, say, 0.66%--via a tax-deferred account, you will walk away with $1,182,720.99. By choosing the variable annuity, you will have paid $235,000 extra for guarantee that you'll get your $150,000 contribution back.

Try to Make Your Plan Better
A little cajoling from a determined group of employees can make a weak 403(b) plan much better.

When you approach your company's higher-ups, have a list of mutual funds you'd like to see included in your plan in hand. In particular, look for funds with low annual expenses, good performance, and experienced management teams. You should also pick funds that invest in different parts of the market so that you can build a diversified portfolio. Those who are Morningstar.com Premium Members can get some ideas from our list of Fund Analyst Picks. (Nonmembers can sign up for a free trial to our Premium Service.)

Alternatives to the 403(b) Plan

If you can't improve the options in your 403(b) plan, look for a way to get out. That can be difficult, because many annuities will charge you to leave. That's called a surrender fee, and it can lop as much as 7% off your investment. Surrender fees usually vanish after you've been investing in the annuity for seven years, though.

If you can avoid the fee or if you have passed the seven-year mark, consider transferring your money into a 403(b)(7) account. That plan will allow you to invest directly in mutual funds. You can set up a 403(b)(7) account with fund companies, such as Vanguard and Fidelity, and your employer can send your contributions directly to your account.

Maybe you don't want to deal with the hassle of setting up a 403(b)(7) account. If your employer doesn't match your regular contributions, it might make sense to skip the plan entirely.

Individual Retirement Accounts (IRAs) and Roth IRAs offer tax advantages similar to 403(b) plans, and you can pick from practically the entire universe of mutual funds. Their only shortcoming is a lower ceiling for annual contributions.

It might be to your advantage to make the maximum annual IRA contribution, then put the rest of your annual savings in a taxable account. You'd forgo the tax advantages of the 403(b) plan, but a host of tax-managed funds do their best to keep their tax burdens low. If you're restricted to low-return, high-cost annuities in your 403(b) plan, you may do better after taxes with many of these tax-efficient mutual funds.

204: Individual Retirement Accounts

Introduction

Proceeds from employer-sponsored retirement plans will fund part of your retirement. Social Security may play a part, too. But after doing the math, you may find that those two sources alone won't cut it. Perhaps you need to do some extra investing outside of your employer-sponsored plan.

Individual retirement accounts, or IRAs, can be just the ticket. Like 401(k) and 403(b) plans, IRAs offer tax benefits. This course covers the two most popular types of IRAs: the traditional IRA and the Roth IRA.

How to Invest in an IRA

The IRS allows anyone to invest money each year in a traditional IRA, although there are contribution limits: see the IRS's Web site at www.irs.gov for current limits. Depending on your adjusted gross income, you may not be able to invest that much--if anything--in a Roth IRA.

IRAs can be invested in any type of publicly traded security, including stocks, bonds, and mutual funds. Generally, there's no limit to switching investments or money managers within an institution, although there could be tax penalties involved if you switch between different types of IRA accounts. Some institutions tack on fees for switching accounts to another firm.

The Difference Between Traditional and Roth IRAs

Many investors qualify for a tax break, either up front or when they withdraw the money from the account.

For those who qualify (consult the IRS' site to determine if that's you), a traditional IRA provides an up-front tax savings.

For example, if you are married and filing jointly and neither you nor your spouse was covered by an employer-sponsored retirement plan, all of your contribution to a traditional IRA plan could be tax deductible. (To learn about your individual situation, however, consult the IRS Web site at www.irs.gov).

You will pay taxes on your investment gains when you withdraw from a traditional IRA account. Currently, money withdrawn from your traditional IRA account is taxed as ordinary income at retirement.

The Roth IRA doesn't provide any up-front tax advantages the way a traditional IRA does. Contributions are not tax deductible. But once you begin withdrawing from a Roth IRA in retirement, all your earnings are tax-free. The only catch: You have to have invested money in this account for at least five years before you take any money out.

If you convert a traditional IRA to a Roth IRA, you'll pay taxes on deductible contributions and earnings made up to the point of conversion. But as soon as the money is placed in a Roth, it grows tax-free. (Note: The Tax Increase Prevention and Reconciliation Act of 2005 allowed anyone, regardless of income level, to convert a traditional IRA to a Roth IRA in 2010 and beyond.)

The Roth Advantage

The Roth IRA has several advantages over the traditional IRA:

Roth Raises the Income Ceiling.
Many investors, particularly those who already participate in a retirement plan at work, will find that the Roth IRA is their only option: The modified adjusted gross income (AGI) cut-offs for traditional IRAs are relatively low. The legislators were more generous with the Roth IRA, though.

Granted, an investment in a Roth IRA doesn't cut tax bills today; remember, Roth IRA contributions are made with aftertax earnings. But money invested is free to multiply, unfettered by capital gains or income-tax bites along the way.

Most Ways You Slice It, a Roth Grows More.
Even if you don't qualify for deductible IRA contributions, you could make nondeductible contributions to a traditional IRA and enjoy tax-deferred growth on your savings.

But go for a Roth if you qualify (or consider conversion). Roth earnings are not simply tax deferred--they're tax free, forever. Provided you've held the Roth for at least five years and are at least 59 1/2 years old when you begin withdrawing from the account, you don't owe taxes on distributions. (See IRS Publication 590 for a few picky exceptions.)

Some people eligible for a deductible IRA won't want to give up the "bird in hand," that is, a tax deduction today. Keep the big picture in focus, though, and you'll notice the long-term advantages of the Roth. Those tax-free distributions in retirement are quite a boon.

Several factors determine whether the Roth is the best choice for you: age, investment return, current tax bracket, and retirement tax bracket. Enter your personal variables into an online calculator, such as Morningstar.com's IRA Calculator, and pick which IRA best suits your situation.

In general, the more time you have and the higher your expected return, the better the Roth looks. And the higher your retirement income is likely to be, the greater the advantages of a Roth. Considering that marginal tax rates are closer to historic lows than historic highs, it is quite possible that your retirement tax rate won't be any lower than it is today--it could even be higher.

So when do traditional deductible IRA contributions seem the better bet? Most often, for people in a high tax rate today--but such investors are less likely to be eligible in the first place.

Flexible Rules Mean Easier Access to Your Money.
You can typically start withdrawing from traditional IRAs after you turn 59 1/2, but you must begin taking annual distributions after you turn 70 1/2.

If you take an early withdrawal from your traditional IRA, you will pay a 10% federal tax penalty plus the income tax on the taxable portion of the distribution. In the case of death, disability, or divorce, or for those individuals who need to tap the IRA to pay for certain medical expenses, it's possible to sidestep the early-withdrawal penalty. In addition, you may also avoid the 10% penalty by taking "substantially equal periodic payments," monthly or annually, without interruption, based on your life expectancy.

The money you invest in a Roth IRA, meanwhile, can be withdrawn at any time, since you paid income taxes on the money before investing it. And as long as your Roth account is at least five years old, there are four situations in which you can draw money from your earnings tax-free: reaching age 59 1/2, disability, the purchase of a first home (in which case up to $10,000 may be withdrawn), and, of course, death.

Another perk of the Roth IRA--you aren't required to take withdrawals at age 70 1/2, as you are with a traditional IRA. That means your money can grow tax-free as long as you like and be transferred in full to your heirs. (Depending on the size of your estate, however, heirs may have to pay estate taxes.)

With a traditional IRA, in contrast, your beneficiaries will pay ordinary income taxes on the account balance based on their tax brackets. An heir can avoid paying a large amount of tax up front and take advantage of compounding by taking distributions over his or her life span. Unfortunately, many people take the lump-sum payment because they're not aware of this option. The tax-deferred status of the traditional IRA can only be transferred to a spouse. If it's part of an estate and paid to children, they must pay estate and income taxes.

205: The Best Investments for Tax-Deferred Accounts

Introduction

You know how much money you'll need to retire. And you know that you'll need to squirrel money away in both taxable and tax-deferred accounts to meet your goal.

But what goes where? What type of investments will make the most of the tax advantages that employer-sponsored retirement plans and IRAs have to offer?

And which investments will allow you to maximize your aftertax returns in your taxable accounts?

In this course, we'll cover what types of investments will work best in your tax-deferred accounts. In Portfolio 206: The Best Investments for Taxable Accounts, we'll offer several choices for how to minimize taxes and maximize aftertax results in a taxable account.

The Old and New Approaches

The traditional approach says to hold bonds in a tax-deferred account and stocks in a taxable account. The rationale is that you're better off deferring taxes on securities, such as bonds, that generate a lot of taxable income.

Newer research is drawing somewhat different conclusions. It says that, in many cases, you should own stocks in tax-deferred accounts and bonds in taxable accounts, especially if you're investing for 15 years or longer.

Why? Because if you're investing long enough, the higher total returns of stocks over time can generate a greater tax burden than the income of bonds over the same time.

Let's look at an example from T. Rowe Price Associates. Investor A and Investor B each decide to place $10,000 in a bond fund and $10,000 in a growth-stock fund. Investor A keeps her bond fund in a taxable account and her growth-stock fund in a tax-deferred account. Investor B does just the opposite, placing the bond fund in the tax-deferred account and the growth-stock fund in the taxable account.

Assuming an ordinary income rate of 28%, a capital-gains rate of 20%, and liquidation of both accounts after 20 years, Investor A, who put the stock fund in the tax-deferred account, ended up with the best aftertax results--$197,700 over the period studied versus $184,500 for Investor B. This pattern held up for higher tax rates (31% and 36%), too. Only when the time period was less than 10 years did the pattern break down.

Rules of Thumb

You can draw a handful of conclusions from the findings of these studies.

- The higher your tax bracket in retirement and the shorter your time horizon until retirement, the more you are likely to benefit from holding stocks in taxable accounts and bonds in tax-deferred accounts.
- If you are 15 years or more away from retiring and you expect to be in a lower tax bracket upon retirement, hold stocks in your tax-deferred accounts and bonds in your taxable account.
- If you are less than 15 years away from retiring and you expect to be in a higher tax bracket upon retirement, hold stocks in your taxable account and bonds in your tax-deferred accounts.
- Because the Roth IRA allows you to withdraw money in the future with no tax consequences at all (providing you meet the requirements), hold stocks in your Roth IRA.

Conditions

Of course, studies are merely that--studies. They don't always reflect your real-world situation. For example, these studies don't address what an investor who is 100% in stocks ought to do.

A few rules of thumb for all-stock investors:

- Place individual stock holdings that you plan to hold for a long time in your taxable account; hold shorter-term stock investments and stock mutual funds in your tax-deferred account.
- Place stock funds with very lower turnover ratios--say, below 20% per year--in your taxable account and those with higher turnover ratios in your tax-deferred account.
- Place large-company index funds in your taxable account--they tend to be tax friendly.

(We'll cover more options for taxable accounts in Portfolios 206: The Best Investments for Taxable Accounts.)

Moreover, the study doesn't touch on the quality of the fund choices available within the tax-deferred plan. Say your retirement plan offers only two choices: a highly rated large-cap index fund or a poorly rated high-turnover small-cap fund. If you listened to the study, you'd probably choose the small-cap fund for tax reasons--even though it's not the better investment overall. Don't let taxes considerations overshadow the quality of an investment.

206: The Best Investments for Taxable Accounts

Introduction

You've invested all that you can in your employer-sponsored retirement plan. You've maxed out your IRA options, too. Yet you need to invest more to reach your goals. You need to set up a taxable account.

What types of investments should you keep in your taxable account if you want to minimize taxes? Here are six tax-friendly investment options, as well as strategies you can practice to minimize the tax bite.

Very Low Turnover Stock Funds

Financial pros argue that low-turnover funds (or funds that don't trade very often) are generally more tax efficient than high-turnover funds. That's somewhat of a myth. Morningstar has found that there's no one-to-one relationship between a fund's turnover rate and its tax efficiency. In fact, a fund with a 200% turnover rate can be just as tax efficient as a fund with a 50% turnover rate.

However, we have found that funds with exceptionally low turnover rates--below 20%--do tend to be tax efficient. Large-company index funds are tax friendly, for example, because they usually carry single-digit turnover ratios.

We've created a list of low-turnover U.S. stock funds using Morningstar.com's Fund Screener. To create the list, enter the following:

- Under "Select Group," choose Domestic Stock.
- Under "Turnover less than or equal to," choose 25%.
- Click "Show Results" for the list.
- On Results Page, choose "Portfolio" in the View drop-down box.
- Click on "Turnover %" to rank funds on the list from lowest turnover to highest turnover.

You can manipulate any of the inputs, if you'd like, narrowing your search to funds in a particular Morningstar Category, or funds that earn a particular star rating, etc.

Tax-Managed Mutual Funds

Tax-managed funds are dedicated to limiting shareholders' tax burdens. They use a variety of strategies--not just one--to minimize taxes. For starters, they avoid dividend-paying stocks. They also strive to limit capital gains by holding their securities for a long time or by selling losing stocks to reduce their taxable gains.

Tax-conscious investors have a slew of these funds from which to choose. They can be hybrid funds that own both stocks and bonds, large-company funds, small-company funds, and foreign funds. In short, you could assemble a tax-friendly portfolio that invests in a variety of securities.

There are many fund-screening tools on the Web that can help. Here we use Morningstar.com's Premium Fund Screenerto get a list of tax-friendly funds. (This tool is available to Morningstar.com Premium Members only, but nonmembers can sign up for a free trial.)

Once on Morningstar.com's Premium Fund Screener, follow these steps to set a screen to help you uncover inexpensive, tax-friendly funds with experienced managers:

- Under the "Select Data to Screen on" drop-down menu, choose "AfterTax Return Without Sale" under the Performance heading. In the pop-up window, select "5 Yr AfterTax Return (no sale) >= Category average." Hit OK.
- Go back to "Select Data to Screen on" and choose "Tax Cost Ratio" under the Performance heading. Choose "5 Yr Tax Cost Ratio < Category average." Hit OK.
- Go again to "Select Data to Screen on" and select "Management" under the Management and Purchase Data heading. Using the Data drop-down menu in the pop-up window, select "Fund Manager Tenure > Category average." Hit OK.
- Return to the "Select Data to Screen on" menu, and choose "Fees & Expenses" under the Management and Purchase Data heading. Select "Expense Ratio < Category average." Hit OK.
- Under "Select Data to Screen on," look under the Management and Purchase Data heading for "Closed to New Investment" and select "Closed to New Investment = No" in the pop-up window. Hit OK.
- Finally, go one last time to "Select Data to Screen on" and select "Distinct Portfolio Only" under the General heading. In the pop-up window, set this condition equal to "Yes." (This will filter out multiple share classes of the same fund in your results.) Hit OK.
- Now hit "Click button to show results" and to view the funds that passed your screen.

Municipal Bonds or Municipal-Bond Funds

States, cities, municipalities, and county governments can all issue municipal bonds, or munis, to raise money. They use the proceeds to improve roads, refurbish schools, or even build sports complexes. The bonds are usually rated by a major rating agency, such as Standard & Poor's or Moody's, based on the quality of the issuer.

Why do tax-sensitive investors like munis? Unlike income from bonds issued by corporations or the federal government, income generated by municipal bonds is exempt from federal, and sometimes state, income taxes.

To choose between a taxable and a municipal-bond investment, you need to know your tax bracket. A muni bond may seem to yield a lot less than a taxable bond, but it could be a different matter after you take your tax rate into account.

Say you're an investor in a higher tax bracket who's choosing between a corporate-bond fund yielding 7% or a muni-bond fund yielding 6%. The corporate-bond fund may seem like the better deal, because its yield is higher. After taxes, though, the muni fund could actually be the higher-yielding investment.

To learn more about choosing muni funds, see Funds 309: Choosing a Municipal-Bond Fund.

Individual Stocks

One of the best ways to minimize taxes on your investments is to buy stocks. Unlike the typical fund investor, you could pay *nothing* in taxes. You can't beat that.

Well, you will still pay capital-gains taxes when you sell a stock, but if you hold your stocks for at least a year, you'll pay just the 15% long-term capital-gains rate (if you are in the 25% or higher tax bracket). And by choosing when you sell, you control when you pay the taxes.

To be a tax-free stock investor, avoid the two things that force funds to make taxable distributions to their shareholders: dividend-paying stocks and selling. Shun dividend-paying stocks because the dividends you get are taxed at 15%. And if you don't sell, you won't pay capital-gains taxes.

Exchange-Traded Funds

Exchange-traded funds (ETFs) are generally index funds that trade like stocks. For example, SPDRs SPY track the S&P 500 Index. Investors buy those shares on the American Stock Exchange.

Unlike mutual funds, which always pass capital-gains taxes to their shareholders, ETFs only generate taxes by owning dividend-paying stocks or by changing their holdings to reflect changes in their indexes. To minimize your tax bill, use ETFs that track large-company indexes, which change infrequently. Other indexes, such as those tracking small and midsize companies, change more frequently, and that means tax bills for shareholders.

We cover ETFs in greater length in Portfolio 403: Exchange-Traded Funds. You can also drop by Morningstar.com's ETFs Center to learn more about these types of investments.

Variable Annuities

Variable annuities (VAs) are essentially mutual funds wrapped in an insurance package. When you buy a variable annuity you can direct your investments into a range of stock or bond portfolios, called subaccounts, made available within a particular policy. Tax-weary investors are drawn to variable annuities because contributions grow tax-deferred until retirement, when gains are taxed as income upon withdrawal.

Mutual funds are usually a better deal than VAs, though. Because of the insurance layer, VAs come with relatively high price tags.

Of course, not all VAs are overpriced. The low-cost VA leaders include companies that are familiar to thrifty mutual fund shoppers--including Vanguard and T. Rowe Price. In fact, their VAs come cheaper than many mutual funds, insurance wrapper and all.

VAs may offer current tax deferral, but the IRS does demand a trade-off: VAs are an estate-tax liability. When you die, your heirs will owe income taxes on your account's appreciation. If you passed along fund or stock investments instead, those securities would be stepped up for tax purposes, meaning your heirs' cost basis would be the value of the investments as of your death; they would only owe taxes on subsequent appreciation. We discuss VAs again in Portfolio 401: Variable Annuities.

Other Ideas for Tax Relief

Here are some other strategies you can practice to limit how much of your taxable account Uncle Sam gets to take.

Buy and hold.
The best way to avoid capital-gains taxes is simply to refuse to sell an investment. Of course, you (or your heirs) will eventually need to sell shares to cash in on an investment's appreciated value. Still, it makes more tax sense--and more investing sense in general--to buy and hold for the long run. If you really want to trade on a regular basis, do it in an individual retirement account or a 401(k) plan, since those transactions are shielded from taxes.

Pay attention to holding periods.
When you sell any investment, you have to pay capital-gains tax on your profits. Under current law, you owe taxes on short-term gains--those from investments that you've held for a year or less--at your ordinary income-tax rate. By contrast, if you've owned the investment for more than a year, you'll owe much less. In 2012, that long-term rate is 15% if you're in the 25% tax bracket or higher, and 5% if you're in the 10% or 15% tax bracket.

Thus, if you have a choice between selling a winning investment that you've held for six months and one that you've held for two years, unloading the latter will result in a lower tax hit. Or, if you're considering selling an investment that you bought 11 months ago, waiting a few extra weeks could be worth your while from a tax standpoint.

Offset capital gains with losses.
If you sell an investment for less than you paid for it, the difference counts as a capital loss. The silver lining to such losses is that they cancel out capital gains, lowering your taxes overall. If your capital losses exceed your capital gains in a given year, you don't have to pay any capital-gains tax, and you can deduct a net loss of up to $3,000 from your taxable income (and carry over any unused losses into the next year).

That's why it's sometimes a good idea to think about selling some of the losers in your portfolio near the end of the year. If you still like these investments for the long term, you can buy them back after waiting 30 days. This rule prevents "wash sales," in which somebody sells a stock to claim a capital loss but then repurchases it immediately to retain ownership.

Pay attention to cost basis when selling shares.
When you sell an investment, the taxable capital gain depends on your cost basis, or the price you paid for the stock. If you bought shares of the stock at different prices, you can sometimes reduce your capital gains, and thus the tax you pay, by specifying that you're selling shares bought at the higher price.

For example, suppose you buy 100 shares of a stock at $10 a share. The stock rises to $20, and you buy another 100 shares. Eventually the stock reaches $30, and you decide to sell 100 of your shares.

Without specific instructions, most brokers and fund families would sell the first shares you bought, and your capital gain would be $2,000, or the $3,000 sale price minus your $1,000 cost basis. But if you specify that you want to sell the shares you bought for $20, your capital gain will only be $1,000, or $3,000 minus a $2,000 cost basis.

There's one catch: You usually need to specify in writing which shares you're selling. That can be difficult, especially with discount brokers. Still, it's worth the effort if you've bought shares at very different prices and need to sell some of them.

207: Investing in Your Company's Stock

Introduction

You always root for the home team. Or you only buy cars that are manufactured in the United States. Or you'd pass up World Series tickets for your nephew's third birthday party, because family is family.

Loyalty is powerful. But when it comes to investing, loyalty should have its limits, especially when it comes to investing in the stock of the company that you work for.

Here's why it's a bad idea to invest too much in your company's stock, how to figure out how much of your company's stock you already own, and how to prevent your portfolio from becoming too dependent on your company's stock.

When Loyalty Goes Too Far

You always root for the home team. Or you only buy cars that are manufactured in the United States. Or you'd pass up World Series tickets for your nephew's third birthday party, because family is family.

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Here's why it's a bad idea to invest too much in your company's stock, how to figure out how much of your company's stock you already own, and how to prevent your portfolio from becoming too dependent on your company's stock.

How Much Do You Own?

Your company's stock may appear in a variety of different places and take a variety of different forms:

- In your employer-sponsored retirement plan. Here, consider not only your purchases, but also your company match, if that match is made in company stock.
- In the form of vested stock options, which allow you to buy more of the company's stock.
- In your taxable accounts, either directly or through mutual funds, if your company's stock is publicly traded.

To see just how much of your company's stock you own, you'll need to determine what you own directly and what you own indirectly via your mutual funds. You could scour annual and semiannual reports for that information, then do the math to find out how much of your company's stock you actually own.

An alternative for Morningstar.com Premium Members is to enter their portfolios in Morningstar.com's Portfolio Manager and click on the "X-Ray" tab. Then, take a look at the Stock Intersection report--that will give you an idea of how much of your overall portfolio is dedicated to your company's stock. You may be surprised to find that your mutual funds own your company's stock, too. (Nonmembers can sign up for a free trial of Morningstar.com's Premium service.)

How Much Is Too Much?

Experts disagree on what the "proper" amount of company stock is. Some will say you should never own any of your company's stock at all. Others will tell you to limit your company-stock stake to no more than 30% of your portfolio.

While every investor's case is different, we prefer moderation. In general, no more than 10% of your portfolio should be in your company's stock, especially if your goal is less than five years away. If that one stock has a bad streak right before you need the money, you may not be able to reach your goal.

Let's take an example. Say you want to retire at age 62 with a $1,250,000 portfolio. You figure you can live on $50,000 a year from that nest egg. Five years before you retire, you have 10% of that portfolio (or $85,000) invested in your company's stock and 90% (or $765,000) in a well-balanced portfolio of stocks and bonds that you expect to grow at about 8% per year.

Then say the company stock tanks, losing 20% each year for five straight years. Your $85,000 investment in company stock drops to $27,850. At the end of five years, your portfolio is worth $1,151,850--not quite what you need, but not bad. If you had 30% of your portfolio in company stock, however, you might need to work an additional three years to make up those lost dollars.

Of course, there is always a chance your company stock will do *better* than a balanced portfolio. If that happens, having 30% of your portfolio in the stock might allow you to retire a few years early. Remember, limiting your exposure to company stock is a *defensive* measure for your portfolio

What If I Have Too Much?

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208: How to Invest for Short-Term Goals

Introduction

Perhaps you're comfortable choosing investments for goals that are 15 or 20 years away--say, for your retirement or for your toddler's education. After all, 20 years is a long time, and you can handle the volatility that comes with investing if you know you don't need the money any time soon.

But you're probably less comfortable choosing investments for goals that are within spitting distance. Like buying that bigger home in three years. Or sending your teen to college in two years. Or taking a European jaunt in four years.

Here are some options for how to invest for short-term goals, along with the pros and cons of each.

Money Market Funds

Many people park money they'll need soon in a money-market account. (Portfolio 104: Emergency Funds covers money-market funds in depth.) And for good reason: Money-market funds are pretty secure.

But investors may do better by taking on a bit more risk. Over the last five years, the average ultrashort-bond fund returned about 3.4% annually versus about 2.2% for the average taxable money-market fund. That may not seem like a lot, but compounded over a few years, it could mean the difference between flying first class to Europe and being confined to coach.

Certificates of Deposit

Certificates of deposit (CDs) are often popular with investors because, like bank accounts, they're insured. The other options discussed in this course are not.

Don't get too bogged down in the insurance issue, though. The types of boring bonds we talk about in this course rarely go belly up. For that to happen, the U.S. government and a host of blue-chip corporations would have to become insolvent. And if that happens, short-term investments may be the least of your worries.

The biggest benefit, however, is that a CD's return is predictable. It's guaranteed. Bond funds aren't that predictable. (A bond fund is less predictable because its return is composed of both income and changes in the prices of the bonds it owns.)

Timing is the biggest problem with CDs. A CD requires that you hold it for a set period. If you cash in sooner, be prepared for substantial early-withdrawal penalties. The penalties typically range from three to six months' worth of interest. But CDs can be great choices for investors who know exactly when they'll need their money.

Ultrashort-Bond Funds

Ultrashort-bond funds invest mainly in Treasury, mortgage-backed, and corporate bonds. They limit risk by sticking with short-term securities. With an average duration of just six months, they don't feel much pain when interest rates rise. Money markets, by contrast, carry durations near zero, but offer lower returns.

If you don't want to put your principal at risk, but would like to eke out a little more return, ultrashort funds are a good first step away from money market funds.

Some funds dip into lower-quality bonds for their higher yields, though. Such funds look safer than they are, because bond defaults have been few and far between in recent years.

Short-Term Municipal Bond Funds

Short-term municipal bond funds, or munis, buy slightly longer-term securities than ultrashort bond funds do.

Because they carry longer durations, short-term muni funds are more sensitive to interest-rate shifts than ultrashort funds. Therefore, they gain more than ultrashort funds when interest rates drop.

Buying an insured muni fund won't lessen the interest-rate risk. While insurance protects against defaults, it can make funds even more vulnerable to rate changes.

If you're saving for a home or another longer-term goal and you can weather some rougher patches, short-term muni funds fill the bill--especially if you're in a high federal-tax bracket. That's because these funds only buy municipal bonds, whose interest is exempt from federal income taxes.

Bank-Loan Funds

Because they invest in floating-rate bank loans taken on by corporations, bank-loan funds have very little interest-rate risk. They yield more than other options listed so far, with the potential to go higher if rates rise.

The big thing to worry about is borrowers defaulting. When the economy is humming along, that's not much of a problem. And even when the economy does slow, banks are among the first creditors in line when a business goes belly up. Companies that have defaulted so far have made good on their floating-rate loans more than 80% of the time; distressed junk bonds haven't done half as well.

When shopping for a bank-loan fund, beware of high costs. Many funds charge back-end loads if you don't stay in for a minimum time (typically, at least a year). Further, their expense ratios are often higher than the average bond fund's.

Bank-loan funds work best for investors who will need to draw on the money at a predictable time. Because most bank-loan funds allow investors to redeem their shares only once each quarter, they aren't good places to keep money you might need in an emergency. So if you sock money away for that trip to Europe in a bank-loan fund, be sure to withdraw far enough in advance.

For more about bank-loan funds, take Funds 407: Using Quirky Bond Funds.

209: How to Invest for Intermediate-Term Goals

Introduction

Perhaps your daughter will leave for college in six years and you're only beginning to invest for the big event now. Or your know you'll need a new Jaguar in seven years to help cope with that mid-life crisis that's likely to strike. Or you're serving a prison sentence with eight years remaining and you want to have enough dough to start your life anew.

Despite the very different goals outlined here, each scenario shares a common theme: Each involves intermediate-term investing.

This course will cover how to invest for a goal that's five to 10 years away.

Start with the Right Mix

As with long-term investing, intermediate-term investing begins with determining your goals, and how much money you need to meet them.

If you know how much money you'll need to fund your goal--say, the money down you'll need for that Jag--you can use asset allocation tools such as Morningstar.com's Asset Allocator to find the asset mix that will allow you to come closest to your goal.

To review how to determine your asset allocation as well as how to use Asset Allocator, refer to Portfolio 105: Determining Your Asset Mix.

But maybe the amount of money you'll need for your goal is unclear, or maybe you're flexible about the amount. You probably won't need a set amount when you walk out of prison, for example--you just want more than you have now. Or you know you won't be able to accumulate the $150,000 that you'll need to send your daughter to college in six years, so you'll take whatever you can get.

In these cases, you'll need a portfolio that falls between the short-term portfolio and the long-term portfolio--one that combines elements of the two. Investors with short time horizons use bonds or cash to preserve their money; those in for the long haul usually rely on higher-returning stocks, because they have the time to recoup any losses. In-betweeners should use stocks to grow their money and bonds to protect what they make.

Many advisors recommend that intermediate-term investors put 25% of the money in a safety net of bonds or cash and the remaining 75% in stocks. Those worried about risk might want to place 35% of their portfolio in bonds or cash.

Which Investments to Choose

You could just stick the low-risk part of your portfolio in the bank, but why not eke out some additional gains without much more risk? Take a look at Portfolio 208: How to Invest for Short-Term Goals for other short-term options.

Stocks are the way to go in the return-generating part of your portfolio. Most investors should opt for stock mutual funds rather than buying stocks directly. Mutual funds offer instant diversification, which is extra-important for intermediate-term investors. In-betweeners can't ride out volatility and take risk the same way that investors with longer time horizons can.

Specifically, large-cap blend funds make the most sense for intermediate-term investors. They invest in the core of the U.S. market and include value and growth stocks among their holdings, making them steadier than most stock funds are when the market hits a rough patch. Large-blend funds tend to be less risky than all other types of U.S. stock funds.

What About Balanced Funds?

A balanced fund is another option for intermediate-term investors. Balanced funds, which are often called hybrid funds, own both stocks and bonds. They earn the "balanced" moniker by keeping the balance between the two asset classes pretty steady, usually placing about 60% of their assets in stocks and 40% in bonds.

For some in-betweeners, though, that stock position may be too small. Many balanced funds hold larger stock positions, however. Review a balanced fund's portfolio holdings to find out how large its stock position is. (Morningstar divides balanced funds into two categories: conservative-allocation funds, which hold only 20%-50% of their assets in stocks, and moderate-allocation funds, which are more aggressive, holding 50%-70% of their assets in stocks. Most balanced funds' names won't indicate whether they are conservatively or moderately allocated, so you'll need to check their Morningstar category and dig into their portfolio holdings to investigate.)

The downside to balanced funds: costs. You can often buy a short-term bond fund and a large-blend fund and pay less in annual expenses than if you'd just bought a balanced fund.

But balanced funds are certainly convenient, and they're not all high-cost. We've put together a list of modest-cost balanced funds using Morningstar.com's Fund Screener. Here's what we did:

- Go to the Fund Screener
- Under Fund Group, choose Balanced.

- Under Morningstar Category, choose Moderate Allocation or Conservative Allocation.
- Under Expense Ratio Less Than or Equal To, choose Category Average.
- Under Morningstar Category Rating, choose 4 and 5.
- Hit Show Results.
- From the Results Page, click on the Expense Ratio (%) column to rank the list from lowest to highest expense ratios.

You can manipulate any of the inputs, if you'd like, narrowing your search even further.

Premium Members can also find a list of the balanced funds Morningstar fund analysts like best in our Fund Analyst Picks. (This is a benefit of Premium Membership, but nonmembers can sign up for a free trial.)

210: How to Invest for College

Introduction

With some smart planning, the School of Hard Knocks won't be the only educational institution your kids will be able to afford.

In this course, we'll cover how to determine how much you'll need to invest for college and what the right mix of investments should be, different investment vehicles you can use for college funding, and how to alter your portfolio as the big day draws near.

What You'll Need

The first thing you need to do is take a deep breath and determine what college will actually cost.

Review Portfolio 102, which discusses in detail how to calculate the cost of your goals. Whether you're saving for retirement, for a home, or for your child's education, goal setting comes down to answering a few key questions:

- How much will the goal cost each year?
- How many years will you be tapping into this portfolio to pay for the goal?

- What will the total cost of the goal be?
- What will inflation do to that total cost?

Next, you need to figure out what asset mix will get you to that goal. If you have not taken Portfolio 105: Determining Your Asset Mix, you may want to take a few moments to do so now.

Now you know what your goal will cost and what your asset mix should be. Next, you need to choose the best college-saving plan for your situation.

Choosing a College-Saving Plan

Several years ago, there were only a few education-savings programs. Parents picked between investing with tax-deferred accounts, such as United Gifts for Minors Act (UGMA) or United Trusts for Minors Act (UTMA), or squirreling money away in taxable accounts.

Today, with options such as the Coverdell Education Savings Account, 529 plans, and state-run Prepaid Tuition programs, parents have a new dilemma: How do they choose among the many college-investing options?

Ideally, you want to choose a plan that will provide the highest investment returns and the best tax benefits. At the same time, you don't want to jeopardize your child's ability to receive some financial aid.

When it comes to the financial-aid issue, consider your own income and future earnings. They will make up a major part of the financial-aid office's decision, and they will be considered more important than assets such as investments or home equity. High-income parents who think their children will qualify for a big financial-aid package simply because the family doesn't keep a brokerage account are sorely mistaken.

When it comes to comparing the various college-saving plans, ask five questions:

- How much can I contribute to the plan?
- What are the plan's investment options?
- What are the taxes?
- Who controls the money?
- Can the money in the plan be used for anything other than education?

Education Savings Account

The Coverdell Education Savings Account (formerly known as the Education IRA) is a creation of the Taxpayer Relief Act of 1997. As the name implies, it's tailor-made for college savings.

Here are the answers to the five college-savings-plan questions:

- You can usually contribute up to $2,000 per year to an Education Savings Account, possibly less depending on your income. A child can only be "funded" by $2,000 per year, though. So you and grandma cannot each invest $2,000 in an Education Savings Account for your son each year.
- You can invest the Education Savings Account in just about anything.
- Although you pay taxes on contributions, withdrawals are tax-free.
- The recipient (the child going to college) technically controls how the money is spent, but he or she can only use it for education. If he/she doesn't use the money, you can transfer the account to a relative who will use the money for education.
- Money in the account can only be used for education.

The Education Savings Account is a good choice for anyone who qualifies. However, saving just $2,000 per year for college may not get your kid very far. As a result, the Education Savings Account should only be one part of your college-saving plan.

Section 529 Plans

Also known as qualified state tuition programs, 529s are the newest thing in college savings. They are offered in all 50 states, although you needn't necessarily use your own state's plan--although there could be state-tax benefits if you stay with an in-state plan.

Individual states sponsor 529 plans. The state sets contribution limits and investment guidelines that the plan must follow. These plans are then administered by an investment company of the state's choosing. Fidelity, TIAA-CREF, and Vanguard all administer 529 plans, for example.

Because there's such variety among plans, you need to do some legwork. You don't need to become footsore, though--check out Morningstar.com's 529 plan data at http://529.morningstar.com/state-map.action. It includes both qualitative and quantitative analysis of state plans, offering recommendations for both in-state and out-of-state investors.

The answers to our college-savings-plan questions:

- The amount you can contribute varies from plan to plan. The best news: Anyone can contribute to 529 plans, regardless of your current income.

- When it comes to investment options, each state has its own roster. If the lineup in your state's plan doesn't suit you, choose a plan outside your home state.
- Withdrawals for qualified expenses are tax-free from federal taxes.
- You're in control, because you select the plan and can determine how much you'll contribute.
- Proceeds of the account can only be used for education. However, you can transfer the account to another child if the original recipient doesn't use it.

These plans are great, especially for high-income investors. Many plans allow you to contribute as much as $200,000 or more up front (though the gift tax may apply for large contributions), and withdrawals for qualified expenses aren't taxed under current law.

Evaluate a 529 plan's investment options as you would any mutual fund. Understand how they invest, examine their performance, and understand all fees associated with them. And remember that you can shop around--you don't have to invest in your state's plan.

State Prepaid Education Plans

Like 529 plans, Prepaid Tuition Plans are also state-sponsored. These plans differ significantly from the other options here, because they allow you to lock in the cost of college at today's prices. They can be good options if you think your child will attend a state university. (In a state-sponsored program, your child needs to go to college in that state to get the maximum benefit of this program.)

The answers to our questions:

- The amount you can contribute varies from plan to plan, and there are generally no income restrictions.
- Prepaid Tuition Plans usually invest in state-backed bonds, because they aim only to keep up with rising in-state university costs.
- Gains are tax-deferred and withdrawals are tax-free under the current tax code.
- Unlike the other options here, you cannot control what the plan invests in. Although the account is technically in your child's name, you retain control of it.
- The money can be used for college funding only. If your child decides not to attend a state college, you can transfer the money to another child's name.

Traditional IRAs

Along with creating the Education IRA, the Taxpayer Relief Act allowed investors to draw on traditional IRAs for education expenses without incurring early withdrawal penalties.

Acceptable uses for traditional IRA proceeds include tuition, supplies, and--for students enrolled at least part time--room and board.

The answers:

- Check the IRS's web site for current contribution limits.
- You can invest an IRA in anything.
- Withdrawals will be taxed at your regular income-tax rate. Some or all of your contribution may be tax-free, depending on your income.
- It's your account. You decide how the money is spent, if at all. If your child doesn't go to college, you can hold on to the IRA for your own retirement.
- If you withdraw the money and don't use it for eligible college costs, you'll be hit with a penalty.

This may be a good fallback way to save for college. It isn't the ideal way, though, given your other options. If you qualify for the tax break that a traditional IRA affords, you should probably be using this vehicle as a means for funding your own retirement instead of your child's education.

Roth IRAs

Thanks again to the Taxpayer Relief Act, you can also draw on Roth IRAs for education expenses.

- Check the IRS' web site for contribution limits.
- You can invest a Roth IRA in just about anything.
- Withdrawals of contribution (not earnings, though) are tax-free. Contributions are subject to taxes.
- The account is under your control. You decide how the money is spent, if at all. If your child doesn't attend college, you can use the Roth IRA to fund other goals

Using the Roth IRA as a college-savings tool suffers from the same drawbacks as using a traditional IRA for college funding. And with a Roth IRA, you can only withdraw your contributions to the account without penalty, not the gains your investments have made.

Uniform Gifts to Minors Act

Most states have variations on the UGMA (sometimes called a UTMA), which allows anyone to transfer ownership of assets or an investment to a minor.

- You can contribute up to $13,000 in 2012 to a UGMA account, $14,000 in 2013.
- You can transfer cash, any mutual fund or stock, or property to the account.
- Withdrawals are taxed at the recipient's rate.
- The money belongs to the recipient, not to you. You can, however, act as a custodian until the recipient reaches a set age. That age varies from state to state.
- UGMAs can be used for anything (except parental obligations), not just college costs.

The biggest problem with the UGMA is the control you surrender. If junior would rather spend the account on a new car rather than college, he can. It's his money.

Turn Tame When the Time Is Right

If your college savings portfolio tanks in the fall of freshman year, you won't have the luxury of waiting for it to rebound. That's why a college portfolio should become tamer as the student gets closer to matriculating. The idea is to protect the gains instead of angling for more.

To rein in the portfolio, shift assets into a short-term bond fund. If the markets turn ugly, the bond fund won't lose much--if any at all.

Start moving some of the portfolio's assets seven years before you need to make that first tuition payment. That should cushion you against a prolonged market slump.

In fact, at that seven-year point, your child's college education isn't a long-term goal; it's an intermediate-term goal. As such, the portfolio should begin to look more like an intermediate-term portfolio than a long-term portfolio.

To learn how to craft an intermediate-term portfolio, review Portfolio 209: How to Invest for Intermediate-Term Goals.

Portfolio300

301: How to Monitor Your Portfolio, Part 1

Introduction

Even in the most casual workplaces, managers review their staffers annually. And for good reason: Employers compensate employees for performing well, and employees need to know how well their supervisors think they're doing and whether they're on track to meet their career goals. Their livelihoods depend on it.

Your investment portfolio requires regular reviews, too. You need to supervise it, just as your manager supervises you, to make sure it stays on track.

The classes in the 300 level of Investing Classroom's Portfolio track will show you how to oversee your portfolio and modify it when necessary.

This course will cover monitoring procedures, as well as how to review:

- The performance of your individual investments and your overall portfolio
- The characteristics of your portfolio
- The fundamentals of your mutual funds

Portfolio 302 will focus exclusively on how to review the fundamentals of your stocks.

Your Monitoring Procedures

Those of you who've created an Investment Policy Statement have already developed your monitoring procedures. In doing so, you answered the following:

- What is my target allocation for each asset class (stocks, bonds, and cash)
- How often will I monitor my portfolio?
- How will I determine how well my investments are doing?
- How will I determine how well my overall portfolio is doing?
- Is my portfolio meeting my expected return?
- What fundamental criteria will I focus on as I review my holdings?
- How often will I rebalance?

If you haven't developed your monitoring procedures or created your Investment Policy Statement, review Portfolio 108 and download Morningstar's Investment Policy Statement
Worksheet at http://news.morningstar.com/pdfs/Investment_Policy_Worksheet.pdf. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.)

As you can see, tracking your portfolio means more than just monitoring its performance. It means keeping an eye on your portfolio's characteristics, too. And it requires you to make sure that the fundamentals of your individual investments haven't changed since you bought them.

Monitoring the Characteristics of Your Portfolio

The first step in the portfolio-monitoring process is to take a close look at your portfolio’s characteristics. Are there significant developments that merit your attention?

Portfolios aren't static. They change without us doing anything to them. That's because market forces will make some investments perform better than others--which means they'll take up more of our assets. Or fund managers buy and sell securities, and in doing so, they change underlying portfolios of your mutual funds and the look of your overall portfolio.

Ignore these changes and you may end up with a portfolio that's very different from the one you originally put together. Ignore these changes and you may be taking on more risk than you think. Finally, ignore these changes and you may not meet your goals.

Look for unexpected changes in your portfolio. If you find some, you need to determine how significant these changes are and if they in any way threaten your long-term investment plan or your portfolio's short-term volatility characteristics.

Investors can enter their portfolios in the easy-to-use Instant X-Ray tool, or they can use Morningstar.com's Portfolio Manager to monitor their portfolios' characteristics via the Portfolio X-Ray tab for more comprehensive analysis. Either way, you'll get an X-ray of your portfolio holdings combined together. You'll find out how your portfolio looks from a series of key vantage points.

Asset Allocation

How does this current asset allocation compare to the original asset mix that you established for yourself? If the mix is off-base, it may be time to rebalance. We cover rebalancing inPortfolio 305.

Style Box Diversification

How does this style mix compare with your original mix? If things differ dramatically, you might consider rebalancing here, too.

Stock Sector

What segments of the stock market is your portfolio most and least exposed to? Is this what you expected? And how does it compare with your original sector mix?

Stock Type

You may find that you have a lot of investments that are of the same stock type or in the same stages of their life cycles. That isn't a bad thing, per se. But having too many aggressive and speculative growth investments can lead to lots of volatility.

World Regions

How diverse are your investments around the globe today, and how do these figures compare with the global mix you set up for yourself originally?

Stocks Stats

Is your portfolio carrying a high price/earnings ratio, making it more vulnerable to price risk than it may have been when you initially invested?

Top-10 Holdings

How much of your assets are in each of your investments? Is this amount significantly different that it was last time you checked in? If so, you may need to rebalance.

Monitoring the Fundamentals of Your Mutual Funds

Just as you watch for unexpected changes in your portfolio, watch for changes in your mutual funds, too. You want your funds to meet the same investment criteria today as they did when you first bought them. You set out your investment criteria in your Investment Policy Statement, and you should hold your mutual funds to those criteria. If they no longer meet your criteria, do they still belong in your portfolio?

Just because a fund no longer meets one or two of your criteria is no reason to sell. But if a fund no longer clears most of your hurdles, it is a sell candidate.

For example, perhaps you purchased a fund five years ago to fill a small-growth role in your portfolio.

If today, however, the fund lands squarely in the mid-cap growth slot of the style box, you're investing in a fundamentally different fund than you once were.

Many financial Web sites, such as Morningstar.com, offer alerts to investors signaling key changes to holdings. Morningstar.com's alerts inform investors when, say, a mutual fund changes star ratings, or moves into a new style-box position.

Monitoring Performance

Once you've reviewed your portfolio's characteristics and those of individual fund holdings, examine its overall results during whatever time period you've chosen. (The longer the better! Short-term performance trends are often little more than noise.) How do these returns compare with the benchmark you've established for this portfolio and the long-term returns you're expecting?

Of course, your portfolio isn't going to return exactly what you need each and every time you examine it; the idea is for the portfolio to average out to that expected return figure over time. So if your portfolio has not met your average required return over whatever time period you've chosen, don't panic. Conversely, if your portfolio has returned more than you expected, don't go on a spending spree.

However, if your portfolio has suffered losses, make sure those losses are within the acceptable range you set forth in your Investment Policy Statement. If not, your portfolio may have more risk in it than you think, and you may need to re-evaluate your holdings.

Let's take an example. Say you own shares of Vanguard Total Stock Market (VTSMX), Vanguard Total Bond Market (VBMFX), T. Rowe Price High-Yield Bond (PRHYX), and T. Rowe Price Emerging Markets Bond (PREMX).

To understand why your portfolio behaved as it did, turn to your individual holdings. For example, In Morningstar.com's Portfolio Manager, you can see your gain and loss in a stock or fund since you initially purchased it.

Maybe one or two of your investments fell short of expectations while others returned more than you expected--understand why. Perhaps stocks were in favor during the period, so your equity holdings did better than your bonds. Put the performance of your investments in context.

The best way to do that is to compare your returns with those of an appropriate benchmark--the benchmark you laid out for each investment in your Investment Policy Statement. By clicking on the Views tab, you can create a custom view that shows the data points of your choice—in this case, each fund's three- and five-year returns as well as how those returns stack up to its category peers.

For more about benchmarks, take a look at Funds 202: How to Benchmark Fund Returns.

302: How to Monitor Your Portfolio, Part 2

Introduction

With cable financial-news programs, stock newsletters and tip sheets, and investment Web sites, you'd think that investors watch their stock portfolios 24 hours a day, seven days a week.

Such mega-monitoring would be overkill. True, stocks require more attention than mutual funds do. And in a volatile market, changes can happen quickly. Still, the managing of your stock portfolio comes down to making sure your stocks continue to meet your investment criteria.

Here's how to monitor your stock portfolio without turning it into a full-time job.

How to Review the Fundamentals of Your Stocks

Just as you watch for unexpected changes in your mutual funds, watch even more closely for changes in your companies. Because mutual funds are collections of stocks, changes happen more slowly. But with individual stocks, things can shift quickly. You'll need to monitor your stocks more closely and frequently than you monitor your mutual funds.

You want your stocks to meet the same investment criteria today as they did when you first bought them. You set out your investment criteria in your Investment Policy Statement, and you should hold your stocks to those criteria. If they no longer meet your criteria, do they still belong in your portfolio?

If you haven't developed your investment criteria or created your Investment Policy Statement, review Portfolio 108 and download Morningstar's Investment Policy Statement Worksheet at http://news.morningstar.com/pdfs/Investment_Policy_Worksheet.pdf. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.)

Just because an investment no longer meets one of your criteria is no reason to sell it. But you should put it on your "to watch" list. And if a stock no longer clears most of your hurdles, it is a sell candidate. (We'll talk more about selling in upcoming courses.)

You can monitor your portfolio with e-mail alerts, such as those offered by Morningstar.com. Such alerts will notify you when there's news about your stocks, if there's a dividend paid or earnings announcement, and dozens more events.

Watch Valuations

Of course, investment criteria will vary from investor to investor. What's important to one stock investor isn't necessarily key to another. There are, however, a few things that all stock investors ought to monitor.

When most people buy a stock, price is a consideration. Maybe you're a bargain-hunter whose eyes light up at the sight of a low price/earnings ratio. Or maybe you're a go-go growth investor who's willing to pay a steep price for a company with terrific growth prospects. Either way, you have a price you're willing to pay for an investment. Anything above that makes the stock too expensive for your taste.

Once you've bought a stock, valuations still matter. If a stock's price/earnings, price/sales, or price/fair value ratio jumps significantly from where you bought it, that increases your price risk, because more of the company's value is in the unknowable future. (Price/earnings and price/sales ratios are widely available; price/fair value ratios are available to Morningstar.com Premium subscribers, and are calculated by dividing the the company’s share price by what Morningstar’s equity analyst thinks that company is worth, based on discounted cash-flow analysis.) If the expectations underlying that higher valuation don't pan out, the stock's price can plunge back to earth.

Conversely, if a stock's P/E or price/fair value shrinks significantly, take notice. You may still like the company, and you now have the opportunity to buy more of it at the cheaper price. But if a shrinking share price signifies deteriorating fundamentals at the company, you may no longer want to own the stock. Only you can determine what falling prices means for you.

Investigate Rapid Price Moves

If a stock's price shoots up or down, something's going on. Maybe the company has reported better-than-expected financial numbers, and its stock price has risen on the news. Or maybe the stock's price is sinking like a stone after the company announced operational problems, or the loss of a key customer. In either case, you should be aware of any such price swings in the stocks you own.

Rapid price moves aren't necessarily anything to panic about. However, understand why the stock's price moved the way it did. Then, decide what to do. In many cases, you'll probably want to sit tight. Again, if the stock still meets your investment criteria, why sell?

Inspect Earnings

Earnings estimates made by Wall Street analysts are important to the prices of your stocks. Each quarter, companies try to exceed the estimates that analysts have made. If companies exceed expectations, they're usually rewarded with a pop up in their stock price. If companies fall short of expectations--or sometimes if they only meet expectations--their stock prices can take a beating.

We don't recommend relying too heavily on whether or not companies meet or beat quarterly estimates; a company that misses estimates can still have great growth prospects. Conversely, a company that exceeds expectations may face roadblocks ahead.

Nevertheless, quarterly earnings figures are useful. A company that consistently exceeds expectations quarter after quarter is doing something right. But a company that has consistently fallen short of estimates for several consecutive quarters probably has significant problems.

Monitor Dividends

Dividends play an important role in many portfolios. They're a sign that corporate management is committed to shareholders, and companies tend to be reluctant to cut them. If you're nearing retirement, you may look to regular dividend payments to help supply you with income for living expenses. And since stocks with high dividend yields tend to be less volatile than non-dividend-paying names, they can provide good balance for anyone's portfolio.

If you own stocks that pay dividends, monitor that payout. You want to see a dividend that's stable, or growing. It's virtually always a bad sign when a company cuts or even eliminates its dividend.

Listen for News

In addition to all of the above, keep an eye out for major news stories about companies whose stock you own. Watch for merger rumors or announcements, changes in management, new-product development, or strategic shifts. All can affect a company's prospects.

Regardless of how you do it, monitoring the stocks in your portfolio is just as important as choosing the stocks in the first place.

303: When to Sell an Investment

Introduction

When the Dow Jones Industrial Average plunges 500 points in a single day, the knee-jerk reaction is to get out--fast. But just as making an investment occurs only after of an extended period of goal setting and research, selling is also best done only after cool deliberation. Selling is *not* best done in the heat of crumbling markets.

Develop your selling discipline. That means establishing a set of selling parameters for your investments.

Selling according to pre-established rules forces you to have a good reason for getting out of an investment--a reason that's based on your personal investment philosophy and the investment selection criteria you laid out in your Investment Policy Statement.

If you haven't developed your monitoring procedures or created your Investment Policy Statement, review Portfolio 108 and download Morningstar's Investment Policy Statement Worksheet at http://news.morningstar.com/pdfs/Investment_Policy_Worksheet.pdf. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.)

This course will cover how selling can hurt a portfolio's performances, some bad reasons to sell an investment, and some good causes for pulling the trigger.

How Selling Can Hurt

Sticking with a good long-term investment is better than trading in an out as it goes up or down. The problem is timing. Investments can make big gains and losses in a short period of time, but it's impossible to predict such short-term movements. The challenge isn't unique to investors trying to pick the "right time" to buy a particular stock. Studies show that it's tough to time the broad market, too.

If you've done the homework necessary to find a good stock or fund, just stick with it. Timing an investment's highs and lows is nearly impossible to do.

Bad Reasons To Sell

Maybe you're not a timer, at least not consciously. But you may be prone to sell an investment for the wrong reasons. Any of these bad reasons sound familiar?

The investment has lost a lot.

Despite the attention lavished on the ups and downs of an investment's price, an investment's price movement doesn't tell you much about the investment's future prospects.

Let's say you own a stock or fund that's gotten crushed. It's tempting to sell, right?

But think about it: What good does it do to sell *after* the investment has fallen? Whatever the bad news was (if there was any), it has already been incorporated in the investment's price.

The more rational reaction to a drop in an investment's price is often exactly the opposite of a sale: If you really like the investment, perhaps you should take advantage of the lower price to buy more.

You're almost certain to make more money in the long run if you ignore what other investors are doing. That means ignoring price movements. Selling only turns paper losses into actual losses.

The investment has gained a lot.

Likewise, just because an investment has risen is no reason to sell. It's oh-so-easy to sell (or fail to buy) a great investment simply because it has already had a good run: It has to peter out, right?

But myriad examples show that no, investments don't have to peter out. The fact is, most investors would be better off if they tuned out daily market updates. That's just noise that, if listened to, can interfere with your long-term investment success.

You need the money.
Selling because you need the money--regardless of how your investments are doing--is a

terrible position to be in and one you should avoid at all costs. Before you invest in stocks or funds, make sure you have an emergency stash in an easy-to-access savings or money-market account to cover unexpected car repairs or sudden unemployment.

For more about how to establish an emergency fund, review Portfolio 104.

Good Reasons To Sell

Of course, it's unlikely you'll hold most investments forever. You will need to sell investments from time to time. Just make sure you're selling for a good reason--and your reason should stem from your own investment philosophy and your investment-selection criteria.

The fundamentals of the investment change.

It's often tough to distinguish between the normal fluctuations of a company's stock price or a fund's performance from long-term shifts in fundamentals.

Let's say that because of a change in foreign-exchange rates, Coca-Cola (KO) earns a little less than analysts had expected in a given quarter and the stock's price takes a licking. Who cares? The company's long-term prospects aren't damaged.

But if the changes are deep enough, the reasons you bought the investment may no longer hold. Then, you'd consider selling.

Maybe you own a stock because the company is growing rapidly. But you find out about accounting irregularities at the company, which pull the rug out from under profits. You may still want to own the stock, but only if you're interested in turnarounds. It's no longer a growth stock.

The fundamentals can change with mutual funds, too. Presumably, you buy a small-value fund because you want exposure to small-value stocks. If the manager starts buying large-growth stocks, you may have a problem. You may now have multiple large-growth funds in your portfolio, and no small-value fund. You may need to sell to restore your original balance of styles.

You made a mistake.

Closely related to changing fundamentals are misunderstood fundamentals. If you buy a gas grill that won't light, or a shirt that doesn't fit, you return it. Sometimes investments need to be returned, too.

Let's take an example. Suppose a bond fund loses more than 20% in a year in which its average peers suffer a much slimmer loss because it had made a big bet on emerging-markets debt. Shareholders who thought they were buying a boring multisector bond fund had every right to sell. They'd made a mistake.

Rather than hang on to a mistake in the hope it stays above water, it makes sense to switch the money to a more-compelling investment, one you feel comfortable with.

The best way to avoid such situations, of course, is to be a finicky buyer. Research your investments thoroughly. The Mutual Funds and Stocks tracks of the Investing Classroom can teach you how.

The investment becomes too expensive according to your criteria.
There's no reason an investment that's done well can't continue to do well. But when valuations rise, the investment's price is outpacing the business--the P in the P/E ratio is rising faster than the E. If you invest in a stock or mutual fund--not because you love the company or fund management but because the investment seems undervalued--a rise in valuations may mean it's time to move on.

Unfortunately, no hard-and-fast rules exist on when an investment becomes too expensive. That's up to you to determine as part of your investment philosophy.

For most investors, however, mutual funds don't become "too expensive" the same way stocks do. That's because fund managers are (theoretically, at least) selling the fully valued stocks in their portfolios and replacing them with better opportunities. They're defining what "too expensive" means, and they're weeding out pricey stocks based on their criteria.

Your portfolio needs rebalancing.

Let's say you had a balanced portfolio five years ago, with equal weightings in the four corners of the Morningstar style box--large value, large growth, small value, and small growth. Your portfolio probably wouldn't be today. More than likely, either large-company stocks have outperformed smaller companies during that time (or vice versa), or one style has dominated over the other. That once-balanced portfolio is likely out of whack today.

Prudence counsels spreading risks around, and that includes rebalancing a lopsided portfolio. For safety's sake, it pays to periodically check to see if your portfolio is diversified, with a good mix not only among styles, but among asset classes and sectors, too. That often means selling some winners and investing the proceeds in losers.

We cover how to rebalance a portfolio in Portfolio 305.

A better opportunity comes along.
Suppose the stock of a great company that you've been keeping your eye on suddenly drops. Or say a mutual fund that was closed for the past five years finally reopens.

When too-good-to-pass-up opportunities arise, it may make sense to sell some of the least-compelling parts of your portfolio to fund the purchase. Just be sure that these opportunities are well thought-out and investigated, that they fit your long-term investment goals, and that they meet the investment selection criteria you laid out in your Investment Policy Statement.

The investment doesn't live up to expectations.

While one year of underperformance may be nothing to worry about, two or three years of falling behind can get frustrating. Worse, if you're relying on the investment to offer a particular amount of return each year, on average, and it continually falls short, it may jeopardize your chances of meeting your financial goal.

Before pulling the sell trigger, be sure you're comparing your underperformer to an appropriate benchmark, such as its Morningstar category, its industry peers, or a suitable index.

Also, be sure that your investments continue to meet the other investment selection criteria in your Investment Policy Statement. If they don't, they may be sell candidates.

Your investment goals change.

We don't invest to win some imaginary race, but to meet our financial goals. As your goals change, your investments should change as well.

Suppose you start investing in a balanced fund with the goal of buying a house within the next five years. If you get married and your spouse already owns a house, you may decide to use that money for retirement instead. In that case, you might sell the balanced fund and buy a pure stock fund. Your goal and the time until you draw on your investment have changed. The investment should, too.

304: Strategies for Selling

Introduction

You've decided that yes, you need to sell an investment from your portfolio. Selling a loser is no problem for most investors (though we'd advise against selling an investment simply because it's down--further investigation is almost always warranted). But what about an investment where you've made a few bucks? If you're selling the investment from a taxable account, Uncle Sam will be right behind you with his open hand.

The idea of paying taxes on investment gains shouldn't stop you from selling securities that you want to sell. But you need to realize what the tax consequences of any sale would be. By putting off a sale, you may be able to save a bundle in taxes.

Here's how to figure out how much appreciation you're sitting on, the scenarios where you'd probably be best off accepting the tax consequences, and where delaying a sale might be the better choice.

Just How Big a Gain Are You Looking At?

Calculating your basis, or the combination of cash paid plus any dividends reinvested that have already been taxed, is no easy task.

First, find the purchase date (or dates, if you bought the fund or stock over a period of time) and price (or prices). Next, find out how much of your gain has already been taxed as dividends (assuming that you've reinvested those dividends in the stock or fund) for each year since you've owned the security. The difference between the value of the investment today and the basis is your capital gain.

When to Sell and Accept the Tax Consequences

Many investors find that their need to sell overrides any tax issues. Here are some cases where going ahead and selling is probably the best option:

If you've held the security for at least one year. If you've held the security that you want to sell for at least one year, you're eligible for long-term capital-gains rates. Long-term capital gains are taxed at a lower rate for most investors; see the IRS's web site for current rates. Meanwhile short-term gains--or gains made on securities held for less than one year--are taxed at ordinary income tax rates, which are higher.

If you can engage in tax-loss selling elsewhere in your portfolio. Tax-loss selling is a way for investors to manage the amount of taxes that they pay on their investments. In tax-loss selling, you sell investments that have lost value to offset the gains that you're taking on winning investments.

But beware: Selling a losing position to offset gains in a winning investment can be a smart tax decision, but a poor investment decision. If you do tax-related selling, sell investments that you'd likely sell even if taxes weren't an issue.

If you have a long time horizon and can compensate for the tax cost of selling over time. For those with a relatively long time horizon, say 15 years or more, consider selling part or all of your appreciated shares, taking the tax hit, and reinvesting in other securities. Because you have so much time to recoup the money you're losing to taxes, selling may outweigh the tax costs.

If your portfolio is way out of balance because of this investment. You should have an established asset mix for your portfolio. How far off is your current allocation from that target because of this security? The farther off you are, the more benefit you'll gain (in terms of risk control) if you sell at least some of your investment.

If the stock or fund really isn't you. Let's say you made a killing on a stock three years ago only to experience a sickening drop this year. You learned that investing in such heated markets just isn't for you, no matter how high the highs can be.

The riskier the investment (and that includes "price risk" in overheated markets), the better off you'll be by selling and diversifying away some of that risk.

If you're convinced bad times are ahead. Most investors would agree that it's better to take a gain on an investment than to take a loss. If you just think nothing but losses are in this investment's future, then sell.

When to Think About Waiting

Sometimes it may pay for you to hold on to a sell candidate, at least for a while longer.

If you haven't owned the stock or fund for at least one year. If you haven't held the investment for at least one year, you'll be subject to short-term capital-gains rates on your sale, which can be dramatically higher than the long-term capital-gains rate.
So consider waiting to sell the security until you've passed the one-year mark.

The stock or fund has consistent performance and is not overly volatile. You may want to sell an investment because a new opportunity has presented itself, or because its growth is slowing. But if this is only a moderately risky investment, consider whether you really need to sell it. How bad are things likely to get? So bad that the tax consequences are worth it? Perhaps not.

The investment isn't messing up your asset allocation or threatening diversification. If the investment that you want to sell takes up only a small portion of your portfolio and isn't throwing your portfolio off-kilter, you may not need to sell immediately. Consider selling a little bit of your position each year, thereby minimizing the tax hit.

You just can't take a big capital-gains tax hit right now. Look at the rest of your financial life. Perhaps you exercised some incentive stock options and have to pay Alternative Minimum Taxes this year. Or you have fewer write-offs than usual. Or you'll be paying estate taxes soon. Now may be a bad time to add capital-gains taxes to the mix.

305: Rebalancing Your Portfolio

Introduction

You've probably never heard someone say, "I can see why you stick with that guy--he's a real loser!" Everyone prefers winners.

So if an investment is successful, naturally, you'd want to stick with it. The last thing you'd want to do is sell some of your winners to invest more money in your investments that aren't doing as well.

No matter how unnatural that practice seems, however, that process—called rebalancing--is an essential part of managing your investment portfolio.

Here's what rebalancing is, why it's important, and how to do it.

What Rebalancing Is

Rebalancing is the process of restoring your portfolio to your target allocation for it.

You don't have to do anything to your portfolio for it to change. That's because some of your investments will do particularly well while others won't. (That was the whole point of diversifying your portfolio in the first place, remember?) Those investments that have done well will naturally begin to take up more of your portfolio; those that haven't done as well will take up less of your portfolio. And you don't have to do a thing for that to happen.

But every so often, you need to readjust your portfolio, to restore its original balance. If your investment goal hasn't changed, your portfolio's mix shouldn't, either. Because of market forces, however, it does.

Why Bother?

Rebalancing is primarily about risk control, or making sure your portfolio isn't overly dependent on the success or failure of one investment, asset class, or style.

Let's say that you put $10,000 in T. Rowe Price New Income (PRCIX) and $10,000 in T. Rowe Price Growth Stock (PRGFX) in January 1997. At the end of 2006, you had to congratulate yourself. Your $20,000 investment had turned into more than $41,000.

Credit a lot of that success to the stock fund. Your position had grown to more than $24,000 at the end of the period. T. Rowe Price New Income, while no slouch itself, was just $17,271.As a result of that outperformance, T. Rowe Price Growth Stock soared to roughly 60% of your portfolio in late 2006. You decide not to mess with its winning streak.

By late 2008, however, you would've gone from patting yourself on the back to kicking yourself you know where. Your portfolio lost more nearly 20% over the two previous years. The culprit? T. Rowe Price Growth Stock, which, like most stock funds, lost nearly two thirds of its value in that two-year period, a vicious bear market for stocks. T. Rowe Price New Income, on the other hand, made money during that period.

If you had rebalanced your portfolio at the beginning of 2007, re-establishing equal positions in the funds, you wouldn't have lost half as much during that year. Rebalancing would have protected a sizable chunk of the gains you made with T. Rowe Price Growth Stock.

The upshot: No one investment style stays in favor forever. In the mid-1990s, for example, all investors cared about were financials stocks. Then from the late-1990s until March 2000, technology stocks were the "in" cocktail-party chatter. After that, the hot investments were REITs, or real-estate investment trusts. Bonds have been in vogue ever since the bear market of 2007-2009. In the bear market, nearly all stocks were hammered, but high-quality bonds held up just fine.

And that's the whole point of rebalancing: You *don't* know what asset class, sector or investing style is going to rule the investment world next year, or how rapidly things might change. Rebalancing helps you reap the full rewards of diversification. Trimming back on a winner allows you to buy a laggard, protect your gains, and position your portfolio to benefit from a change in the market's favorites.

How to Do It

Convinced? Good. Now comes the sticky part: figuring out just how to rebalance.

Rebalancing would be a cinch if all your money was in one account. But you may be investing for one goal via various vehicles. For instance, you may have some retirement assets in an IRA, more in an employer-sponsored retirement account, and even some in a taxable account.

If these accounts are all funding one goal, they are, for all intents and purposes, part of one portfolio. So when you rebalance, you're not just going to rebalance your employer-sponsored account. You should rebalance across *all* of these accounts simultaneously.

Here's how:

Step 1: Recall your target portfolio mix.

You included the details of this mix in your Investment Policy Statement. (If you haven't developed your investment criteria or created your Investment Policy Statement, review Portfolio 108 and download Morningstar's Investment Policy Statement Worksheet at http://news.morningstar.com/pdfs/Investment_Policy_Worksheet.pdf. (Note: The worksheet is available as a PDF file. You will need Adobe® Acrobat® Reader to view and print it.) This was the blend of asset classes and investment styles that were going to allow you to reach your investment goal.

Step 2: Compare your target mix to your current mix.

Consult your portfolio statements or online tracking tool. Morningstar.com can help with its Instant X-Ray and Portfolio Managertools. Just enter a new portfolio or retrieve one you have already saved on Morningstar.com.

Step 3: Determine where your investments are out of whack.

Begin by seeing how your cash and bond positions have shifted relative to your stock stake. Very often, your positions in these areas will shrink relative to stocks because, in general, stocks as a group outperform cash and bonds.

Next, examine your style-box mix. Do you have a larger stake in small-company stocks than you did originally, for example? Or are growth stocks taking up more of your portfolio than they did before?

Then, consider your sector exposure. Although you may not have built your portfolio with a specific sector mix in mind, you want to be sure that you aren't overexposed to one particular industry.

Finally, look at your investments, one by one. Which ones have performed the best? These investments may now be taking up more of your portfolio than you originally intended.

Step 4: Readjust.

Pare back the parts of your portfolio that have grown and direct those dollars to the investments that haven't.

Our Rebalancing Guidelines

Rebalancing may at first remind TV buffs of the plate-spinning act from the Ed Sullivan Show--the guy who kept all that fine china spinning precariously atop long, flexible rods. How stressful it must have been to keep all those place settings gyrating at once, running back and forth to give each rod a flick and keep it all from toppling down.

Effective rebalancing doesn't have to be nearly as tension filled. You don't need to keep daily tabs on your portfolio and tweak it weekly. Instead, consider these guidelines.

Guideline 1: Rebalance only on an as-needed basis. We're not saying you shouldn't look at your portfolio periodically. But resist the urge to tinker. You'll save yourself unnecessary labor and, if your portfolio includes taxable accounts, a good bit of money. That's because rebalancing requires paring back the winners, which means realizing capital gains and, for the taxable investor, paying Uncle Sam.

Some people like to rebalance on a calendar-year basis—say, every December. But a better strategy is to conduct a thorough checkup of your portfolio once a year, but rebalance only when your portfolio's asset allocation is out of sync with your targets. For example, you might only rebalance when your portfolio's allocations to stocks and bonds diverge from your target allocation by five percentage points. (On the Investment Policy Statement, you can specify ranges for your allocations to each asset class. For example, your target allocation to stocks may be 55%, but you'll let the weighting go as high as 60% or as low as 50% before making changes.) Hands-off investors could give their portfolios an even longer leash, rebalancing only when their allocations to the major asset classes diverge by 10 percentage points relative to their targets.

Guideline 2: If you rebalance just one thing, make it the stock/bond split. Your cash and bond stakes are vital to keeping your portfolio's risk in check. So if you don't want to take the time to rebalance your entire portfolio on a regular basis, at least restore your cash and/or bond positions when they've diverged widely from your targets.

Guideline 3: Be a tax tactician. Keeping your portfolio's volatility in line isn't satisfying if your rebalancing strategy means you also wind up with poor aftertax returns. Here are three things you can do to minimize taxes:

1. Use new money--say from a bonus or a gift--to restore your portfolio's balance. Adding fresh dollars to the laggards in your portfolio, helps you avoid the tax consequences of selling the winners. If you don't have new money to put to work, consider having your funds' income and capital-gains distributions paid into a money-market account, then using that cash for rebalancing.

2. If you need to scale back in certain types of investments that you own in both taxable and tax-deferred accounts, sell the securities in the tax-deferred accounts first. That way, you'll limit how much you'll pay in capital-gains taxes.

306: Getting More Aggressive

Introduction

Most of us don't want our 6-year-olds to punch classmates who irritate them, or suggest that they tell their great aunts how they *really* feel about getting their cheeks pinched. We don't want our kids to be overly assertive.

Yet when it comes to investing, being aggressive isn't the worst thing, especially if you have a long enough investment horizon, an ambitious goal, and, perhaps most importantly, a stomach for volatility.

This course will cover how you can determine if you're being aggressive enough with your investments, and offer various solutions for how to rev up a sedate portfolio.

Are You Being Aggressive Enough?

How aggressive you should be with your investments depends on three things:

- your investment goal, or how much money you'll need
- your investment horizon, or how long you plan to invest for the goal
- your ability to handle volatility

To find out whether your current portfolio is aggressive enough to meet your goals, use an online asset allocation tool.

If you find that your current portfolio is unlikely to allow you to reach your goal, or you find that it isn't as volatile as you may have thought, consider ways to make your portfolio more aggressive.

Shake Up Your Asset Mix

You can do plenty of things to amplify your long-term returns and volatility. The most significant move: Reducing your bond and cash investments and increasing your position in stocks.

Many financial professionals argue that your blend of cash, stocks, and bonds contributes more to your portfolio's return and volatility than what investment styles you practice, what sectors you have exposure to, and what individual securities you choose.

While we believe all of these factors play important roles in your volatility and return, we agree: Asset allocation is huge. And the more of your portfolio you have in stocks and the less you have in bonds and cash, the more intense your portfolio's performance will be.

Rev Up Your Bond Mix

In addition to altering your asset mix, you can inject some excitement into specific asset groups, too.

Take bonds for example. Short- and intermediate-term bonds and bond funds are commonplace in investment portfolios. To boost your bond component, consider adding one or more of the following types of bonds/bond funds:

Long-Term Bonds
Because the maturity dates of long-term bonds are farther away than those of short- and intermediate-term bonds, long-term bonds tend to yield more. They also tend to gain more when interest rates fall and lose more when interest rates rise.

You can find long-term bond fund ideas using screening tools like Morningstar.com's free Fund Screener. Analyst recommendations such as Morningstar.com's Fund Analyst Picks are also a good source, if you are a Morningstar.com Premium Member. (Nonmembers can sign up for a free trial to Morningstar's Premium Service.)

High-Yield Bonds
High-yield bonds are corporate bonds issued by lower-quality corporations. These bonds carry more credit risk--or the risk that the issuer will default on the debt--than higher-quality bonds do. As a result, they generally yield more than the average high-quality bond.

The returns of high-yield bonds very often follow the returns of the stock market more than the returns of the bond market. Why? Because the performance of high-yield bonds is influenced by the growth and earnings of the company that issued the bond, just as the performance of a stock is influenced by the growth and earnings of the company that issued the stock. Rising or falling interest rates have little bearing on the performance of high-yield bonds.

You can find ideas by using online screening tools such as Morningstar.com's Fund Screener. Using that tool, select the following inputs using the drop-down menus and checkboxes: Fund Group = Taxable Bond; Morningstar Category = High Yield Bond; and Morningstar Star Rating = 4, 5. You can change the inputs to narrow the search further.

Analyst recommendations such as Morningstar.com's Fund Analyst Picks are also a good source, if you are a Morningstar.com Premium Member. (Nonmembers can sign up for a free trial to Morningstar's Premium Service.)

Convertible Bonds
Convertible bonds are stock surrogates even more than high-yield bonds are. That's because convertible bonds can be, as their name suggests, converted into stocks.

We're not going to get into the details of that here. But because of this conversion feature, convertibles behave very much like stocks. They are generally less volatile, though, because they pay a fixed coupon (or yield). They are bonds, after all.

You can find convertible fund ideas by using online screening tools such as Morningstar.com's Fund Screener. Using that tool, select the following inputs using the drop-down menus and checkboxes: Fund Group = All; Morningstar Category = Convertibles; and Morningstar Star Rating = 4, 5. You can change the inputs to narrow the search further.

Analyst recommendations such as Morningstar.com's Fund Analyst Picks are also a good source, if you are a Morningstar.com Premium Member. (Nonmembers can sign up for a free trial to Morningstar's Premium Service.)

Electrify Your Stock Mix

Most investors build portfolios around a core of large-company stocks or funds. You can heighten your performance (and volatility, of course) by exploring the following options.

Mid- and Small-Company Stocks
Some studies suggest that, over very long time periods, smaller-company stocks return more than larger-company stocks. That's because smaller companies are usually growing faster than larger companies, and stock prices (and thereby returns) usually keep pace with growth. The faster the growth, says theory, the higher the return.

Premium Members looking for good small- and mid-cap funds can browse Morningstar's Fund Analyst Picks. (Nonmembers can sign up for a free trial to Morningstar's Premium Service.)

Stock investors can find ideas by using online screening tools, such as Morningstar.com free Stock Screener, which allows you to screen for several types of mid- and small-cap stocks. You can add more inputs to narrow the search further.

Growth Stocks
Tilting the large-company portion of your portfolio toward growth stocks may also amplify its performance. This occurs for the same reason that smaller companies can add oomph: Over time, a stock's price follows its earnings. As a result, companies that are growing at a decent rate should, theoretically at least, outperform those companies that are growing at a slower rate.

Awaken Your Foreign Mix

Most of the foreign stocks that you'll own, either directly or via mutual funds, will be from large companies domiciled in developed markets. To intensify your foreign position, consider these options.

Mid- and Small-Company Stocks
As in the United States, foreign mid- and small-company stocks theoretically have a growth edge over their larger counterparts, too.

You can find ideas by using an online tool such as Morningstar.com's free Fund Screener. Using that tool, simply use the following settings: Fund Group = International Stock; Morningstar Category = Foreign Large Blend; Morningstar Star Rating = 4, 5; Average Market Cap Less than or = $1 billion. You can change the inputs to narrow the search further.

Emerging-Markets Stocks
The world's developing markets certainly hold promise. As deregulation, increasing communications, and free-market thinking grip emerging countries, their stock markets seem poised to benefit.

So far, emerging-markets investors have enjoyed some thrills. In 2003, funds in the emerging-markets category gained about 55% on average, and continued to post strong gains of 24%-37% on average in 2004-2007. But emerging-markets funds fell hard in 2008, dropping 54% on average, compared with a 37% drop in the S&P 500. These funds can also suffer in shorter time frames, posting double-digit losses during 11 rolling three-month periods in the past decade through October 2012, including six such periods when they plummeted 20% or more.

The jury's still out on whether emerging-markets stocks will deliver gains that live up to their promise. But they certainly qualify as aggressive investments.

Test Drive Before You Buy

Before deciding that you want to add small companies, emerging-markets stocks, or high-yield bond funds to your portfolio, find out how these new choices would work with and affect your current mix.

Many online financial Web sites offer tools that can help.

Once you see all of the holdings for your "aggressive" portfolio, answer a few questions:

- Is this new portfolio more likely to meet your goal than your old portfolio?
- How much more volatile is this portfolio? Can you handle that possible three-month loss?

You may be surprised by what you find. Becoming more aggressive doesn't always improve your chances of reaching your goal. And it'll almost always deepen your possible three-month loss. Make sure you can handle the volatility that comes with a more-aggressive portfolio.

307: Getting More Conservative

Introduction

You hate Rush Limbaugh. Blue suits, too.

Yet maybe your investment portfolio could use a little conservatism. Perhaps you overdosed on a hot sector and suffered one heck of a hangover when it cooled off. Or maybe your portfolio just doesn't need to be very aggressive for you to meet your goals.

This course will cover how you can determine if you're being too aggressive with your investments, and offer various solutions for how to dull an edgy portfolio--at least a little bit.

Are You Being Too Aggressive?

How aggressive you should be with your investments depends on three things:

- your investment goal, or how much money you'll need
- your investment horizon, or how long you plan to invest for the goal
- your ability to handle volatility

To find out whether your current portfolio is too aggressive for your goals, use an online asset allocation tool.

If you find that you're more than likely to meet your goals given your current portfolio, or you find that your portfolio is far more volatile than you thought, consider ways to make your portfolio more conservative.

Alter Your Asset Mix

You can do plenty of things to damp your volatility. The most significant move: Reducing your stock investments and increasing your position in cash and bonds.

Many financial professionals argue that your blend of cash, stocks, and bonds contributes more to your portfolio's return and volatility than what investment styles you practice, what sectors you have exposure to, and what individual securities you choose.

While we believe all of these factors play important roles in your volatility and return, we agree: Asset allocation is huge. And the less of your portfolio you have in stocks and the more you have in bonds and cash, the more sedate your portfolio's performance will be.

Restrain Your Bond Mix

In addition to altering your asset mix, you can curtail the volatility in specific asset groups, too.

For instance, many portfolios include intermediate-term bonds at their core. To damp the volatility of an intermediate-term-bond portfolio, consider adding a short-term bond fund to your mix.

Because the maturity dates of short-term bonds are nearer than those of intermediate-term bonds, short-term bonds tend to be less volatile. They often yield less, as well. Finally, they usually gain less than intermediate-term bonds when interest rates fall, but lose less when rates rise.

Many online financial Web sites, such as Morningstar.com, offer screening tools that are a good starting point for ideas about conservative bond funds. Additionally, analyst recommendations, or picks, are a great place to begin, too. Morningstar.com Premium Members can access Morningstar Fund Analyst Picks. (And nonmembers can sign up for a free trial.)

Subdue Your Stock Mix

Lessen your portfolio's volatility by exploring the following options among U.S. stocks.

Very Large Companies
Some studies suggest that, over very long time periods, smaller-company stocks return more than larger-company stocks. That's because smaller companies are usually growing faster than larger companies, and stock prices (and thereby returns) usually keep pace with growth. The faster the growth, says theory, the higher the return.

But the faster the growth and the smaller the company, the more volatile the stock, too. So if curtailing volatility is your goal, focus the U.S. stock portion of your portfolio on the very largest companies. They may not have the same growth potential as smaller companies, but they don't have the same volatility, either.

If you are looking for a good large-company stock fund, you can find ideas by using an online Fund Screener or Stock Screeneror browsing analyst recommendations such as Morningstar.com's Fund Analyst Picks, which are available to Premium Members or those taking a free trial.

Dividend-Paying Stocks
Dividend-paying stocks are often called "buffers." That's because their dividends provide a cushion in a difficult market. Although a company's stock price may fall, it will usually pay its dividend. And that dividend props up total return.

Let's take an example. Acme Cement Company's stock price falls from $100 per share to $95 per share in one year. That's a 5% loss. However, the company pays a $7.00 per-share dividend each year. At the end of the year, shareholders have a $95 share price and a $7 dividend. So they haven't really endured a 5% loss. It's really a gain, thanks to the dividend.

Dividends won't always turn losses into gains. But they can curtail volatility.

You can find potential investment ideas by using the Morningstar Screen of High Dividend Yields.

Reasonably Priced Stocks
Companies whose stocks trade at high prices relative to their earnings, their sales, or their cash flows harbor what's called "price risk." In such cases, investors have high expectations about the futures of these companies, and are therefore willing to pay a premium for the stock.

If the earnings, sales, or cash flows of these companies don't live up to expectations, however, their stock prices can plummet.

To avoid such price dives, stick with companies whose stocks are trading at moderate prices relative to their earnings, sales, and/or cash flows.

Find ideas by using the Morningstar Screen of Low-Priced Growth Stocks.

Tone Down Your Foreign Mix

If you've been aggressive with your foreign mix, you've most likely been drawn to mid- and small-company foreign stocks, or emerging-markets stocks. Though both offer the promise of big returns, both are very volatile.

To curtail volatility in your foreign position, focus on large international companies that are domiciled in developed markets. They may not have the same growth potential as smaller companies or emerging-markets stocks, but they don't have the same volatility, either.

Find ideas by using an online fund screener. For example, we set Morningstar.com's Fund Screener with the following inputs: Fund Group = International Stock; Morningstar Category = Foreign Large Blend; Morningstar Star Rating = 4, 5; and Average Market Cap Greater than or equal to $10 billion. You can change the inputs to narrow the search further.

Test Drive Before You Buy

Before deciding that you want to add dividend-paying stocks, developed-markets stocks, or short-term bond funds to your portfolio, find out how these new choices would work with and affect your current mix.

Many online financial Web sites offer tools that can help.

Once you see all of the holdings for your "conservative" portfolio, answer a few questions:

- Will you still be able to meet your goal with this portfolio?
- How much less volatile is this portfolio?

You may be surprised by what you find. You may see, for example, that you're becoming too conservative. Or, conversely, that the changes you want to make aren't going to make much of a difference as far as your future returns or future volatility are concerned. Or you may find that you've built a better portfolio for your goal.

308: Adding Mutual Funds to a Stock Portfolio

Introduction

In-the-know investors buy stocks. Those less-in-the-know--or those who choose to know less--own mutual funds. At least that's the rap when it comes to the stocks versus funds issue.

But investing doesn't have to be a choice between investing directly in stocks or indirectly through mutual funds. Investors can--and many should--do both. The trick is determining how your portfolio can benefit most from each type of investment.

This course will cover how funds can improve a stock portfolio. Portfolio 309 will address the opposite: how stocks can embellish a fund portfolio.

Funds Provide Stability

More than 2,000 stocks (17%) in Morningstar's database returned over 20% in 2011; only 1 domestic U.S. stock funds did the same. But how many U.S.-stock funds lost more than 20%? Only 31. And how many stocks lost a fifth of their value in 2007? More than 5,600.

Funds Guide You Down the Road Less Traveled

Many stock investors favor the big-name technology, telecommunication, and services stocks--such as Microsoft (MSFT) and Wal-Mart (WMT)--that keep our economy humming.

But what about micro-caps such as Measurement Specialties (MEAS) or foreign companies such as Japan's Nippon Telegraph & Telephone (NTT)? Such off-the-beaten-path securities aren't within most stock investors' purviews. Nor are such stocks easy to analyze, buy, or sell.

That's where a mutual fund can help. Some funds invest in micro-caps, others invest around the globe, still others focus on markets, such as real estate, that have their own quirks. Stock investors who turn over some of their dollars to an expert in these areas gain exposure to new opportunities without having to learn a whole new set of analytical skills.

Funds Balance Your Investment Style

But there will be a time when your style falters, at least temporarily. Biotech underwent a fierce correction in early 2000, and investors who stashed their money in Buffett's wide-moat, easy-to-understand businesses found it tough to profit in 1999. Tech's loudest cheerleaders silenced their rah-rahs as Nasdaq spiraled in 2000. Those holding REITs and financials felt the pain in 2007. And in 2012, energy and basic materials stocks have lagged most other categories.

How to Add Funds

Figuring out your appropriate stock/fund mix is (you knew this was coming) up to you.

Begin by looking for gaps in your portfolio. Online portfolio tools like Morningstar.com's Instant X-Ray and Portfolio Manager can help you in this analysis.

Do you have any foreign exposure? Do your assets cluster in particular sectors or style-box positions? Consider investing in mutual funds to gain exposure to countries, sectors, and styles that your portfolio currently lacks.

309: Adding Stocks to a Fund Portfolio

Introduction

Fund investors may be put off by the idea of choosing stocks themselves. After all, many of them invested in funds precisely because they *didn't* want to do their own stock-picking. They want to keep their investing lives simple.

But the effort involved with investing in stocks directly can be worth it, for a few reasons.

Stocks Can Add Oomph

Over last last 10 years through Oct. 2012, Netflix has returned 33% per year on average. Try getting that kind of result from a mutual fund. But before you get too excited, you should know that Netflix stock would have returned much more had it not lost 60% of its value in 2011.

Stocks Can Cost Less

In these days of bargain online trades, it can cost less to buy a portfolio of stocks than it can to buy many mutual funds. That's especially true if you're planning to buy two dozen or so large, steady companies and hold them for the next 20 years. You will pay the up-front trading costs and not spend another dime until you sell. Why pay a fund 1% per year (or more) in expenses to do the same thing?

In all fairness, plenty of large-company funds charge less than 1% per year. For example, Vanguard 500 Index VFINX costs just 0.18% annually. That's a measly $180 on a $100,000 investment. But if you had invested that extra money in large caps instead of giving it to the fund to buy and hold large-cap stocks for you, over 10 years, compounding at a 10% rate per year, you could have earned more than $4,000, depending on how much you paid to buy your dozen stocks in the first place.

If you have the resources, consider assembling a collection of two dozen or so stable, leading companies that represent a variety of industries to form the core part of your portfolio, with a plan to hold on to these names for years to come. You'll likely save on fund-management fees and, if you've put together a diversified portfolio of the largest U.S. companies, get marketlike results.

You can then invest the remainder of your assets in mutual funds that invest in smaller companies, foreign stocks, and other styles that aren't represented within your core stock holdings.

Stocks Allow You to Control Uncle Sam's Take

This is perhaps the best reason for fund investors working within taxable accounts to consider stocks: to control their tax destinies.

Because mutual funds are required to distribute capital gains that their managers incur during the course of the year, fund investors often receive taxable distributions that they didn't want--or weren't prepared for. (For more about funds and taxes, review Mutual Funds 104.)

But when you invest directly in stocks, you control when you buy and sell your holdings. As a result, you have more power over your tax tab. You can sell your losing stocks--and you'll more than likely have losers to sell--to offset distributed gains from your mutual funds.

310: How to Withdraw from Your Portfolio in Retirement

Introduction

Imagine if you could draw your final breath at the same time you spent your last dollar. Okay, so maybe you don't want to contemplate exhausting either one. But giving it some thought is a darn sight better than running out of money before you run out of time.

There are a host of factors involved in figuring out a safe rate for drawing down your nest egg and for calculating how much you can spend in retirement. This course and the accompanying worksheet will guide you through the process.

Download and print Morningstar's Income Worksheet for Retirees at http://news.morningstar.com/pdfs/Income_Worksheet_Retire.pdf. (Note: The worksheet is available as a PDF file. You will need Adobe Acrobat Reader to view and print it.)

Find Your Asset Mix, Time Horizon

The right mix of stocks, bonds, and cash is going to depend upon how sure you want to be that your money doesn't run out prematurely.

On the worksheet, circle which asset mix comes closest to your current allocation.

Your time horizon is how long you expect to draw on your portfolio. In other words, it's how long you expect to live once you retire.

Keep in mind that Americans are living longer, healthier lives than ever before. A woman who is now 65 can expect to live another 20 years, while a 65-year old man likely has another 17 years to look forward to.

Subtract your expected retirement age from your life expectancy to figure how long you'll be tapping your portfolio. Circle the number of years that come closest on the worksheet.

Determine How Confident You Want to Be

Both investors and financial advisors used to calculate withdrawal rates by assuming that a portfolio would earn some average annual rate of return over a period. For example, you might assume that your portfolio would earn 8% per year for 30 years.

Recent studies show how wrong that approach can be. The *actual* returns you experience each year in retirement make a huge difference in how much you can spend each year. Average numbers aren't enough.

Here's a historical example, courtesy of a study by T. Rowe Price. Assume you had a $250,000 portfolio in 1969 that was invested 60% in stocks, 30% in bonds, and 10% in cash. That portfolio earned an average of 11.7% per year over a 30-year retirement period from 1969 to 1998.

Let's say you needed to withdraw 6% of your portfolio each year. Given that 6% is only a bit more than half of your "average" return, you'd have more than enough money to last your retirement, right?

Wrong. Because a bear market occurred early in the cycle (in 1973 and 1974), your nest egg would have been depleted by 1994. Had that bear market come in the 25th and 26th years of your retirement, however, you would have found yourself with a $2,000,000 portfolio at the end of 30 years.

These examples don't mean that calculating a withdrawal rate is a fruitless activity, though. Computers can run thousands of possible return scenarios, allowing you to use probability testing to make sure your spending rate will hold up when the next bear market comes.

For some of you, certainty is crucial. You want your withdrawal rate to survive most if not all worst-case scenarios 95% to 100% of the time. Other investors may be comfortable with a lower probability of success--maybe you don't think we'll hit every economic disaster that these probability tests include. Or perhaps the spending rate at a 95% confidence level is just unacceptably low for you.

On the worksheet, choose from among three confidence levels. If you choose a 95% confidence level, there would only be a 5% chance that your withdrawal rate wouldn't last throughout your retirement period. An 85% confidence level means that 15% of the time, your portfolio may expire before you die. And a 50% confidence level means there is a 50% chance you will run out of money too soon.

Find Your Withdrawal Rate

On the worksheet, find where all three lines--your target asset mix, number of years expected in retirement, and level of confidence--intersect. This is your withdrawal rate given those parameters.

Two things to consider:

1. If your estimated or remaining years in retirement falls between two numbers, you'll need to estimate a mid-way point for your withdrawal rate. For example, if you expect to spend 25 years in retirement, you'll need to estimate a withdrawal rate that is half way between 20 and 30 years.
2. If you aren't satisfied with the rate you're getting, consider altering your asset mix. Or experiment with other confidence levels. Or put off retirement (thereby shortening the number of years expected in retirement) so that you can accumulate more assets. Finding the best withdrawal rate for you is about trade-offs.

Estimating How Much of Your Portfolio You Can Spend

You now know what percentage of your portfolio you can spend in retirement. Next you need to determine what that means in dollar terms.

To do that, tally the value of your retirement portfolio. Include all taxable account balances, as well as money in your tax-deferred accounts, such as IRAs and 401(k)s.

Fill in those figures on the worksheet.

Next, multiply your withdrawal rate factor by your total investable assets. The result is how much of your portfolio you can spend your first year in retirement.

Let's take an example. Say you have $500,000 in total investable assets, a 20-year time horizon, a mix of 50% stocks, 35% bonds, 15% cash, and an 85% confidence level. You'd multiply approximately 6% by $500,000. That would equal a pretax withdrawal rate of about $30,000 per year. Each year, you'd increase that withdrawal rate by the rate of inflation over the prior year.

Other Sources of Income--and Taxes

Many retirees rely on some fixed sources of income--things like Social Security, pensions, or annuities. The more fixed sources of income you have, the lower your withdrawal rate from your portfolio can be.

The only trouble with fixed sources of income: inflation. Unless your fixed sources of income inch up as inflation does, you'll need to adjust your withdrawal rate over time to compensate for the income "lost" to inflation.

Enter your fixed sources of income on the worksheet. Add them to your withdrawal amount from the first year.

Let's go back to our previous example. If you expected to receive $12,000 per year from Social Security and another $10,000 per year from your pension, you would have total pretax income of $52,000--your withdrawal plus Social Security and pension payments.

Of course, that's before taxes. Subtract the amount you owe in taxes from your total income on the worksheet. This figure is the total income you'll have your first year in retirement after taxes.

Making Refinements

If you aren't satisfied with this final dollar amount, see if you can change your withdrawal rate by altering your asset mix, your confidence level, or your number of years in retirement.

If you are satisfied with what you've found, congratulations! But, unfortunately, the work doesn't end here. Your spending rates will probably change over time. Later in life, for example, you may be less active, and may therefore spend less on travel and entertainment. But you may need to spend more for medical attention. The key is to plan for flexibility.

Further, if these worst-case scenarios don't materialize, you may leave a larger estate behind than you intended to.

For example, if you choose to be 95% sure that you'll have enough money to last 20 years with an asset mix of 50% stocks, 35% bonds, 15% cash, and an initial portfolio balance of $1,000,000, there would be about a 50% chance that your final estate will top $800,000.

That's just one reason why you'll want to monitor and adjust your spending amounts throughout your retirement.

Portfolio400

401: Variable Annuities

Introduction

Up until now, we've talked about how to use reasonably run-of-the-mill investments--stocks and mutual funds--in your portfolio.

In the 400 level of Investing Classroom Portfolio, we'll explore other types of investments that you might choose for your portfolio.

This lesson will focus on annuities. Many people own them but few people understand them.

What's a Variable Annuity?

All annuities are contracts with an insurance company, whereby you pay in with the understanding that the company will send you a stream of income. But that's where the similarities end and an often-bewildering parade of features and benefits begins.

You can choose to receive the income within the first 13 months of your contract (an immediate annuity) or at some point in the future (a deferred annuity). With a fixed annuity, you earn a predetermined rate of interest on your investment. If you invest in a variable annuity, you'll have control over how your assets are invested, and the size of your account will vary based on how those investments perform.

Equity-indexed annuities, which have grown in popularity in recent years, promise to be kind of a hybrid between a variable and fixed annuity. They allow you to earn returns that are higher than you'd be able to get with a fixed annuity but provide a measure of downside protection not available with a variable annuity.

Here's an overview of some of the key annuity types, as well as the pros and cons of each.

Fixed Immediate Annuity

Pros

- Helps provide protection against outliving your assets.
- Can be a cost-effective way to obtain a predictable income stream.

Cons

- Annuity rates are loosely correlated with interest rates. Because interest rates are currently low, annuity payouts are also pretty low right now and go lower as you add more features.
- Once you've bought one of these contracts, it can be difficult to get out of it.

The most straightforward type of fixed immediate annuity is a single premium immediate annuity, or SPIA. With a SPIA, you give the insurance company a slice of your assets, and in exchange you receive an income payment, usually monthly, for the rest of your life, much as you would with a pension.

With the most basic type of SPIA, you receive income during the course of your own lifetime, and your income payments cease when you die. That can be a good deal if you're in good health and have longevity in your family. On the flip side, if a retiree were to die early in the life of his contract, the insurance company would go home the winner, pocketing more than it ever paid out.

In addition to buying an annuity to cover your life and your spouse's, you can also add on features that provide benefits to your children or other beneficiaries after you've died. You can also buy a fixed immediate annuity with inflation protection, so that your payment steps up along with prices. But the costs of those extra features can quickly erode your payout.

Fixed Deferred Annuity

Pros

- Offers many tax benefits of a traditional nondeductible IRA but has no income, contribution, or withdrawal limits.
- Allows purchasers to spend down their portfolio of traditional assets during their expected life spans and then kicks in to help cover living expenses later in life.

Cons

- Although fixed deferred annuities sometimes entice with high teaser rates that are attractive compared with certificates of deposit or other short-term vehicles, those rates often reset to lower levels. Fixed deferred annuities typically offer a guaranteed minimum interest rate, but that can be quite low after the teaser period ends.
- Fixed deferred annuities, unlike CDs, don't offer FDIC protection, and you can't tap them for short-term income needs before you're age 59 1/2. You also may owe a surrender charge if you need access to your money early on in the life of your contract. (Annuities typically offer a "free look" provision, however, that lets you get all of your money back if you cancel the contract within a set number of days.)

Unlike a fixed immediate annuity, you don't begin taking payments from a fixed deferred annuity right away. Instead, the fixed deferred annuity functions something like a savings vehicle, where you can sock away money for retirement and earn a predetermined rate of interest. Fixed deferred annuities are sometimes called longevity insurance because you begin taking payouts later in life, after you've spent down your traditional portfolio of stocks, bonds, and mutual funds.

A fixed deferred annuity is somewhat (but not entirely) like putting a CD inside of an IRA. Like CDs, these vehicles guarantee you a fixed--albeit relatively low--interest rate. They also offer some of the same tax treatment as a traditional nondeductible IRA receives: Your contributions are nondeductible, but your investment increases on a tax-deferred basis. You will also owe a penalty if you take your assets out before you're 59 1/2, as is the case with a traditional IRA. The key differences versus an IRA are that the IRS doesn't impose any limits on how much you can stash in one, and you don't have to take assets out by age 70 1/2. Some fixed deferred annuities also include a death benefit, payable to your heirs, if you die before you begin taking income from your annuity.

Variable Annuity

Pros

- For those with long time horizons, the ability to enjoy equity market participation is valuable.
- Variable annuities also offer tax-sheltered growth and unlimited contributions for those who have maxed out their tax-deferred options.
- Those who layer on guaranteed withdrawal and income benefits also buy themselves income and a measure of principal protection.

Cons

- Variable annuities often have several layers of costs, including mortality and expense charges, underlying fund costs, administrative expenses, and fees for option benefits. Surrender charges may also apply if you need to withdraw assets early in the life of your contract, usually within the first five years.
- Tax treatment upon distribution is also unattractive relative to stocks and stock mutual funds held in taxable accounts for at least a year.

Unlike fixed annuities, variable insurance products give you a level of control over your investment selections--including the opportunity to invest in stocks. The account value of a variable annuity fluctuates with the direction of your investments. The ability to own stocks makes a variable annuity a better choice when asset growth is a priority, though it can be a mixed blessing when stocks are dropping. Variable annuities also come with insurance components, including a death benefit payable to your heirs if you die before you annuitize. VA investors can also layer on other so-called living benefits, such as guaranteed minimum withdrawal benefit riders, which allow VA owners to withdraw a fixed percentage of the benefit base each year until death.

As with the fixed deferred annuity discussed above, a deferred variable annuity (by far the most common type of VA) functions something like an IRA, though you must choose your investments from a set menu of mutual funds, called subaccounts. VAs receive generally the same tax treatment as fixed deferred annuities: Your contributions aren't tax-deductible, but your investments can compound on a tax-deferred basis. You'll also owe ordinary income taxes upon withdrawal. (More on this in a moment.)

The biggest knock against VAs is their several layers of costs. The management costs associated with running the investments are, in some cases, even lower than mutual fund management fees. But because annuities offer a death benefit--usually guaranteeing to provide your heirs with an amount equal to your initial investment if you die before you annuitize--they charge an additional expense called a mortality and expense charge. That element of protection can provide peace of mind.

But in reality, few VA owners end up using their death benefits, and the associated costs can be a drag on your long-term returns. You'll also pay additional fees for any features you layer on, such as guaranteed minimum withdrawal benefits. When all of those expenses are factored in, you can easily pay much more than you would for a comparable mutual fund coupled with separate insurance coverage. Finally, some VA policies have onerous surrender charges if you need your cash early in the life of your policy. (VAs also typically have a free look provision, however.)

Equity-Indexed Annuity

Pros

- Equity-indexed annuities give holders equity participation as well as some safeguards if the stock market performs poorly.
- Offers tax-deferred growth.

Cons

- In a strong up market, investors in these vehicles will see their gains muted.
- These vehicles are also complicated and can carry significant surrender charges, as well as a tax penalty if you need to sell before age 59 1/2.
- Withdrawals are taxed as ordinary income.

These vehicles, often pitched as a happy medium between fixed and variable annuities, have exploded in popularity during the past several years. Although there are many different variations, the basic idea is the same: Equity-indexed annuities typically promise some guaranteed rate of return, much like a fixed annuity, but they also offer participation in equity market returns.

Under a typical scenario, an equity-indexed annuity will offer a minimum return that amounts to 90% of the premium paid at a 3% interest rate. In an up market, it will also offer a percentage of the return of a stock market index, usually the S&P 500. Some equity-indexed annuities cap the equity gains you're eligible to receive.

As with the other annuities, earnings in equity-indexed annuities increase on a tax-deferred basis, and holders pay income tax on their distributions. Equity-indexed annuities also typically include a death benefit. Additionally, when stocks were going up, critics bemoaned that owners of equity-indexed annuities would receive only a fraction of the stock market's gains. But as the stock market tanked from 2007 through early 2009, owners of these annuities were able to limit their stock market-related losses.

Still, there are a couple of persistent issues with equity-indexed annuities. The first is that they're complicated. Insurers use different methods of calculating the index return that holders pocket, and you need to read the fine print to determine how your own return will be calculated. Moreover, equity-indexed annuities don't typically include reinvested dividends when calculating index returns, yet dividends have historically accounted for nearly 40% of the market's total return. Finally, equity-indexed annuities often carry steep surrender charges, though some insurers waive them for medical reasons or other emergency expenses.

402: Closed-End Funds, Hedge Funds, and UITs

Introduction

For investors familiar only with stocks, bonds, and conventional mutual funds, the variety of alternative investment vehicles on the market might seem overwhelming. There are many investment types that are similar in nature to mutual funds in that they hold or track baskets of securities, but each of these has its own unique characteristics.

For those seeking clarity on what some of these lesser-known investment types are and how they work, here's a primer.

Exchange-Traded Funds (ETFs)

ETFs are becoming increasingly popular and are very similar to conventional open-end mutual funds in that they invest assets in a portfolio of securities, often--but not always--tracking an index. Among key differences are the fact that while conventional mutual funds are priced once a day after the market closes, ETFs are repriced and traded throughout the day. There also are structural benefits regarding how an ETF operates that often lead to lower fees compared with mutual funds investing in similar portfolios, as well as some tax efficiencies. (For more on ETFs, see Portfolio 403: ETFs or Mutual Funds: Which to Choose?)

Exchange-Traded Notes (ETNs)

It sounds similar to an ETF but is actually quite different. An ETN essentially is a promissory note from a financial institution to match the return of an index, minus fees. Like a bond, it has a maturity date, and like an ETF it can be traded throughout the day. The danger here is that an ETN is an unsecured obligation, meaning that if the financial institution issuing it can't meet its obligations, assets invested in the ETN may be lost. For that reason investing in an ETN entails a degree of credit risk along with the risk inherent in the performance of the index it tracks.

Unit Investment Trusts (UITs)

In the broadest sense, this refers to a type of investment company that holds a fixed portfolio of securities for a specified period of time. More specifically, it is also a structure used by some older ETFs that prevents them from making distributions until the end of each quarter, from holding securities not in the indexes they track, and from lending out securities. The inability to reinvest dividends daily, as newer ETFs and conventional mutual funds may do, can lead to tracking error, in which the ETF's performance diverges from its index. No new ETF has used this structure since 2002.

403: Exchange-Traded Funds

Introduction

Traditional open-end mutual funds have long been the staple of many investors' portfolios. Recently, however, an alternative has emerged--exchange-traded funds. While ETFs have been around since the early 1990s, their popularity has soared in recent years, and they are being used by more and more brokers and financial advisors. In addition, ETFs are popping up in company retirement plans.

ETFs, like conventional mutual funds, hold a basket of securities (stocks or bonds). The primary difference is how the investor buys and sells his or her shares. Whereas investors in conventional mutual funds buy their shares from a fund company and sell them back to the fund shop when they want to redeem, investors buying or selling ETF shares must trade with other investors in the market, much as they would do if they want to buy or sell shares of an individual stock. For that reason, individual investors must use a broker when they want to buy and sell ETF shares.

As the name suggests, exchange-traded funds are priced and traded on an exchange (AMEX, NYSE, or Nasdaq) throughout the day just like stocks. In contrast, traditional mutual funds' prices are set once a day (usually 4 p.m. Eastern) and investors must place their orders before that time in order to get that day's price. Also unlike mutual funds, you can do just about anything with ETF shares that you can with a stock, including setting market and limit orders, shorting, and buying on margin.

So, how do you tell whether an ETF or a conventional mutual fund is best for you? Here are some things to consider:

What You Want to Invest In

ETF providers have increasingly aimed to provide funds for investors looking to invest in a narrow market segment. The ETF universe is flush with funds that focus on a single market sector, industry, or geographic region. Say you favor indexing and want to own a specific corner of the market such as biotech. There may not be many index mutual funds that track those sectors--but there are ETFs that do. Also, there are many more ETFs than funds that track single foreign countries. Exchange-traded funds offer investors a way to invest in a corner of the market without having to load up on just one or two individual stocks (plus, it's more cost-efficient in terms of brokerage commissions).

However, it's also worth noting that narrowly focused funds--whether ETFs or conventional offerings--can be too hot to handle for many investors. That's because investors are often inclined to buy and sell narrowly focused funds at inopportune times.

Taxes

ETFs are also structured to shield investors from capital gains better than conventional funds. Most ETFs are index funds, so they typically trade less than most actively managed funds and should generate fewer taxable capital gains. Also, because most investors buy and sell ETF shares with other investors on an exchange, the ETF manager doesn't have to worry about selling holdings--thereby triggering capital gains--to meet investor redemptions. Moreover, because the big institutions can make share redemptions "in-kind" (rather than redeem shares for cash, the ETF gives the institution a basket of stocks equal in value to the share redemption), ETFs can unload their lowest-cost-basis stocks in the portfolio, thereby reducing their capital gains exposure.

Costs

Because ETFs don't have to manage hundreds of customer accounts or staff call centers, they have lower overhead charges that translate into lower expense ratios. However, you will pay brokerage commissions to buy and sell ETF shares, and the costs of rapid--or even occasional--trading can more than offset the initial advantage of an ETF's lower expense ratio. For those reasons, an ETF will be the most cost-effective choice for those who use discount brokers, invest a large lump sum of money, and are willing to hold the investment for the long term. For others, an exchange-traded fund may not have a big cost advantage over a plain-vanilla, low-cost index fund.

Using ETFs for Portfolio Construction

Asset allocation is one of the most important decisions that you make as an investor. Having the right mix of stocks, bonds, cash, and commodities in your portfolio, and being well diversified within each asset class, can have a profound impact of your returns. ETFs can be an easy way to gain this diversification. They can be cheap, flexible, and tax-efficient and may help you gain access to sectors and asset classes that would otherwise be closed off to individual investors.

For core stock exposure, many investors could be well served by ETFs. There are several inexpensive, broad market ETFs that track major large-cap indexes, like the S&P 500. This can be a very cheap way to gain exposure to the broad market, but investors who are dollar-cost averaging (regularly investing small amounts over time) should carefully watch broker fees that may be incurred when buying ETFs, as they may push the overall costs of the investment over that of a traditional index mutual fund.

ETFs can also help you gain outsized exposure to undervalued areas of the market. Oftentimes, the short-term gyrations of the market leave certain sectors and subsectors trading for less than their intrinsic worth. Another important role that ETFs can play in your portfolio is to provide access to alternative asset classes like commodities and currencies. These areas, which used to be available only to institutional investors and high-net worth individuals, can help further diversify your portfolio. Although most investors would want these asset classes to represent only a tiny fraction of their overall holdings, their presence in a portfolio can be helpful because they can be uncorrelated to broader stock market returns.

404: Using Sector Funds in a Portfolio

Introduction

Even though they have been traded in the U.S. for over a century, closed-end funds (CEFs) are not well understood. A common misunderstanding is that a closed-end fund is a type of traditional mutual fund or an exchange-traded fund (ETF).

A closed-end fund is NOT a traditional mutual fund that is closed to new investors.

At its most fundamental level, a CEF is an investment structure (not an asset class), organized under the regulations of the Investment Company Act of 1940. A CEF is a type of investment company whose shares are traded on the open market, like a stock or an ETF.

Why are they called "Closed-End" funds?

Like a traditional mutual fund, a CEF invests in a portfolio of securities and is managed, typically, by an investment management firm. But unlike mutual funds, CEFs are closed in the sense that capital does not regularly flow into them when investors buy shares, and it does not flow out when investors sell shares. After the initial public offering, shares are not traded directly with the sponsoring fund family, as is the case with open-end mutual funds.

Instead, shares are traded on an exchange, typically, and other market participants act as the corresponding buyers or sellers. The fund itself does not issue or redeem shares daily.

Like stocks, CEFs hold an initial public offering at their launch. With the capital raised during this IPO, the portfolio managers then buy securities befitting the fund's investment strategy.

Capital Inflows and Outflows

After the IPO, there are only 5 ways to increase capital within the portfolio of a closed-end fund:

1. Making sound investment choices that appreciate and thus increase the net asset value
2. Issuing debt, thereby leveraging the fund
3. Issuing preferred shares, thereby leveraging the fund
4. Conducting a secondary share offering (selling new shares to the public)
5. Conducting a rights offering (giving existing shareholders the right to invest more capital into the fund in proportion to their existing ownership).

Similarly, there are only five ways capital can flow out of a CEF:

1. Distributions to shareholders
2. Poor investment decisions
3. A tender offer to repurchase shares, which is a method to control discounts (see next slide).
4. For leveraged funds only, forced sales to remain in compliance of leverage limits
5. The liquidation of the fund

So, because capital does not flow freely into and out of CEFs, they are referred to as "closed-end" funds.

Premiums and Discounts

The "closed-end" structure gives rise to discounts and premiums. After the IPO, a CEF's shares trade on the open market, typically on an exchange, and the market itself determines the share price. The result is that the share price typically does not match the net asset value of the fund's underlying holdings. (Net asset value = (Fund Assets-Fund Liabilities)/Shares Outstanding)

If the share price is higher than the net asset value, shares are said to be trading at a "premium." This is typically portrayed as a "positive discount," although mathematically that is counterintuitive. For instance, a fund trading at a two percent premium would be shown as "+2%." If the share price is less than the net asset value, the shares are said to be trading at a "discount." This is typically portrayed with a minus sign, "-2%."

405: Investing in IPOs

Introduction

As we outlined in Portfolio 404: Closed-end Funds, closed-end funds are unique investment vehicles.

That said, they do share many traits with mutual funds and exchange-traded funds.

In this course, we will explicitly lay out the similarities and differences.

CEFs and Mutual Funds

CEFs do share some traits with traditional open-end mutual funds:

- Both have an underlying portfolio of investments with a net asset value
- Both are run by a professional management team
- Both have expense ratios and, typically, fee schedules

- Both may offer distributions of income and capital gains to investors

However, traditional mutual funds issue and redeem shares daily, at the end of business, at the fund's net asset value. CEFs do not issue or redeem shares daily.

Instead, CEF shares trade on an exchange intraday, like stocks. The share price for a CEF is set by the market. The share price only rarely, and by sheer coincidence, equals the CEF's net asset value.

Also unlike traditional mutual funds, CEFs may issue debt and/or preferred shares to leverage their net assets. That leverage can increase distributions (income) but also increases volatility of the net asset value.

CEFs and ETFs

CEFs also share some traits with ETFs:

- Both have an underlying portfolio of investments with a net asset value
- Both trade during the day on exchanges
- CEF and ETF shares can be treated very much like a stock, in that you can set limit orders, short the shares, and buy on margin
- The portfolios may be leveraged
- Both have expense ratios and, typically, fee schedules
- Both may offer distributions of income and capital gains to investors

ETFs have a redemption/creation feature, which typically ensures the share price doesn't stray significantly from the net asset value. As a result, an ETF's capital structure is not closed. CEFs do not have such a feature.

CEFs are actively managed, whereas most ETFs are designed to track an index's performance.

CEFs achieve leverage through issuance of debt and preferred shares, as well as through financial engineering. ETFs are precluded from issuing debt or preferred shares.

ETFs are structured to shield investors from capital gains better than CEFs or open-end funds are.

406: Gold's Role in a Portfolio

Introduction

Inflation is one of the natural enemies of most investors. Think of it as compounding in reverse: What your investment returns give with one hand, inflation can take away with the other.

Compared to previous periods in history, inflation appears to be under control in the United States. Nevertheless, investors should consider the toll that inflation can take when building a portfolio.

There are several tools you can use to add some inflation-protection to a portfolio – especially to a portfolio that consists predominantly of fixed-rate investments.

Here are some options to choose from.

Treasury Inflation-Protected Securities (TIPS)

Treasury Inflation-Protected Securities, or TIPS, have been called the only asset class that's truly risk-free. The securities are backed by the full faith and credit of the U.S. government, so there's no credit risk. In addition, TIPS' principal values adjust to keep pace with inflation, which helps protect owners' purchasing power. That's a benefit holders of nominal Treasury bonds do not have. Assuming real yields are positive--and that hasn't always been the case--someone buying and holding a TIPS bond to maturity is guaranteed a positive real return.

TIPS bonds pay interest twice a year. In addition, TIPS bonds' principal values regularly adjust to reflect changes in the Consumer Price Index, both up or down. The net effect of that adjustment is that if inflation goes up, so do TIPS' principal values and in turn their yields. When inflation is falling, TIPS' principals are adjusted downward, taking yields down in the process. When a TIPS bond matures, the owner receives either the bond's original value or the value adjusted upward for inflation, whichever is greater.

Commodities

You might also consider a small slice of commodities in your portfolio--roughly 5%-6% at the high end. But if you're retired, be sure to dollar-cost average into a commodity investment rather than adding it all in one go, because mistiming a commodities investment can erode any long-term inflation-protection benefit you hoped to gain.

Before you layer on additional inflation protection in the form of commodities, however, see if you already have any quasi-inflation hedges in your portfolio. For example, emerging markets tend to be heavy on basic-material producers, and they in turn are beneficiaries of higher demand and prices; check your portfolio's exposure to Latin America and developing Asian markets.

Also look at your portfolio's stake in energy stocks. They're not the same as owning commodities directly, but they have a fairly high correlation with energy prices, and energy is a major component of most commodities indexes.

Stocks

Stocks are another, indirect way to gird your portfolio against the threat of inflation. They have the potential for higher returns than bonds, and inflation will take a smaller bite, in percentage terms, out of your future purchasing power. Owning companies with a demonstrated history of dividend growth is another way to help offset the effects of inflation on your portfolio.

407: Real Estate's Role in a Portfolio

Introduction

For many years, REITs, or real estate investment trusts, were seen as a good way to diversify a portfolio and provide some degree of protection against volatility in the equities market. During the 2000 market downturn, for example, when the S&P 500 lost 9%, real estate stocks gained 34% on average.

However, that was an extreme market environment, and events since then have altered REITs' role as a diversification tool.

This course will cover what REITs are, their diversification value, and how to think about them when constructing a portfolio.

What They Are

REITs are a type of stock made up of portfolios of commercial properties. These properties generate income from rent and capital appreciation in the form of rising property values. REITs typically invest in office buildings, shopping centers, hotels, and other properties. Some focus on specific types of real estate, such as health-care REITs that own hospitals, skilled-nursing facilities, and so forth. There also are mutual funds and exchange-traded funds made up of REITs as well as those that track REIT indexes.

REITs' main purpose is to generate revenue from leases. And because they are required to pay nearly all of that revenue to shareholders, they can offer high yields, making them good choices for investors looking for a steady source of income, though they are far more effective in tax-advantaged accounts such as IRAs or 401(k)s where their nonqualified dividends are shielded from Uncle Sam. Historically, REITs have provided a hedge against inflation, which tends to increase real estate prices and rents.

Diversification Value

One significant change was the addition of REITs to the S&P 500 in late 2001. (Today real estate makes up about 2% of the index.) This change has had a significant impact on the correlation between REITs and the S&P 500, one of the most widely used measures of overall stock market performance. With REITs added to the index, the S&P 500 has become more sensitive to their performance. In addition, as index funds have increased in popularity, more money has flown into REITs, as well, helping to increase this correlation.

The increased correlation between REITs and stocks was borne out in painful fashion during the 2008 market crash, when real estate funds lost 39.6%, compared with a 37% drop in the S&P 500.

It also should be noted that REITs are not the low-volatility asset class some think. Depending on the time period under review, real estate can have a standard deviation (a measure of volatility) greater than that of the S&P 500 index.

Asset Class Still Has Value in a Portfolio

Do these statistics mean REITs shouldn't play a role in your portfolio? Not at all. Although they might not provide the degree of diversification from stocks they once did, REITs do offer the benefit of exposure to an asset class that can deliver consistent income and possibly above-market returns.

It's also worth noting that, like stocks, REITs generally have a low level of correlation with bonds. REITs' role as a diversifier from stocks might be diminished, but they can still add diversification to a bond-heavy portfolio.

Just keep REITs' volatility and correlation to stocks in mind when considering your asset allocation. Also, be aware that many stock funds contain REITs, so you might already have some exposure to them without even knowing it.

408: Futures and Options

Introduction

For some investors, the term "derivatives" may have a negative connotation because of the role these complex instruments played in recent financial disasters. But many institutional investors, banks, governments, hedge funds, and corporations rely on derivatives as a way to manage risk, pursue hedging strategies, and achieve other financial objectives. Likewise, mutual funds and exchange-traded funds are increasingly using derivatives as part of their investment strategies.

A full discussion of how derivatives work could fill a book, but for investors curious to learn more about what they are and how some funds use them, here's a primer.

Defining Derivatives

The term "derivatives" refers to financial instruments that derive their value from an underlying asset, such as equities, bonds, commodities, or real estate. Some types of derivatives, such as options and futures, might already be familiar to you. These, along with swaps, are among the most commonly used types of derivatives in the financial world. Here are some basic definitions and examples of these three commonly used derivative types.

Futures: Agreement between two parties to buy/sell an asset at some point in the future at a price that is determined today. Although originally developed for use in trading commodities, today commodity futures make up less than one third of futures traded. Other types include equity index (such as the S&P 500) and even interest-rate futures.

Sample uses: A farmer locks in a high price today for crops he will sell at a later date; an airline locks in future jet fuel prices today to guard against potential price increases at a later time.

Options: Gives its owner the right to buy or sell an asset at a given price for a set time period. Because the option represents the right to purchase the asset and not ownership of the asset itself, it typically costs just a fraction of the asset's price. These instruments may be used to gain exposure to equities, ETFs, equity indexes, and commodities. Options come in many varieties and can be used as part of many different trading strategies, such as betting that the price of an asset will go up or that it will go down.

Sample uses: An investor wants to hedge against price swings in a security he or she already owns (covered call); an investor wants to help protect his or her portfolio by buying some downside exposure in case of a market downturn (protective put).

Swaps: Agreement between two parties to trade different payment types over a given time period. These may be used to swap interest-rate or currency exposure, or credit protection (credit default swap).

Sample uses: A bank looking to reduce its exposure to floating interest rates paid on deposit accounts swaps that exposure with another party that can provide exposure to a fixed rate; companies operating in different countries swap currency exposures as a way to reduce currency risk.

Widely Used Among Funds

Mutual funds may use derivatives as a way to gain, hedge, or short exposure to a certain type of asset, often at a cost that is lower than it would take to own the position outright. Use of derivatives is prevalent across fund categories.

Derivatives used by bond funds included bond index and currency futures and forwards, options on bond indexes and currencies, and interest-rate and credit default swaps. Stock funds, on the other hand, were more likely to use equity index and currency futures and forwards and options on indexes and individual equities. Alternative funds tend to be heavy users of derivatives--for example, trading futures and options as part of a long-short equity strategy.

Let's take an example of how a fund might use derivatives, focusing on a large-blend equity fund that aims to track the S&P 500, with a little bit of extra return thrown in.

Rather than simply seeking to hold all the stocks in the index at the appropriate weightings, as a typical S&P 500 index fund would do, a manager could use futures and swaps to gain exposure to the index and its price changes at a much lower cost. This allows him to invest the fund's large pile of unused cash in short-term bonds in an attempt to boost returns and beat the index.

Use of derivatives also is built into the DNA of so-called leveraged ETFs, which rely on them to execute some rather exotic trading strategies in some cases. ProShares UltraShort QQQ is designed to deliver twice the inverse daily return of the tech-heavy Nasdaq 100 Index. On days when the Nasdaq 100 is down, the fund aims to deliver a positive return, times two. And on days when the index is up, the fund will have big losses. The ETF pursues its objectives exclusively through the use of derivatives such as futures and swaps, without holding any of the index's underlying securities. (An ETF like this also illustrates the potential risks of such a leveraged strategy in that a sizable gain in the index would result in a loss twice as large for investors. It should only be used by high-frequency traders and those hedging against or anticipating a near-term drop in the index.)

Transparency an Issue

By now you may be asking yourself, how can I tell if the funds I own use derivatives? It's a good question, as investors have the right to know how money they entrust to a fund company is being invested. However, disclosure of derivative use by funds unfortunately has been inconsistent.

Further exacerbating the transparency problem is the fact that, while some derivatives, such as futures, are traded on regulated exchanges, others, including swaps, are traded privately in the over-the-counter market, potentially adding credit risk.

The use of derivatives by some funds makes knowing how your fund works that much more important. Used properly, they can help manage risk and foster innovative investing strategies. But used irresponsibly, they can court disaster. As an investor, you owe it to yourself to understand how your fund works and whether derivatives are part of its approach. And if your fund company is less-than-forthcoming with this information, you have every right to demand it.

409: Short Selling

Introduction

The Investing Classroom spends a lot of time focused on investing in equities, and for good reason: Many of the investors using the Investing Classroom are looking for growth, and in general equities provide more growth over the long term than bonds.

That said, bonds provide much-needed ballast to equity portfolios. They are also key instruments when investing for shorter- and intermediate-term goals. And they are critical in retiree portfolios.

This course and Portfolio 410 provide a brief primer on bonds.

What Is a Bond?

When you buy a stock, you become part owner of the company. When you buy a bond, you are making a loan; you are simply lending money to a company (corporate bonds) or to a government (for U.S. investors, this is most commonly the U.S. government). Because U.S. government bonds (also known as Treasuries) are issued and guaranteed by Uncle Sam, they typically offer a modest return with low risk. Corporate bonds are issued by companies and carry a higher degree of risk (should the company default) as well as return.

Your loan lasts a certain period of time--until the date that the bond reaches maturity, when the principal of a bond is repaid. In the meantime, you can typically expect income payments (commonly known as coupons) as interest on the loan. Thus, the essential issues for bond investing will be the bond's maturity, how much interest it pays, and how confident you are that the business or government can actually repay the loan.

Because of their fixed interest payments and the promise of repayment at maturity, bonds are considered less risky than stocks, though they historically have also returned less than equities. So if you're buying a bond fund to give your portfolio stability or to help generate income, then your strategy may pay off. But if you think you can't lose money in bonds, guess again.

Bonds and Credit Risk

One of the key risks bond investors face involves the bond's credit quality. Credit quality simply measures the ability of an issuer to repay its debts.

Think of it this way: If your ne'er-do-well brother-in-law who's drowning in credit card debt wants to borrow $50 from you, you would probably wonder if you'd ever see that $50 again. You'd be far more likely to loan money to your super-responsible kid sister who just needs a little emergency cash. The same dynamic occurs between companies and investors. Investors more eagerly loan money to well-established companies that seem likely to repay their debts, but they think twice about loaning to firms without a solid track record or that have fallen on hard times.

Judgments about a firm's ability to pay its debts are encapsulated in a credit rating. Credit-rating firms, such as Moody's, Standard & Poor's, and Morningstar, closely examine a firm's financial statements to get an idea of whether a company is closer to being a no-goodnik or a debt-paying good citizen. They then assign a letter grade to the company's debt: AAA indicates the highest credit quality and D indicates the lowest. (Moody's uses a slightly different ratings scale than S&P and Morningstar, but the basic framework is the same.)

So if you hold a bond rated AAA, odds are very good that you'll collect all of your coupons and principal. Indeed, bonds rated AAA, AA, A, and BBB are considered investment-grade, meaning that it's pretty likely the company that issued the bonds will repay its debts. Bonds rated BB, B, CCC, CC, and C are non-investment-grade, or high-yield, bonds. That means there's a higher chance that the bond issuer will renege on its obligations, or default. In fact, D, the lowest grade, is reserved for bonds that are already in default.

Of course, you probably don't want a bond that may not pay its promised coupons and principal. The main purpose in owning a bond, after all, is getting your hands on its income. So if you're bond shopping, you're not going to pick up a lower-rated bond just for the heck of it. You need some sort of incentive. That incentive comes in the form of higher yields. All other things being equal, the lower a bond's credit quality, the higher its yield. That's why you can find a high-yield bond fund with a yield of 5% or much more, while many investment-grade bond funds yield less than half that much. Because investment-grade issuers are more likely to meet their obligations, investors trade higher income for greater certainty.

Credit quality affects more than just a bond's yield, though; it can also affect its value. Specifically, lower-rated bonds tend to drop in value when the economy is in recession or when investors think the economy is likely to fall into a recession. Recessions usually mean lower corporate profits and thus less money to pay bondholders. If an issuer's ability to repay its debt looks a little shaky in a healthy economy, it will be even more suspect in a recession. High-yield bond funds usually drop in value when investors are worried about the economy.

Bonds and Interest Rates

The other key risk that bond investors face relates to interest rates. Bond prices move in the opposite direction of interest rates. When rates fall, bond prices rise. When rates rise, bond prices fall. Why? Remember that most bonds' interest payments are fixed, but prevailing market interest rates may change. If investors are able to buy a similar bond at a higher interest rate next month, then the market value of the lower-interest bond will decrease (that is, it will need to sell at a discount to its face value in order to attract buyers). When prevailing rates fall, then you could sell a higher-interest bond at a premium to face value.

To determine how dramatic a fund's ups and downs might be in a changing-rate environment, check out its duration. Duration measures a fund's sensitivity to interest rates, factoring in when interest payments are made as well as the final payment. The higher a bond's duration, the more it responds to changes in interest rates. If a bond fund has a duration of five years, you can expect it to gain roughly 5% if interest rates fall by one percentage point, and to lose 5% if interest rates rise by one percentage point. (The manager may be able to offset some of that price depreciation by buying higher-yielding securities, however.) And that bond fund with a duration of 8.5 years? We know it's more volatile, and more vulnerable to interest-rate changes, than the bond fund with a duration of five years.

410: Income Alternatives for Retirees

Introduction

Portfolio 409 covered key bond terms (such as credit quality and duration), explained the relationship between bond prices and interest rates, and what inflation can do to bonds.

In this course, we'll discuss different types of bonds. Just as you wouldn't want to have all of your stocks in just one style, you also want to diversify your bond portfolio. A well-rounded bond portfolio could have some exposure to most, if not all, of the following bond types.

Government Bonds

Considered the safest bond type, government bonds are backed by the U.S. Treasury. Interest is taxed at the federal level but not at the state and local level.

There are two main types of government bonds.

Savings Bonds: These bond types defer paying out interest until the bonds are redeemed. A portion of I-Bonds' interest adjusts along with inflation rates

Treasury Bonds: The maturity of the security determines what type of Treasury you (or your fund) own. A Treasury bill has a maturity of one year or less. A note has a maturity of two to 10 years. A bond has a maturity of more than 10 years. TIPS have a fixed interest rate, but investors' principal adjusts along with inflation rates. Because TIPS investors pay taxes on the interest income as well as on the inflation adjustments to their principal, it's best to hold TIPS in tax-deferred accounts.

Mortgage-Backed Bonds

Mortgage bonds are made up of a pool of home mortgages. The agencies that issue these bonds include GNMA (Government National Mortgage Association--a U.S. government agency), Freddie Mac, and Fannie Mae (Freddie and Fannie are government-sponsored enterprises). Private institutions such as banks also issue mortgage-backed securities.

A big risk with these bonds is that mortgage holders will prepay their mortgages, and the bondholders will not get the interest they thought they would. Because these bonds carry prepayment risk, their interest payments are a little higher.

Municipal Bonds

Municipal bonds, which are issued by state and local municipalities, offer interest payments that are exempt from federal taxes and may also be exempt from state and local income taxes, depending on where you live. These bonds typically offer lower yields than Treasuries because of their tax benefits.

To help decide between a taxable bond fund and a tax-exempt bond fund, take the taxable fund's yield and multiply it by 1 minus your tax rate. This is the fund's tax-adjusted yield. For instance, if you are in the 25% tax bracket and you are comparing a taxable-bond fund paying 4% with a muni fund paying 3.5%, you'd multiply 4% by (1 -

0.25) and compare that with 3.5%. On an aftertax basis, the fund with the 4% yield would yield only 3%. So in this case, the muni fund offers a higher aftertax interest rate.

Other Bond Types

Generally considered the riskiest type of domestic bond, bonds issued by corporations, as opposed to government entities, typically offer the highest interest payments. Those bonds with the lowest credit quality ratings (BB and below) are considered "junk" bonds.

For diversification beyond the U.S. and exposure to foreign currencies, world bond funds have been attracting investor assets recently. Such funds usually invest the lion's share of assets in bonds issued by foreign governments, but they may also hold bonds issued by foreign corporations. Emerging-markets bond funds have historically been considered even riskier, but they have been gaining a lot of attention recently, too, as their yields are often higher than bonds from U.S. issuers.

Portfolio500

501: Why Bother with Investment Theory?

Introduction

Theory. We hated it in college. What practical use would the Pythagorean Theorem or Deconstructionism have in our lives?

Many feel the same way about investment theory. Explaining modern portfolio theory to your colleagues at a cocktail party may make you seem erudite, but will understanding it make you a better investor? Yes, it can. The trick is putting the theory in context.

The 500 Level of the Investing Classroom will explore some of the major topics in portfolio theory, those ideas that form the basis of how people invest and build portfolios. We'll also summarize some ongoing investment debates. By questioning many of the old rules and offering their theories, today's financial scholars and observers prove that investing is a learning experience that never ends.

Efficient Markets Theory

Burton Malkiel's *A Random Walk Down Wall Street*, first published in 1973, popularized this theory, which says that stock prices reflect all the publicly available information about the companies. Stock prices may not be "right," but they're as correct as they possibly can be.

There's no point in trying to beat the market, suggests the theory. Just index it.

Some, including most mutual fund managers, disagree. They feel that they can find mispriced securities, or opportunities where a stock's price does not accurately reflect everything about the company.

We'll explore both sides of the issue in Portfolio 502.

Modern Portfolio Theory

Just call Harry Markowitz the Dean of Diversification. Back in the 1950s, Markowitz pointed out what is now obvious: The more return you can expect from an investment, the greater the risk inherent in that investment. Modern Portfolio Theory says that you can limit your volatility by spreading your risk among different types of investments.

We'll detail the ins and outs of MPT in Portfolio 503.

The Investing Pyramid

For some, investing is a hobby. That's right, some folks enjoy visiting financial web sites daily, watching financial news – they even subscribe to financial newsletters and attend financial conferences.

For most, however, investing isn't a hobby. It's drudgery. It's overwhelming. And it's impossible to imagine how to squeeze it in one's busy life.

The Investing Pyramid is a framework that non-hobbyists can use to frame the investing process. If you have a finite amount of time to devote to (or a finite interest in) your investment activities, this can help guide the way.

Learn about pyramid in Portfolio 504.

What Goes Where: The Art of Asset Location

"Don't let the tail wag the dog."

That well-worn expression applies to so many things in life – including investing. Specifically, you'll hear some investing "experts" say that you shouldn't let taxes drive your investment decisions. Others, meanwhile, will argue the exact opposite.

Portfolio 505 offers some guidelines for how to think about tax matters in the investment process.

Factor Investing

Most investors have heard of factor investing, but just may not know it. If you've ever favored smaller companies to larger companies, you've engaged in factor investing.

Portfolio 506 traces the history of factor investing.

Behavioral Pitfalls

Psychological factors--such as the tendency to feel particularly risk-averse following a bear market or a proclivity to follow the crowd--can play enormous roles in our investment outcomes, and often they are not positive ones.

Portfolio 507 and 508 outline 10 of the most common behavioral pitfalls that investors make.

The Bucket Approach to Retirement Allocation

Here's your assignment: Gather up all of your retirement accounts and shape them into a portfolio that will supply you with the income you'll need during your retirement years. Oh, and one other tiny to-do: You'll also need to make sure you never run out of money, even though you don't know exactly how long you'll need it.

In the past, one simple and elegant solution to the above problem was to buy an immediate annuity that would pay you a stream of income for the rest of your life. But many investors don't like the loss of control that accompanies annuities. One other intuitively appealing idea is to sink your portfolio into income-producing investments such as bonds and dividend-paying stocks and live off whatever yield they generate. That way you might never have to tap your principal at all. The big drawback, however, is that you're buffeted around by whatever the interest-rate gods serve up. When yields are up, you're living high off the hog; when they're miserly, you have the unappetizing choice of scaling your spending way back or venturing into riskier income-producing securities to get the yield you need.

It's no wonder that so many retirees and pre-retirees have been receptive to another strategy: "bucketing" their portfolio for retirement. At its core, bucketing is a total-return approach in which you segment your portfolio based on when you expect to need your money. Money for near-term income needs is parked in cash and short-term bonds, while money needed for longer-range income needs remains in bonds and stocks.

Portfolio 509 details how the bucket approach to retirement allocation works.

What's the Right Foreign Allocation?

U.S.-based investors keep hearing that it's a small world, and they should therefore globalize their portfolios in an effort to maximize their return opportunity. But how should investors decide how much foreign exposure is too much and how much is not enough? Portfolio 510 sorts through the issues.

502: Efficient Market Theory

Introduction

Given the seemingly nonsensical price swings in the stock market, it's hard to believe that anyone could call the stock market "efficient." Yet that's exactly what Burton Malkiel did in his 1973 book, *A Random Walk Down Wall Street*.

This course explains what efficient market theory is, explores the arguments against it, and shows what the theory has to do with your portfolio.

What Efficient Market Theory Is

Efficient market theory--or as it's technically known, Efficient Market Hypothesis--is an attempt to explain why stocks behave the way they do.

The hypothesis holds that stock prices reflect all the publicly available information about companies. Stock prices aren't necessarily "right," but they're as correct as they possibly could be. As a result, says Malkiel, "a chimpanzee throwing darts at *The Wall Street Journal* can select a portfolio that performs as well as those managed by the experts."

Given how broad the original Efficient Market Hypothesis (EMH) was, a noted academic, Eugene Fama, later divided the theory into three subhypotheses.

The weak-form EMH assumes that current stock prices fully reflect all historical information, including past returns. Thus investors would gain little from technical analysis, or the practice of studying a stock's price chart in an attempt to determine where the stock price is going to go in the future.

The semi-strong EMH form assumes that stock prices fully reflect all historical information*and*all current publicly available information. Thus, investors gain little from fundamental analysis, or the practice of examining a company's financial statements and recent developments.

Finally, the strong-form EMH states that prices reflect not just historical and current publicly available information, but insider information, too. Investors therefore can't benefit from technical analysis, fundamental analysis, or insider information

The Conclusions of Efficient Market Theory

Let's take an example. Company A sells at $53 per share. According to efficient market theory, that $53 price tag takes into account all factors that affect the stock, including the company's growth history up until that time, such as its profitability, the quality of its management, and what analysts were predicting the company would earn in the future.

Efficient-market theorists don't claim that any one investor thinks about all these things when buying stocks. Maybe some investors bought Company A because they liked what management said in its latest earnings release, or because they liked the company's products. But the activity of *all* investors, which is what actually drives the stock's price, collectively reflects all of those factors.

What's the practical application of this theory? Because the market is efficient, with prices moving so quickly as new information comes out about a company, no one can consistently buy and sell quickly enough to benefit from the information. As a result, neither you nor professional money managers can beat the market for an extended period of time. Instead of trying to beat the market, say efficient market theory's supporters, you should just index, or buy and hold all the stocks in the market.

Strikes Against Efficient Markets Theory

In the 1980s, academics challenged the theory. And the October 1987 stock market crash left economists, money managers, and investors asking: "Did the market accurately reflect all publicly available information about these companies before the crash? If so, how could the crash have happened?"

Even Malkiel himself admitted in the sixth edition of *A Random Walk* (published in 1995) that "while the reports of the death of the efficient-market theory are vastly exaggerated, there do seem to be some techniques of stock selection that may tilt the odds of success in favor of the individual investor."

Some of the more-notable studies that threw the weak-form EMH into question included research by Eugene Fama and Kenneth French. The duo found that buying stocks that have performed poorly during the past few years led to superior returns over the next few years. In other words, a strategy of buying unpopular stocks can lead to better results than a strategy of buying popular stocks. That's because the market can get carried away with fashionable stocks, and pessimism can be overdone.

Academics uncovered stock-market patterns that questioned the semi-strong EMH, too. They found that stocks with low price/earnings and/or price/book multiples produce above-average returns over time.

Finally, researchers have shown how stock splits, dividend increases, insider buying, and merger announcements can dramatically affect stock prices, thereby proving false the strongest-form EMH.

The Upshot

So is EMH a has-been? Perhaps. But the question for you as an investor is whether you can effectively take advantage of the market anomalies that challenge EMH. Pricing irregularities do exist. So do predictable patterns. But there's no guarantee that they'll continue, nor that you (or your fund managers) will be able to spot them and take advantage of them.

If you believe in EMH, then you should be indexing the market. If you don't believe in EMH, then you should pick your own stocks, or pay mutual fund managers to choose stocks for you. If you see merit in both sides, index part of your portfolio and actively pick stocks with the other part of it. Investing doesn't have to be a choice between efficient market theory and active management. There's room in your portfolio for both.

503: Modern Portfolio Theory

Introduction

Nothing ventured, nothing gained. You can't have your cake and eat it, too. Life is a series of trade-offs.

We're all familiar with these mottos, which remind us that to get something, we have to give something up.

Investing requires sacrifices, too. We have give up safety and take on risk to achieve better returns. Modern Portfolio Theory (MPT) tries to make the most of the trade-off, illustrating how to generate as much return as possible for the least amount of risk.

This course will examine the relationship between an investment's risk and its return, how diversification allows you to achieve the maximum amount of return for the least amount of risk, and the role MPT can play in your portfolio.

Risk and Return

With any reward--such as a great-performing stock or mutual fund--there's always some element of risk. And the greater the potential reward, the greater the potential risk.

It's hard to imagine a time when the risk/reward relationship was considered revolutionary. But, prior to Harry Markowitz's 1952 dissertation, Portfolio Selection, investment theory didn't discuss the risks of investing. Instead, it was flush with ideas for maximizing return.

Markowitz believed, and mathematically proved, that there is a direct relationship between an investment's risk and its reward. He saw risk as an equal partner with expected gain. As such, he argued that investors need to manage the tension between risk and return in the investment process.

Markowitz also argued that investors should be measuring, monitoring, and controlling risk at the portfolio level, not at the individual-security level. As a result, individual securities should be chosen based not only on their own merit, but also on how they affect the portfolio as a whole.

Diversification and an "Efficient" Portfolio

According to MPT, you can limit the volatility of your portfolio by spreading out your risk among different types of investments. In fact, by putting together a basket of risky or volatile stocks, the overall risk of the portfolio would actually be less than any one of the individual stocks in it.

Diversification depends more on how the securities perform relative to one another than on the number of securities you own, though. Markowitz compared a portfolio of 60 railway securities with another portfolio of the same size that included railroads, utilities, mining, and manufacturing companies. He concluded that the latter is better diversified. "The reason is that it is generally more likely for firms within the same industry to do poorly at the same time than for firms in dissimilar industries," he says.

The "right" kind of diversification requires that you own securities that don't behave alike. In other words, their price movements have low correlation with each other.

Correlation measures the degree at which two securities move in similar patterns. Its value ranges from -1.0, indicating two securities moving perfectly opposite each other, to 1.0, indicating two securities moving in tandem. So to spread out your risk, you would want the securities in your portfolio to have correlations closer to -1.0 than to 1.0.

According to Markowitz, the goal is to craft an "efficient" portfolio. An efficient portfolio is either a portfolio that offers the highest expected return for a given level of risk, or one with the lowest level of risk for a given expected return. The line that connects all these efficient portfolios is the efficient frontier. The efficient frontier represents that set of portfolios that has the maximum rate of return for every given level of risk. The last thing investors want is a portfolio with a low expected return and high level of risk.

No point on the efficient frontier is any better than any other point. Investors must examine their own risk/return preferences to determine where they should invest on the efficient frontier. But, theoretically at least, the efficient frontier allows you to reduce your risk at no cost in return. Or you can increase return at any particular level of risk.

Applying Modern Portfolio Theory to Your Investment Reality

While the idea of an efficient portfolio and the efficient frontier graph make great theory, how can they be applied to your own investment situation? After all, few individual investors can create efficient frontier graphs for themselves, nor determine what their efficient portfolio would be. And even if investors had the time and technology to do so, market prices change, and the riskiness of asset classes isn't static.

What's important here isn't the details of the efficient frontier graph, nor finding the most efficient portfolio for you. Rather, the takeaways from Modern Portfolio Theory are:

1. Risk and return are directly linked. If you want a chance at greater returns, you'll need to take on more risk.

2. Diversification across securities that do not behave alike reduces your portfolio's overall risk.

Those two concepts are so firmly ingrained among investors that you probably used them to build your portfolio, even if you'd never heard about Modern Portfolio Theory before today. For example, your asset allocation is the direct result of your time horizon, risk tolerance, and financial goal. To reach that goal in the appropriate amount of time, you must take on a certain level of risk.

Further, you're likely controlling risk in your portfolio by mixing investments that have a low correlation with one another. For example, the stock and bond markets don't usually move in the same direction. By having a portfolio that includes both stocks and bonds, you're one step closer to a more diversified and less risky portfolio.

504: Asset Allocation Is "It"

Introduction

Do you remember the U.S. Department of Agriculture's food pyramid? Even though the USDA abandoned the pyramid as an image to help set dietary priorities, it's still a useful shape to convey how to allocate your time and resources, including when you're investing.

At the bottom of the pyramid are the activities that you should spend the most time and energy on because they have the biggest impact on your results. They're the equivalent of broccoli and brown rice. Meanwhile, at the top are tasks that, though worthwhile, will have a smaller impact on your bottom line.

Here's a look at the investment pyramid Morningstar's Director of Financial Planning, Christine Benz, would propose, ranging from what should be investors' top priorities--the base of the pyramid--to the least important ones. If you have a finite amount of time to devote to your investment activities, this can help guide the way.

Pyramid's Base: Set Goals

You know how it is when you don't start a day with a to-do list? You get buffeted around by whatever comes up. Phone calls, answering emails, chatting with colleagues about favorite childhood candy bars, and whoops--how on earth did it get to be 11:20 already?

Managing your finances without first articulating your near- and long-term goals is pretty similar. The days will go by, and you'll no doubt find plenty of ways to spend your money. But you won't necessarily get to where you really wanted to go. Rather than operating with the amorphous goal of "wealth accumulation," take a step back and articulate the specifics of what you're trying to achieve, when you'll need the money, and how much.

Paying the full freight for college for each of your kids? Retirement while you're still young enough to enjoy it? A move to a bigger house within the next five years? By quantifying each of your financial goals, you may see that it's not going to be possible to achieve them all, but it's better to know that early on so you can prioritize. And each of those goals likely carries its own time horizon, which in turn will dictate what types of investments you hold and where.

Once you've set your baseline goals and quantified how much they'll cost, checking your progress toward them can serve as the ultimate financial checkup; monitoring specific investments is secondary.

Next Band: Manage Saving/Spending Rates

Budgeting is boring, which is why it's easy to give short shrift to it in favor of sexier pursuits such as trading stocks. But even if you select the very best investments, you'll be hard-pressed to make up for a shortfall if you haven't saved enough. That's why setting your saving and spending rate has far more importance in the pyramid than does investment selection.

As a result of technological advances and new electronic budgeting tools, there have never been more ways to monitor and manage your spending. This is key to ensure that your savings rate puts you on track to achieve the above-mentioned goals. For people who prefer the pen and paper route, you can find budgeting worksheets online.

Note that this concept matters long after you've stopped saving, too. For retirees, the difference between a 4% and a 6% withdrawal rate can be enormous when it comes to the viability of a retirement plan. Being able to adjust one's spending rate--especially downward in times of market duress--has also emerged as a best practice in the realm of retirement portfolio management because it helps a retiree avoid turning paper losses into real ones.

Next Band: Asset Allocation

For more than 25 years, academics have been debating the role that asset allocation--a portfolio's division among stocks, bonds, and cash--plays in investment results. Specific findings have varied, but there's near-universal consensus both in the academic community and among practitioners that the asset-allocation mix you choose matters a lot. A portfolio that consists entirely of cash and short-term bonds will exhibit very few fluctuations, which can provide peace of mind and may be appropriate for very short-term goals. Over time, however, it will get eaten alive by a portfolio that includes a stock component.

Specific recommendations about asset allocation will vary by advisor and financial-services company, but the basic rules of the road should hold you in good stead during your investing career.

For your long-term goals, start heavy with high-quality stocks, then gradually shift more into safer securities as your need for the money draws near. And be careful not to gorge on niche investments such as gold and emerging-markets stocks, whose returns are sometimes explosive but so is their downside potential. Diversify reasonably among the core asset classes--high-quality stocks, high-quality bonds, and cash--and you'll be OK.

505: Diversifying with Foreign Stocks

Introduction

When it comes to matters of money and investing, there are a handful of topics that make anyone's head hurt. One of them is asset location--essentially, the placement of investments in taxable or tax-sheltered accounts.

This course will explain the challenges investors face with asset location, and provide some general guidelines for navigating this confusing landscape.

Why is asset location such a sticky wicket?

For one thing, the tax treatment of investments changes frequently, so what might be an optimal asset placement today might not be a few years from now.

Dividends provide a great case in point. Prior to 2003, income from stock dividends was taxed at the ordinary income tax rate, so you'd generally want to hold income-rich stocks in your tax-sheltered accounts. But when dividends began to be taxed at the lower capital gains tax rate, they were no longer verboten for taxable accounts.

In addition to tax treatment confusion, practical considerations sometimes completely contradict advice that makes good tax sense. When we're in accumulation mode, most of us naturally use our retirement accounts (401(k)s and other company-retirement plans and IRAs) as a storehouse for our longest-term savings, so it's only logical that we'd be inclined to invest in long-term assets (namely, stocks) there.

Meanwhile, from a practical standpoint it's logical to want to hold more safe, stable, and liquid assets (namely, bonds and cash) in accounts that we can readily tap without strictures or penalties--our taxable accounts. Yet as much logical sense as those asset-placement arrangements might seem to make, they precisely contradict what a tax advisor would tell you to do. Because income from bonds and cash is taxed at your ordinary income tax rate, that's a powerful argument for holding bonds in your tax-sheltered accounts while keeping at least some stocks in your taxable account.

There are no one-size-fits-all solutions, and it's worth revisiting your asset-location framework every few years, to make sure your plan syncs up with the current tax rules. But here are some general guidelines.

Tax-Sheltered Accounts = High Returners With High Tax Costs

Because you don't have to pay taxes from year to year on income or capital gains you earn in tax-sheltered accounts like IRAs and 401(k)s, these are good receptacles for higher-returning investments that also have heavy tax consequences. The best example would be junk bonds, junk-bond funds, and multi-sector-bond funds, all of which kick off a high percentage of taxable income. And while it's a stretch to call high-quality bonds and bond funds "high-returning", they're also a better fit for tax-sheltered accounts than for taxable because their payouts are taxed at an investor's ordinary income tax rate.

So generally speaking, to the extent that you hold bonds, you're better off doing so within the confines of a tax-sheltered account. If you need to hold bonds in your taxable accounts, determine whether a municipal bond or bond fund might offer you a better aftertax yield than a taxable bond investment. (Income from munis is free of federal and, in some cases, state income taxes.)

By contrast, stocks and stock funds are generally a better bet for taxable accounts, for reasons outlined in the next section. That said, not all stocks belong in the taxable bin. Although they enjoy relatively low tax treatment currently, dividend-paying stocks are arguably a better fit for tax-sheltered rather than taxable accounts. The key reason is control. Dividend income, like bond income, isn't discretionary. Whereas stock investors can delay the receipt of capital gains simply by hanging on to the stock, investors in dividend-paying stocks don't have that kind of control; they get a payout whether they like it or not. That makes dividend payers, regardless of tax treatment, less attractive than nondividend payers from a tax standpoint.

Your tax-sheltered accounts are also the right spot for REITs, whose payouts are generally considered nonqualified and taxed at ordinary income tax rates. Preferred stock, too, is on the bubble, depending on the type of preferred you're dealing with, and therefore is apt to be a better fit within the confines of a tax-sheltered account. Traditional preferreds generally qualify for dividend-tax treatment, whereas income from trust preferreds is taxed at an investor's ordinary income tax rate. Dividends from some foreign stocks and funds may also be classed as nonqualified, meaning they will be taxed as income.

Finally, to the extent that you hold mutual funds that churn through their portfolios frequently, you're better off doing so within your company-retirement plan or IRA. Such funds tend to generate a lot of short-term capital gains, which are also taxed as ordinary income.

Taxable Accounts = Higher Returners With Low Tax Costs

The above exceptions notwithstanding, there are compelling reasons to hold stocks in your taxable rather than tax-sheltered accounts.

As noted earlier, long-term capital gains, which is what you have when you sell a stock that you've held for at least a year, are taxed at a much lower rate than is bond income—consult the IRS' web site for current long-term capital gains tax rates by income-tax bracket.

Another key reason to hold stock in your taxable accounts is that stock investors can also exert a higher level of control over the receipt of capital gains than bond investors--for example, by buying and holding individual stocks or by investing in exchange-traded funds, which have a built-in mechanism for limiting taxable capital gains payouts. Tax-managed funds and traditional broad-market stock-index funds also tend to do a good job of keeping the lid on distributing capital gains

Either Account = Lower Returners With High Tax Costs

So the key rules of thumb are that stocks go in taxable accounts and bonds go in tax-sheltered wrappers. But what about lowly old cash? From a pure tax standpoint, holding the assets in a tax-sheltered account makes the most sense, as income from cash investments is taxable as ordinary income, just like bond income.

Here's a case, however, where practical considerations may override the tax argument. One of the key benefits of cash is easy access to your money when you need it, so it simply may not make sense to store cash for near-term income needs in tax-sheltered accounts, where you may face taxes and other penalties to pull it out prematurely. And because you're receiving a minuscule income stream from most cash investments these days (you might be holding them for stability as much as real income), the tax hit associated with holding cash in a taxable account is apt to be quite low for most investors.

The bottom line is that if you're holding cash for near-term income needs or as an emergency fund, it makes sense to hold it in a taxable account. If you're holding a sleeve of cash as a component of your retirement portfolio's long-term strategic asset-allocation plan, it's fine to hold it within the context of your tax-sheltered account.

506: Value: The "Better" Approach?

Introduction

Unless you like to open the occasional dusty academic tome, chances are you're not intimately familiar with factor investing. It's really not as esoteric as it sounds.

You've heard of style investing--small cap versus large cap, or value versus growth. If you've ever tilted to a particular style, you've engaged in factor investing. Style investing is a kind of factor investing, dealing with only two factors: size (large-small) and value (value-growth).

A working definition of a factor is an attribute of an asset that both explains and produces excess returns. Factor investing can be thought of as buying these return-generating attributes rather than buying asset classes or picking stocks.

This course covers the history of factor investing, some stock factors, and how factors create excess returns.

History

The original factor theory, dating back to the 1960s, is the capital asset pricing model, or CAPM, which predicts that the only determinant of an asset's expected return is how strongly its returns move (or, in technical terms, covary) with the market's.

The strength of the relationship is summarized in a variable called beta. A beta of 1 indicates that for each percentage point the market moves, an asset's price moves in the same direction by a percentage point. CAPM predicts asset returns are linearly related to market beta.

However, since the 1970s, academics have known that stock returns don't seem to be related to beta. This finding spurred many fruitless or convoluted attempts to explain how market efficiency could be squared with a world in which CAPM didn't work.

Other Factors

Eugene Fama and Kenneth French "fixed" the CAPM, at least for stocks, by adding two factors: size and value. They observed that smaller stocks outperformed larger stocks and stocks with high book/market outperformed stocks with low book/market. More importantly, the relationships were smooth; the smaller or more value-laden the stock, the higher its return. Fama and French interpret the smoothness of the relationship as indicating the market is rationally "pricing" these attributes, which implies that size and value strategies enjoy higher expected returns for being riskier.

Further research has uncovered more stock factors, including momentum, quality, and low volatility, in nearly every equity market studied. They also display the same smooth relationship: The stronger the factor attribute, the higher the excess returns. The interpretation of these factors depends on whether you believe the market is efficient. In an efficient market, they must be connected to risk. However, if the market is not perfectly rational, some may represent quantitative strategies that exploit mispricings to produce excess returns.

Many practitioners don't believe value, quality, momentum, and low-volatility strategies work because they are riskier. The strategies were exploited by investors before academics published them in journals as "discoveries." It's also hard to reconcile them all as representing risk because if you lump them all together, you get a smooth return stream.

This does not mean that all factors earn profits by identifying mispricings. Some attributes, such as illiquidity, are associated with higher returns because they obviously represent risk. So factor investing encompasses two different approaches:

1. Rational factor theory, which deals with the rewards that accrue to different types of risk and how the market prices them. Factor investing in this context is about finding the optimal portfolio of factor risks.

2. Factor investing as commonly understood by practitioners, which is the identification of simple quantitative strategies associated with excess returns.

Though it's been around for decades, factor investing has only in the past decade gained adherents. Recent converts include the Government Pension Fund of Norway, the biggest pension fund in Europe, and CalPERS, the biggest public pension fund in the United States.

Redefining Alpha

An implication of factor-based investing is that what was once legitimately deemed "alpha"--excess returns attributable to skill--has morphed into "beta" (or a factor) once researchers identify a simple strategy that replicates the alpha. For instance, certain hedge fund managers in the 1980s and 1990s pursued then-exotic strategies such as merger arbitrage that produced excellent returns uncorrelated to the market. However, once researchers identified how the arbitrage strategies worked and created mechanical replications, the managers' alpha became beta.

A consequence of this process is that the hurdle for being declared a truly skilled manager has risen over time. In the 1980s, it was good enough to beat your benchmarks. These days, studies looking for evidence of skill in equity mutual funds control for exposure to size, value, and momentum factors. In other words, if your excess returns come during times that value, smaller-cap, or momentum stocks outperform, the procedure will adjust your "excess" return to zero.

If you believe the excess returns of value and momentum strategies reflect risk, then it's a reasonable adjustment. If you believe value and momentum produce excess returns because of market inefficiency, then it's not--what you've done is redefine outperformance.

507: Measuring Mutual Fund Manager Skill

Introduction

Successful investing is hard, but it doesn't require genius. In fact, Warren Buffett asserted that it's not so much raw brain power you need, but temperament "to control the urges that get other people into trouble in investing."

As much as anything else, successful investing requires something perhaps even more rare: the ability to identify and overcome one's own psychological weaknesses.

Over the past several decades, psychology has permeated our culture in many ways. In more recent times, its influences have taken hold in the field of behavioral finance, spawning an array of academic papers and learned tomes that attempt to explain why people make financial decisions that are contrary to their own interests.

Experts in the field of behavioral finance have a lot to offer in terms of understanding psychology and the behaviors of investors, particularly the mistakes that they make. Much of the field attempts to extrapolate larger, macro trends of influence, such as how human behavior might move the market.

This course and Portfolio 508 will focus on how the insights from the field of behavioral finance can benefit individual investors – specifically, how investors can learn to spot and correct investing mistakes in order to yield greater profits.

Pitfall: Overconfidence

Overconfidence refers to our boundless ability as human beings to think that we're smarter or more capable than we really are. It's what leads 82% of people to say that they are in the top 30% of safe drivers, for example. Moreover, when people say that they're 90% sure of something, studies show that they're right only about 70% of the time. Such optimism isn't always bad. Certainly we'd have a difficult time dealing with life's many setbacks if we were die-hard pessimists.

However, overconfidence hurts us as investors when we believe that we're better able to spot the next great investment than another investor is. Odds are, we're not. (Nothing personal.)

Studies show that overconfident investors trade more rapidly because they think they know more than the person on the other side of the trade. Trading rapidly costs plenty, and rarely rewards the effort. We'll repeat yet again that trading costs in the form of commissions, taxes, and losses on the bid-ask spread have been shown to be a serious damper on annualized returns. These frictional costs will always drag returns down.

One of the things that drives rapid trading, in addition to overconfidence in our abilities, is the illusion of control. Greater participation in our investments can make us feel more in control of our finances, but there is a degree to which too much involvement can be detrimental, as studies of rapid trading have demonstrated.

Pitfall: Selective Memory

Another danger that overconfident behavior might lead to is selective memory. Few of us want to remember a painful event or experience in the past, particularly one that was of our own doing. In terms of investments, we certainly don't want to remember those stock calls that we missed much less those that proved to be mistakes that ended in losses.

The more confident we are, the more such memories threaten our self-image. How can we be such good investors if we made those mistakes in the past? Instead of remembering the past accurately, in fact, we will remember it selectively so that it suits our needs and preserves our self-image.

Incorporating information in this way is a form of correcting for cognitive dissonance, a well-known theory in psychology. Cognitive dissonance posits that we are uncomfortable holding two seemingly disparate ideas, opinions, beliefs, attitudes, or in this case, behaviors, at once, and our psyche will somehow need to correct for this.

Correcting for a poor investment choice of the past, particularly if we see ourselves as skilled traders now, warrants selectively adjusting our memory of that poor investment choice. "Perhaps it really wasn't such a bad decision selling that stock?" Or, "Perhaps we didn't lose as much money as we thought?" Over time our memory of the event will likely not be accurate but will be well integrated into a whole picture of how we need to see ourselves.

Another type of selective memory is representativeness, which is a mental shortcut that causes us to give too much weight to recent evidence--such as short-term performance numbers--and too little weight to the evidence from the more distant past. As a result, we'll give too little weight to the real odds of an event happening.

Pitfall: Self-Handicapping

Researchers have also observed a behavior that could be considered the opposite of overconfidence. Self-handicapping bias occurs when we try to explain any possible future poor performance with a reason that may or may not be true.

An example of self-handicapping is when we say we're not feeling good prior to a presentation, so if the presentation doesn't go well, we'll have an explanation. Or it's when we confess to our ankle being sore just before running on the field for a big game. If we don't quite play well, maybe it's because our ankle was hurting.

As investors, we may also succumb to self-handicapping, perhaps by admitting that we didn't spend as much time researching a stock as we normally had done in the past, just in case the investment doesn't turn out quite as well as expected. Both overconfidence and self-handicapping behaviors are common among investors, but they aren't the only negative tendencies that can impact our overall investing success.

Pitfall: Loss Aversion

It's no secret, for example, that many investors will focus obsessively on one investment that's losing money, even if the rest of their portfolio is in the black. This behavior is called loss aversion.

Investors have been shown to be more likely to sell winning stocks in an effort to "take some profits," while at the same time not wanting to accept defeat in the case of the losers. Philip Fisher wrote in his excellent book Common Stocks and Uncommon Profits that, "More money has probably been lost by investors holding a stock they really did not want until they could 'at least come out even' than from any other single reason."

Regret also comes into play with loss aversion. It may lead us to be unable to distinguish between a bad decision and a bad outcome. We regret a bad outcome, such as a stretch of weak performance from a given stock, even if we chose the investment for all the right reasons. In this case, regret can lead us to make a bad sell decision, such as selling a solid company at a bottom instead of buying more.

It also doesn't help that we tend to feel the pain of a loss more strongly than we do the pleasure of a gain. It's this unwillingness to accept the pain early that might cause us to "ride losers too long" in the vain hope that they'll turn around and won't make us face the consequences of our decisions.

Pitfall: Sunk Costs

It's no secret, for example, that many investors will focus obsessively on one investment that's losing money, even if the rest of their portfolio is in the black. This behavior is called loss aversion.

Investors have been shown to be more likely to sell winning stocks in an effort to "take some profits," while at the same time not wanting to accept defeat in the case of the losers. Philip Fisher wrote in his excellent book Common Stocks and Uncommon Profits that, "More money has probably been lost by investors holding a stock they really did not want until they could 'at least come out even' than from any other single reason."

Regret also comes into play with loss aversion. It may lead us to be unable to distinguish between a bad decision and a bad outcome. We regret a bad outcome, such as a stretch of weak performance from a given stock, even if we chose the investment for all the right reasons. In this case, regret can lead us to make a bad sell decision, such as selling a solid company at a bottom instead of buying more.

It also doesn't help that we tend to feel the pain of a loss more strongly than we do the pleasure of a gain. It's this unwillingness to accept the pain early that might cause us to "ride losers too long" in the vain hope that they'll turn around and won't make us face the consequences of our decisions.

508: The Small-Company Advantage: Fact or Fiction?

Introduction

Portfoilo 507 introduced the concept of behavioral finance -- the study of the psychology and the behaviors of investors, particularly the mistakes that they make. Much of the field attempts to extrapolate larger, macro trends of influence, such as how human behavior might move the market.

That course covered five behaviors that investors exhibit. This course covers five additional behaviors that can subvert investment performance.

Pitfall: Anchoring

Ask New Yorkers to estimate the population of Chicago, and they'll anchor on the number they know--the population of the Big Apple--and adjust down, but not enough. Ask people in Milwaukee to guess the number of people in Chicago and they'll anchor on the number they know and go up, but not enough. When estimating the unknown, we cleave to what we know.

Investors often fall prey to anchoring. They get anchored on their own estimates of a company's earnings, or on last year's earnings. For investors, anchoring behavior manifests itself in placing undue emphasis on recent performance since this may be what instigated the investment decision in the first place.

When an investment is lagging, we may hold on to it because we cling to the price we paid for it, or its strong performance just before its decline, in an effort to "break even" or get back to what we paid for it. We may cling to subpar companies for years, rather than dumping them and getting on with our investment life. It's costly to hold on to losers, though, and we may miss out on putting those invested funds to better use.

Pitfall: Confirmation Bias

Another risk that stems from both overconfidence and anchoring involves how we look at information. Too often we extrapolate our own beliefs without realizing it and engage in confirmation bias, or treating information that supports what we already believe, or want to believe, more favorably.

For instance, if we've had luck owning a particular brand of cars, we will likely be more inclined to believe information that supports our own good experience owning them, rather than information to the contrary. If we've purchased a mutual fund concentrated in health-care stocks, we may overemphasize positive information about the sector and discount whatever negative news we hear about how these stocks are expected to perform.

Hindsight bias also plays off of overconfidence and anchoring behavior. This is the tendency to re-evaluate our past behavior surrounding an event or decision knowing the actual outcome. Our judgment of a previous decision becomes biased to accommodate the new information. For example, knowing the outcome of a stock's performance, we may adjust our reasoning for purchasing it in the first place. This type of "knowledge updating" can keep us from viewing past decisions as objectively as we should.

Pitfall: Mental Accounting

If you've ever heard friends say that they can't spend a certain pool of money because they're planning to use it for their vacation, you've witnessed mental accounting in action. Most of us separate our money into buckets--this money is for the kids' college education, this money is for our retirement, this money is for the house. Heaven forbid that we spend the house money on a vacation.

Investors derive some benefits from this behavior. Earmarking money for retirement may prevent us from spending it frivolously. Mental accounting becomes a problem, though, when we categorize our funds without looking at the bigger picture. One example of this would be how we view a tax refund. While we might diligently place any extra money left over from our regular income into savings, we often view tax refunds as "found money" to be spent more frivolously. Since tax refunds are in fact our earned income, they should not be considered this way.

For gambling aficionados this effect can be referred to as "house money." We're much more likely to take risks with house money than with our own. For example, if we go to the roulette table with $100 and win another $200, we're more likely to take a bigger risk with that $200 in winnings than we would if the money was our own to begin with. There's a perception that the money isn't really ours and wasn't earned, so it's OK to take more risk with it. This is risk we'd be unlikely to take if we'd spent time working for that $200 ourselves.

Similarly, if our taxes were correctly adjusted so that we received that refund in portions all year long as part of our regular paycheck, we might be less inclined to go out and impulsively purchase that Caribbean cruise or flat-screen television.

In investing, just remember that money is money, no matter whether the funds in a brokerage account are derived from hard-earned savings, an inheritance, or realized capital gains.

509: Dividends

Introduction

The bucket approach to retirement-portfolio management, pioneered by financial planning guru Harold Evensky, effectively helps retirees create a paycheck from their investment assets.

The bucket concept is anchored on the basic premise that assets needed to fund near-term living expenses ought to remain in cash, dinky yields and all. Assets that won't be needed for several years or more can be parked in a diversified pool of long-term holdings, with the cash buffer providing the peace of mind to ride out periodic downturns in the long-term portfolio.

Here’s how the bucket approach works and how to fill each bucket.

The All-Important Bucket 1

The linchpin of any bucket framework is a highly liquid component to meet near-term living expenses for one year or more. When cash yields are close to zero, bucket 1 is close to dead money, but the goal of this portfolio sleeve is to stabilize principal to meet income needs not covered by other income sources.

To arrive at the amount of money to hold in bucket 1, start by sketching out spending needs on an annual basis. Subtract from that amount any certain, non-portfolio sources of income such as Social Security or pension payments. The amount left over is the starting point for bucket 1: That's the amount of annual income bucket 1 will need to supply.

More conservative investors will want to multiply that figure by 2 or more to determine their cash holdings. Alternatively, investors concerned about the opportunity cost of so much cash might consider building a two-part liquidity pool--one year's worth of living expenses in true cash and one or more year's worth of living expenses in a slightly higher-yielding alternative holding, such as a short-term bond fund. A retiree might also consider including an emergency fund within bucket 1 to defray unanticipated expenses such as car repairs, additional health-care costs, and so on.

Bucket 2 and Beyond

Although retirees may customize different frameworks for the number of buckets they hold, and the types of assets in each, Morningstar’s Director of Personal Finance, Christine Benz suggests two additional buckets, as follows.

Bucket 2: This portfolio segment contains five or more years' worth of living expenses, with a goal of income production and stability. Thus, it's dominated by high-quality fixed-income exposure, though it might also include a small share of high-quality dividend-paying equities and other yield-rich securities such as master limited partnerships. Balanced or conservative- and moderate-allocation funds would also be appropriate in this part of the portfolio.

Income distributions from this portion of the portfolio can be used to refill bucket 1 as those assets are depleted. Why not simply spend the income proceeds directly and skip bucket 1 altogether? Because most retirees desire a reasonably consistent income stream to help meet their income needs. If yields are low, the retiree can maintain a consistent standard of living by looking to other portfolio sources, such as rebalancing proceeds from buckets 2 and 3, to refill bucket 1.

Bucket 3: The longest-term portion of the portfolio, bucket 3 is dominated by stocks and more volatile bond types like junk bonds. Because this portion of the portfolio is likely to deliver the best long-term performance, it will require periodic trimming to keep the total portfolio from becoming too equity-heavy. By the same token, this portion of the portfolio will also have much greater loss potential than buckets 1 and 2. Those portfolio components are in place to prevent the investor from tapping bucket 3 when it's in a slump, which would otherwise turn paper losses into real ones.

Bucket Maintenance

The bucket structure calls for adding assets back to bucket 1 as the cash is spent down. Yet investors can exercise a lot of leeway to determine the logistics of that necessary bucket maintenance.

The following sequence will make sense in many situations:

- Income from cash holdings in bucket 1. These will be of limited help in a yield-starved environment, but could become more meaningful when yields rise.
- Income from bonds and dividend-paying stocks from buckets 2 and possibly even 3. (Income-focused investors might decide that their bucket maintenance starts and stops with these distributions.)
- Rebalancing proceeds from buckets 2 and especially 3.
- Principal withdrawals from bucket 2, provided the above methods have been exhausted. Such a scenario would tend to be most likely in a 2008-style environment, when bond and dividend yields dropped and equities slumped, thereby making it an inopportune time to unload equities. (Such a scenario would generally be a decent time to engage in tax-loss selling, but the proceeds from that would be best deployed back into equities.)

510: Behavioral Finance

Introduction

It's a trend we've seen again and again: Investors' enthusiasm for an asset class seems to ebb and flow with the performance of that market segment.

Foreign stocks are no exception. For example, though there are sound fundamental reasons for investing in emerging markets, it's probably not a coincidence that investors send scads of new money to diversified emerging-markets stock funds when they are outperforming.

But rather than adding to and subtracting from your foreign stake based on market performance, and risk being whipped around by market winds, a better approach is to set a strategic, long-term allocation to foreign stocks and stick with it, making only minor adjustments to rebalance.

Unfortunately, that's easier said than done. Even informed observers vary widely on how much to stake overseas, ranging from the "don't bother" camp to the "all global, all the time" school of thought.

And importantly, classifying foreign and U.S. companies based on where their headquarters are located is evolving into an increasingly questionable exercise, especially for large-cap multinationals. Companies such as Coca Cola and McDonald’s derive more than half of their revenues from overseas, whereas global behemoths such Nestle and Toyota count on the U.S. for a big portion of their sales.

The Global Portfolio: A Starting Point

Given the fact that country of domicile doesn't say a lot about where a company actually does business, it's tempting to shelve the foreign versus U.S. allocation question altogether and simply opt for a global markets index fund.

That's a logical approach, particularly for those who are already index enthusiasts. If you buy into the concept of letting the market decide the size of the holdings in your fund, letting the market decide country weightings is a logical extension of that thought process.

And even if you're not ready to cede complete control of your country allocations by investing in a global stock market index fund, the geographic allocations of the global market provide a good starting point for thinking about your own allocations. Consult the allocations of an index such as the FTSE All-World Index, for instance.

Ask the Experts

Morningstar's Lifetime Allocation Indexes, developed in conjunction with asset-allocation specialist Ibbotson Associates, provide additional intelligence about what's a reasonable foreign/domestic split.

In general, it's worth noting that these benchmarks are much less foreign-stock-heavy than is the case with global market benchmarks such as the FTSE All-World Index. For example, the portfolios geared toward investors who are just starting out steer roughly 40% of their equity assets toward foreign stocks as of this writing, and those weightings step down dramatically for those nearing and in retirement. For people with 10-15 years until retirement, the indexes' foreign stakes compose roughly 30% of the overall equity allocation as of this writing, and drop to 20%-25% of equity for those who are already retired.

One of the key rationales for a lower foreign-stock allocation in retirement is currency risk. Because foreign assets are not denominated in dollars, there's a chance that foreign currencies could dip as an investor approaches retirement, thereby depressing the purchasing power of a heavily globalized portfolio at an inopportune time. Of course, those currency swings can work the other way, too. But the bottom line is that currency risk is a wild card that's completely out of your control, and you're better off reducing any such risks as retirement draws near.

A checkup of target-date funds' average foreign allocations yields weightings that are in a similar range, roughly one third of the overall equity portfolio as of this writing. As is the case with Morningstar's Lifetime Allocation Indexes, foreign stocks consume a larger share (close to 40%) of the equity portfolios for younger investors than is the case for investors closing in on retirement.