LIGHTBULB PRESS®

GUIDE TO UNDERSTANDING INVESTING

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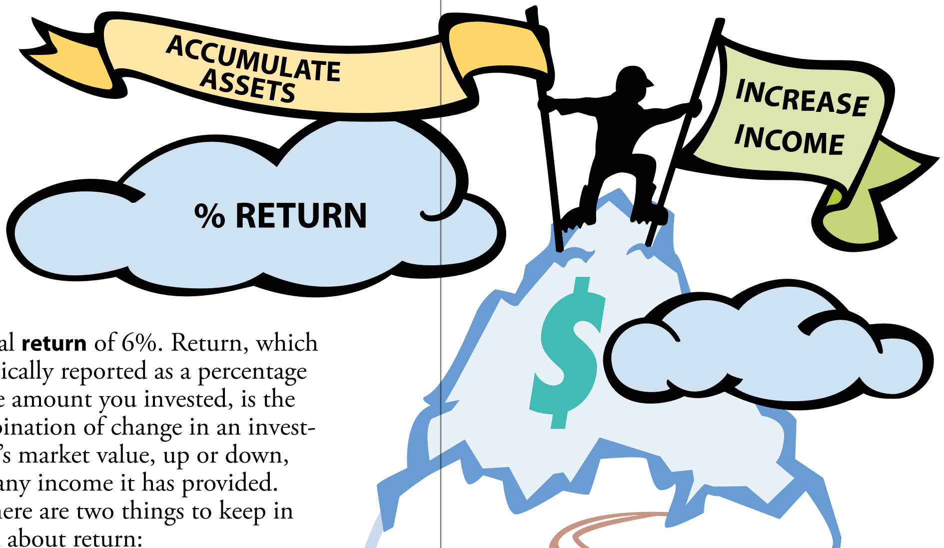
Investing Basics

When you invest, your dual goals are accumulating valuable assets and increasing your income.

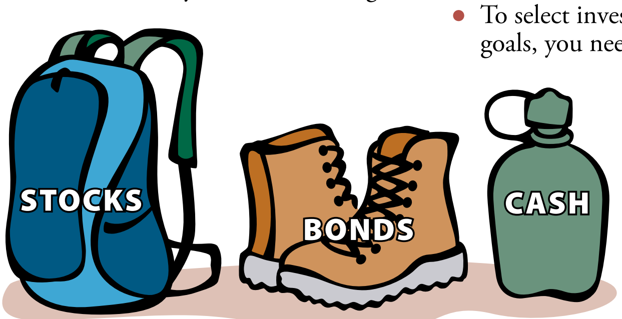


Investing means using the money you have to build a portfolio of assets that you expect to grow in value over time, provide current income, or, in some cases, provide both growth and income. Done wisely, investing can help you meet your financial goals—paying for a college education, enjoying a comfortable retirement, buying a home, or whatever is important to you.

Investing even a small amount on a regular basis has the potential to produce positive results over the long term. For example, investing just $96 a week for 30 years can add up to more than $400,000 if you have an average annual **return** of 6%. Return, which is typically reported as a percentage of the amount you invested, is the combination of change in an investment's market value, up or down, plus any income it has provided.

There are two things to keep in mind about return:

- It isn't guaranteed. While it could be 6% or higher, it could also be less, or even negative, in some years, reducing the annual average.
- To select investments to meet your goals, you need to understand what the choices are, the return that's possible with different choices, and the risks you'll take.



INVESTMENT OVERVIEW

There are three core investment categories, called **asset classes**: stocks, bonds, and cash.

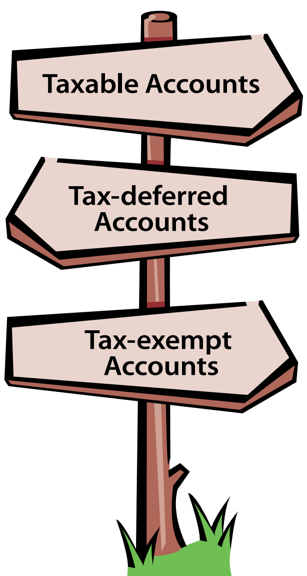
- **Stocks** are ownership shares in a corporation.
- **Bonds** are loans to a corporation or government.
- **Cash investments** include certificates of deposit (CDs) and US Treasury bills.

To invest, you typically buy and sell through a brokerage firm account. In some cases, you can buy directly from the issuer. In others, you invest through an account in a plan offered by your employer or the state where you live.

You can purchase individual investments or invest indirectly by choosing mutual funds or exchange traded funds (ETFs) that own stocks, bonds, or cash—or sometimes a combination of asset classes. The combination of assets you own makes up your **investment portfolio**.

WHAT'S THE ISSUE?

The corporations and governments that offer investments for sale are issuers. The act of offering is called issuing, and each investment is an issue.



INVESTMENT ACCOUNTS

Just as there are different types of investments, there are different types of investment accounts.

You can invest as much as you can afford in a **taxable account** each year, purchase any investments you choose, and withdraw as you wish. You pay tax on investment earnings and on capital gains from selling investments for more than you paid to buy them. Most dividends and all capital gains on investments you've owned for more than a year are taxed at a lower federal rate than your ordinary income.

You may have **tax-deferred accounts** for your retirement savings. You pay no tax on earnings in these accounts as they accumulate and, in many cases, no tax on the money that's invested. The amount you can invest is subject to an annual cap, which is adjusted from time to time to reflect inflation. When you take money out, usually after you retire, it's taxed at the same rate you pay on your ordinary income. Annual withdrawals are mandatory after you turn 73, and there's a penalty if you withdraw before 59½.

You may choose **tax-exempt accounts** to invest for retirement, education, or healthcare expenses. You invest after-tax income in all except a healthcare account. If you follow the rules, no tax is due on the earnings as they accumulate or when you withdraw. But, there may be restrictions on how much you can invest each year and how you use the withdrawals.

WHAT'S A SECURITY?

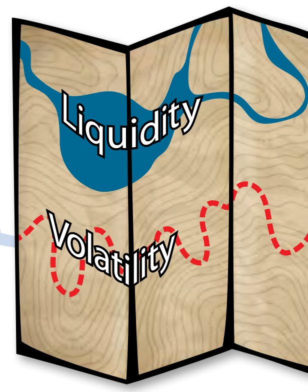
Securities, by definition, are written proofs of ownership, such as stock or bond certificates. But as electronic records have replaced certificates, the term survives as a synonym for investments.

CHOOSING INVESTMENTS

As you evaluate an investment for your portfolio, you consider it on its own merits and how it complements the investments you already own. For example, if you hold a number of stocks issued by large, well-known companies, you may decide to choose the stock of a smaller or newer company to add variety.

You'll also want to consider a number of personal factors, including your financial goals, your time frame, and your risk tolerance, as you make your selections. For example, a stock mutual fund that's appropriate for a retirement account may not be a good choice when you're trying to accumulate a down payment for a home.

The issues in this case are **liquidity** and **volatility**. The term liquidity refers to how quickly you could convert an investment to cash with little or no loss of value. Volatility is a measure of how quickly and how often an investment's price changes. You don't need liquidity in a retirement account, but you probably do in an account you're planning to withdraw from in the near future. Since volatility tends to flatten out over time, it's not a concern in retirement accounts but is if you have a short time frame.



You'll also want to look at an investment's risk/return profile. In brief, that is the level of return can you expect for the degree of risk you are taking. For example, insured bank investments pose very limited risk, but they tend to provide a smaller return than investments, such as stocks, that expose you to more risk. Conversely, taking more risk means greater potential return.

Taking the First Steps

Getting started is tough, but the earlier you start investing, the more it should pay off in the long run.

Investing hasn't replaced sports as the national pastime. But it's increasingly a part of many people's financial lives. One reason is that while a college education is more important than ever before, it is also more expensive. So if you're a parent or grandparent, you may be investing to cover at least some of those costs for your family.

Similarly, the sources of income that helped make your parents' or grandparents' retirement secure—pensions and Social Security—are likely to play a smaller role for you. And you're likely to live longer after you retire. So it's more important than ever to invest for your long-term security.

Perhaps the greatest challenge in investing—whether you have lots of experience, you've just started, or you're uncertain about how to begin—is finding the information you need to make decisions confidently. Among other things, this includes choosing what investments to buy, which ones to keep, and when to sell. The next challenge is translating your knowledge into action.

SAVE OR INVEST?

Investing isn't the same as saving. When you save, you deposit your money in federally insured bank or credit union accounts or buy US Treasury bills or notes that are backed by the US government. With those guarantees, you know your money is safe and will be available when you need it to meet short-term goals or cover financial emergencies.

AN INVESTMENT OVERVIEW

Most investors, from the newest to the most experienced, focus on three investment categories, or asset classes: stocks and stock funds, bonds and bond funds, and cash.

Each category of investment puts your money to work in a different way. But they share some features that help to make them attractive as the backbone of a portfolio:

- They're easy to buy and sell.
- It's usually easy to find research and track performance.
- They're available at a wide range of prices.
- They have the potential to provide one or both of the two things you seek when you invest: growth and income.

Over time, you may also include other investments—perhaps real estate, options contracts, commodity funds, or a limited partnership—to add variety to your portfolio. This makes it more likely you'll be able to benefit from being invested in the asset class or classes that are performing best at any given time.

RATES OF RETURN

Reinvesting dividends, interest, and capital gains as those earnings are paid increases your investment principal and the base on which new earnings can accumulate. That's the power of compounding. What it offers is the potential for significant gains over an extended period.

This chart illustrates the impact of long-term compounding at different annualized rates of return, assuming you invested $5,000 at the beginning of each year in a tax-deferred account. Note that the differences after five years are relatively small, but that the gap increases substantially as time goes by.

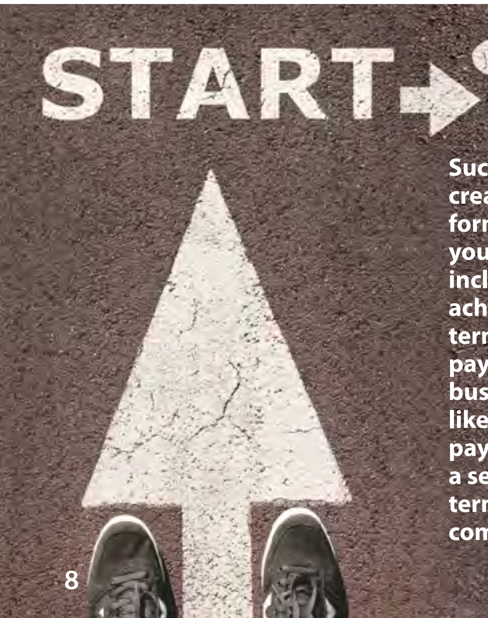
These hypothetical results do not represent the return on any particular investment or portfolio of investments. You could lose money even if you reinvested all your earnings.

AVERAGE ANNUALIZED RETURN

Time in Years	4%	6%	8%	10%
5	$28,165	$29,876	$31,680	$33,578
10	$62,432	$69,858	$78,227	$87,656
15	$104,123	$123,363	$146,621	$174,749
20	$154,846	$194,964	$247,115	$315,013
25	$216,559	$290,782	$394,772	$540,909
30	$291,642	$419,008	$611,729	$904,717
35	$382,992	$590,604	$930,511	$1,490,634
40	$494,133	$820,238	$1,398,905	$2,434,259

When you invest, your goals are more ambitious. You want to increase the value of your **principal**—the money you invest—or provide a source of income for the present or the future. In fact, by owning a varied portfolio of investments, you may be able to accomplish both goals.

At the same time, investing means you have to be willing to accept risk, like cyclical market downturns or the potential loss of some of your assets, to achieve the results you seek. That's not the case with insured bank accounts, which virtually eliminate risk to your principal, but provide little growth or income.



1 Set Goals

Successful investing usually involves creating a financial plan. The plan can be a formal document or simply a list of things you wish to do in the future. But it must include the financial steps you'll take to achieve those goals. Some will be short term like buying a new car, making a down payment on a home, or starting a new business. Others may be mid-term goals, like financing your children's education, paying for extended travel, or purchasing a second home. Finally, there are long-term goals—most notably, planning for a comfortable retirement.

2 Start Now

There's no perfect time to invest, but the sooner you start, the more time your assets have the potential to grow. Not only can you add money to your investment accounts for a longer period, but you can afford to take more financial risks, with the corresponding potential for larger returns. And you can ride out the inevitable downturns in the investment markets, giving your portfolio time to regain any lost value.

But remember, it's never too late to start investing either.

3 Stick With It

While past results can't guarantee what will happen in the future, stocks and the ETFs and mutual funds that invest in stocks have provided stronger returns over the long term than cash or fixed-income investments. That's due to their potential to increase in value and to **compounding**, which occurs when investment earnings are reinvested to produce a new base on which future earnings can accumulate.

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Making a Financial Plan

A financial plan is a working document that can be as flexible or as focused as you want it to be.

Whether you work with an adviser to create a plan, use a financial planning site or app, or devise one on your own, you'll need some basic financial documents to establish your starting point. Advisers, for example, usually ask to see recent income tax returns, a summary of your investments, information on your retirement plans, and your life insurance policies.

By evaluating the financial choices you've made so far, it's easier to plan for the future. This involves defining your priorities and developing a timeline for meeting them. Otherwise, it's too easy to find yourself making random decisions that won't move you forward toward your goals and may even interfere with achieving them.

A good financial plan is always a work in progress, though. You'll modify it regularly as time goes by, having reached some goals and redefined others.

OWNERSHIP: ONE OF THE KEYS TO PLANNING

The kind of ownership you select for property and other assets determines what you can do with them, how vulnerable they are to creditors, and what happens to them after you die. Laws are complicated and vary from state to state, so you should seek professional advice.

Ownership	Features
Individual (or sole)	• You own the asset outright
Joint tenants with rights of survivorship	• You share the asset equally with one or more joint owners • At your death, the assets automatically transfer to joint owner(s) • You generally can't sell property without consent of joint owner(s)
Tenants in common	• Each owner holds a part, or share, of the whole • Individual shares can be sold, given away, or left as owner wishes
Tenants by entirety	• You must be married • Mutual consent is needed to divide or sell the property • At death the property goes to the surviving owner
Community property	• In the nine states with community property laws, most property acquired during marriage is owned equally by both partners • Once property becomes community property, it remains so even if you move out of the state

Choosing an Adviser

If you're looking for an investment adviser, you'll want to set up some criteria to help you evaluate the people you may work with. Among the questions you can ask to help you make a choice:

How much experience have you had working with clients that share my situation and goals?
Ten years of experience isn't too much to expect, especially if you're new to investing.

What's your background and expertise?
You'll want to work with an adviser who has a strong reputation in the field, either as an individual or as an employee of a respected company, and appropriate credentials.

What kinds of investments do you sell most often?
You may want to look for an adviser who suggests a broad range of investment products including traditional and perhaps some alternative investments.

How are you paid?
Some advisers are paid commissions on the products they sell, some receive flat or hourly fees for their service, and some are paid a combination of fees and commissions.

Would you explain how the investments you recommend will help me achieve my goals?
You'll want an adviser who's willing and able to explain how investments work and why they're suited to your needs.

How will I know if my investments are producing the results I want?
Advisers should provide regular reports on the status of your accounts and be willing to explain how well your investments are performing and what adjustments to consider.

THE RISK ISSUE

Financial planning almost always involves making investments. One issue you'll have to resolve is the level of investment risk you're comfortable taking. The choice ranges from very little to a great deal, with a broad middle ground between the extremes.

Conservative investors tend to protect their principal to the extent that's possible while still realizing enough return to outpace inflation. They may prefer insured certificates of deposit (CDs), US Treasury issues that they hold to maturity, and securities such as high-rated bonds, blue-chip stocks, and balanced mutual funds.

Aggressive investors are willing to put their principal at greater risk for the potential of realizing a higher return and greater growth. They may invest in new or troubled companies, higher-risk bonds, and a range of alternative investments.

Moderate investors emphasize growth over safety, though they typically prefer to limit the percentage of their portfolio assets committed to higher-risk investments. They may select a variety of securities and other products, including some alternative investments.

The risk of investing too conservatively limits your ability to realize your goals. But investing too aggressively, especially as you get older, increases the potential for losing money in a market downturn without leaving time to recoup your losses. That's risk you may not want to take.

BEATING INFLATION

Outpacing the effects of **inflation**, or the gradual increase in what things cost, is one reason financial planning is so important. Because prices rise, money doesn't buy as much this year as it did last year. Ten years from now, it will buy even fewer of the things you need.

So in order to maintain the same standard of living, you need an equivalent increase in income every year. One way you may achieve that is by investing in assets with the potential to provide a return higher than the rate of inflation. Usually, that means a greater emphasis on equities than on bonds or cash.

ASSESSING PROGRESS

At least once a year, you and your adviser should evaluate the investments you've made to see if they're providing the return you expected. If not, it may be time to make some changes to your portfolio. But keep in mind that what's happening in the securities markets in general will have a major effect on how individual investments perform.

If the economy is healthy and the markets are prospering, your investments should reflect that strength. But if investments overall are lagging, yours are likely to lag as well. A diversified portfolio of investments helps you manage some of the market risk that every investor faces, though it doesn't guarantee a positive return.

Getting the Money Together

Accumulating and allocating investment money is a key part of your plan.

With your financial plan in hand, you can turn your attention to getting the cash together to make the first investment, and the next one, and the ones after that.

You don't need much money to open an investment account. And once it's opened you can add to it easily by having money directly deposited from your paycheck, transferred from your checking account, or by writing a check yourself.

You can also accumulate money in a savings account and plan to transfer lump sums to your investment account. But you should compare what you'd earn in the savings account with what you have the potential to earn by investing right from the start. You may find investing makes more sense for no more effort.

INVESTING AT WORK

You may start investing in a retirement plan before you open a personal investment account. In that case, your employer has chosen a plan provider—often a mutual fund company—and you choose among investments available through the plan.

INVESTMENT ACCOUNTS

To open an investment account with a brokerage firm, mutual fund company, or the brokerage arm of a bank or credit union, you meet in person with a registered representative—better known as a broker—or enroll online by clicking on the Open An Account tab and following the prompts.

Minimum opening deposit

You'll want to investigate how much cash you'll need to open an account and keep it active. Online accounts generally require modest minimums, such as $500, but may require $2,500 or more. Full service firms may offer several levels of interaction with investment professionals, with minimums ranging from $10,000 to $100,000.

Commissions

When you invest you typically pay a commission or sales charge plus transaction costs. Costs range from $0 for stocks and ETFs at large online brokerage firms and directly sold mutual funds to an average of 2% to 2.5% of the trade.

Customer service

The more interaction you want with an investment professional, the more likely you may be to lean toward a brick and mortar firm. However, some, but not all, online firms offer extensive customer service as well, either online or over the phone.

Other factors

Other things you may want to investigate before you choose a firm are the types of investment products you can purchase, the availability of investment research or stock analysis software, and the fees that might apply in addition to commissions.

Add NEW MONEY regularly to investment accounts

REINVESTING YOUR EARNINGS

One of the most reliable ways to build your assets is to reinvest the money you earn on the investments you already have.

Dividends and interest from stocks and bonds are paid into your brokerage account, and you can ask your broker to reinvest them. With mutual funds, you can participate in a reinvestment plan, which means distributions are used to buy additional shares directly.

Making arrangements like these demonstrates why having an investment plan can make such a positive difference: If you know what you want to do next, you won't end up holding earnings in cash for very long.

Purchase INVESTMENTS with the funds you accumulate

Choosing investments is always a challenge, and when you're just getting started it may be intimidating.

Many people start with mutual funds, in part because they're the most common investment in a retirement savings plan. In addition, if you're investing on your own, the initial cost of buying fund shares is relatively modest—often $1,500 to $3,000 and sometimes less—and you can add to your fund in increments of $100 or less.

If you compare costs, you can find a range of funds with extremely low annual fees, called **expense ratios**. The less you pay to own a fund, the more of your return you keep.

ETFs can also be attractive as initial investments, especially those that track the performance of a large number of individual stocks or bonds. Expense ratios are typically low, as they are with index mutual funds.

You might choose both stock and bond funds and ETFs or choose US Treasury bills and notes for the fixed income part of your portfolio. You can open an online TreasuryDirect account linked to your bank account to buy new issues or roll over your maturing ones. There's no charge for purchases or holding the issues.

By reinvesting your earnings and adding new money regularly to your account, you can gradually expand your portfolio. Some investors stick to mutual funds, ETFs, and Treasurys. Others add individual securities as their account value increases. The choice is yours.

Reinvest EARNINGS

THE ACCUMULATION PHASE

You can build an investment account from money you're earning by adding a certain amount every paycheck or every month.

If you stick to the guideline of investing 10% of your annual salary, you're talking about $542 a month if you're earning $65,000 a year, and $1,042 a month if you're earning $125,000 a year. You can find the monthly amount you're aiming for by dividing your annual salary by 12 and multiplying by 10%.

If you don't have a steady income, and you're building your investment assets in bursts rather than in regular installments, there may be an added incentive for using a mutual fund account that puts your money directly into investments. But remember that these accounts do not assure you'll have a profit or protect you from losses in a declining market.

OWNING INVESTMENTS TOGETHER

You may decide to own investments jointly with a partner or spouse. Sharing investment decisions may make the most sense for you, or you may want to split up the responsibility, with one of you taking the lead on long-term investment decisions and the other on meeting short-term goals. Also good to consider is the way you own the assets, including jointly with rights of survivorship or as tenants in common.

Investment Risk

There's no such thing as a totally safe investment, but you can choose the level of risk you're comfortable with.

When you invest, you always take a certain amount of risk. The most dramatic consequence is the possibility you could lose some or all of your principal. But you also have to consider the more probable risk that you won't accumulate as much as you need to reach your financial goals.

The two are interrelated. If you focus on reducing the risk of loss, you usually reduce your potential return and long-term financial security. If you can tolerate some fluctuation in your accounts' values, the most productive approach is often a middle ground. This means you include some investments with little risk to principal, a few with considerable risk, and the majority in assets that pose some risk but may also provide a strong return.

The bottom line is that you have to find a comfortable balance between too much risk and too little or adjust your goals to align with the risk you're willing to take.

ESTIMATING RISK

There's no way to predict how investments will perform in the future or the factors that may limit their return. But by looking at the way that an investment or type of investment has performed in the past, you can get a sense of the level of return it's reasonable to expect.

For example, if the annual return on large-company stocks has averaged about 10% since 1926, it's unrealistic to assume that future returns will average 15% or more, despite the fact that they have been that high or higher in some years. In other years, returns have been significantly lower and in about one-third of the years they've been negative.

KEEPING YOUR EYES CLOSED

One of the worst mistakes you can make as an investor is to ignore or minimize the risks you're taking, or to assume that nothing bad is going to happen. The only thing that's more risky is failing to invest because you're afraid you could lose money. Although you're likely to suffer some loss of portfolio value in a market downturn, in the next upturn you're positioned not only to regain lost ground but to accumulate additional savings provided you stay invested.

The Investment Pyramid

Risk is the result of volatility—how much and how quickly the value of an investment changes—and uncertainty.

HIGHER RISK

Unregulated products, such as crypto, futures contracts, some options, speculative equity investments, low-rated bonds, and certain commodities generally expose you to higher than average risk most of the time. In some cases, you could lose more than your initial investment.

HIGHEST GAINS OR LOSSES
You can win big, but lose bigger, with risky investments.

MODERATE RISK

Some investments pose greater risk at some times than at others. Stocks, equity mutual funds, and ETFs, as a group, may provide strong returns in some but not all periods. Individual stocks can expose you to major gains or losses. The same is true of bonds and real estate.

LIMITED RISK

Investing in the stocks and bonds of the largest and most stable issuers and the funds that invest in them poses more limited risk of major losses, but losses can and do occur in some periods. Even some investments considered essentially free of default risk, such as Treasury issues, can expose you to market risk.

LOWER RISK

The investments that pose the least risk of loss are insured bank products and short-term government issues. However, they typically expose you over the long term to inflation risk, which can be especially severe when interest rates are low.

LOWEST GAINS OR LOSSES
$10,000 in a savings account at rates below inflation will be safe but will lose value over time.

INTRODUCTION TO INVESTING

THE SECURITY OF INSURANCE

One of the reasons people feel comfortable about putting money into bank products—like CDs, money market accounts, and regular savings—is that their investments are insured through the **Federal Deposit Insurance Corporation (FDIC)**. Even if the bank folds, the money is safe.

But, it's not that simple. If a bank is bought out by another bank—a common phenomenon as large regional banks expand—the money will be safe, but the rates you had been earning might not be. Banks that acquire others are under no obligation to pay the same CD rates, for example, that the banks they bought paid.

It's also important to understand how FDIC insurance works. Basically, it insures you per **account category** in each bank. The five categories that most people use are individual, joint, trust, retirement, and business accounts. For example, if you had an individual account and an IRA, both of them would be covered up to the limit, currently up to $250,000 per account. Accounts in separate branches of the same bank are considered the same account, but if you have an individual account in two different banks, each account is covered up to the limit.

THE RISK OF HIGH YIELDS

When the economy is down, and investment earnings decline, you might be tempted to seek an investment that produces the higher returns to which you've grown accustomed. The risk is buying lower-quality investments (which pay more to attract buyers), or investments you don't know anything about. It's a good idea to be skeptical of any investment described as risk free, except perhaps US Treasury bills, or that promises a dramatically higher yield than better-known products. Even if it's legitimate, it's likely to have strings attached.

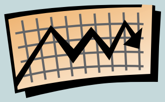
EMPLOYER STOCK

If you work for a publicly traded company, one of your retirement plan choices may be buying its stock. Or your employer may make its matching contributions in stock. There may be good reasons to choose the stock, including the fact that it gives you an opportunity to share in the success of your company.

But there are risks in tying your financial security too tightly to a single source. At worst, you could lose your job and your 401(k) could take a big hit. A useful guideline is to keep company stock to less than 10% to 20% of your account value.

OTHER KINDS OF RISK

Beyond the risks of the investments themselves—for example, a new company that fails or an established company that suffers severe losses—there are other risks you can't predict or control but must be prepared for:



MARKET RISK depends on the state of the economy as a whole. If the stock market tumbles, your stock investment will probably decline in value even if the companies whose stock you own are making money.

CURRENCY FLUCTUATION is increasingly a factor in investment risk, as more people put money into international markets. If the dollar rises in value, for example, the value of overseas investments declines—and vice versa.

INFLATION RISK affects the value of fixed-rate investments like bonds and CDs. If you buy when interest rates are low, the value of your investments declines as inflation and interest rates rise because the old interest rate isn't adjusted to keep pace.

POLITICAL TURMOIL is a risk because the economies of different nations are closely intertwined. Threats to the oil supply, for example, have disrupted the economy before and could again.

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INTRODUCTION TO INVESTING

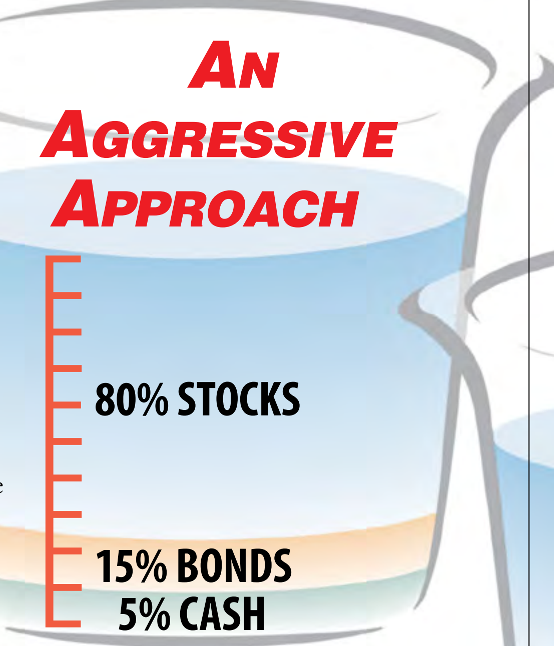
Allocating Your Assets

Divide and conquer is often the best way to win your investment battle.

Asset allocation is a strategy for increasing investment return while helping to manage investment risk. You allocate by assigning percentages of your overall portfolio to different categories of investments known as **asset classes**. Each asset class differs from the others in some critical ways, including how the value of the underlying investments is determined and how they put your money to work.

There are several reasons why asset allocation is a crucial principle of sound investing:

- No single asset class produces the strongest return year in and year out.
- Different asset classes tend to produce their strongest returns at different times and under different conditions.
- An asset class with a strong return in one year may have a weak return in the next, or the reverse.



As a result, if you're invested in several asset classes at the same time, you can benefit from each class's strong years without being as vulnerable in their weak ones—provided, of course, that you don't move all your money into the current strong performer and sell off the weak one.

FOLLOWING A FORMULA

To make your allocation decisions easier, financial professionals have devised some standard formulas for dividing up your portfolio based on factors including your age, your investment goals, your liquidity needs, and the amount of risk you're willing to take. These models are flexible, though, and you can adapt them to your own needs.

For example, you may decide on a classic allocation model—say 60% in stocks, 30% in bonds, and 10% in cash—and stick with it. Or you may decide to be more aggressive, increasing your stock holdings to 80% early in your financial life, and then become more conservative by reducing them to 40% after you retire.

MAKING IT WORK

Thinking in percentage terms as you add money to your accounts may seem complicated, but it's really not.

A MATTER OF TASTE

Deciding on the percentages of your investment assets to allocate to stocks and stock ETFs and mutual funds, bonds and bond ETFs and mutual funds, and cash and cash equivalents isn't an easy task. There's no single asset allocation that's right for everyone. And the one that's appropriate when you're 25 probably won't be suitable when you're 50 or 75.

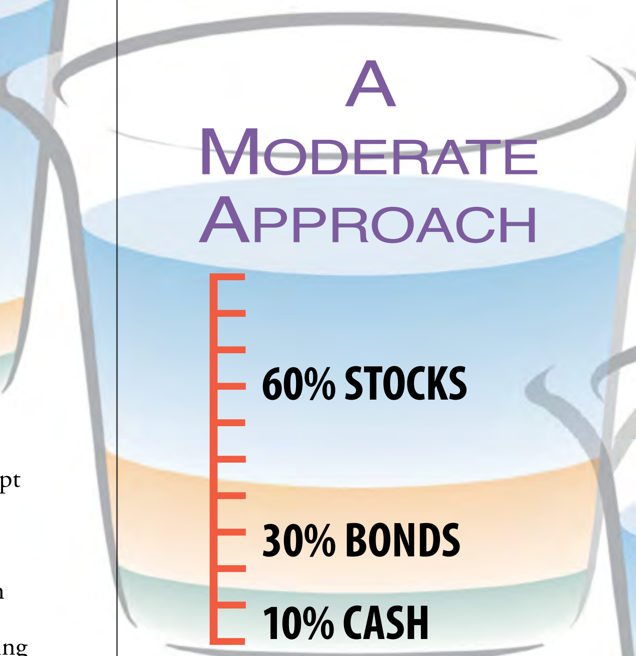
That's because the element of unpredictability in investing, especially investing in stocks and stock funds, isn't such a threat when you've got a long time to reach your goals. But if you're counting on your investment assets to meet an important near-term goal, you'll probably want to reduce the risk of losing your principal.

In addition to your age, you also have to consider what your goals are, what they are likely to cost, the size of your investment portfolio, and your risk tolerance in selecting an allocation. Investment experience also plays a role.

While many investors stick to stock, bonds, and cash, others investigate adding small percentages of real estate, equity options, commodity funds, and direct investments to the mix. One reason is to include non-correlated investments, or those whose prices are not influenced by the same factors that drive changes in stock and bond prices.

If you're using the moderate 60%-30%-10% approach, for example, each time you have money to invest—say $1,000—you could put $600 into a stock mutual fund, $300 into a bond fund, and $100 into a money market fund toward the purchase of your next CD or T-bill.

While your overall portfolio may never be allocated as precisely as a hypothetical model, perfection isn't what you're after. But by adding money to all three investment categories, in the approximate proportions you've decided on, you've made it easier to maintain the allocation you want.



A CYCLICAL PATTERN

Investment markets and the economy as a whole tend to move in recurring cycles that affect how different asset classes perform. For example, the prices of existing bonds tend to drop when market interest rates rise and increase when rates fall. Stocks, on the other hand, tend to gain value when rates fall and may retreat when rates rise.

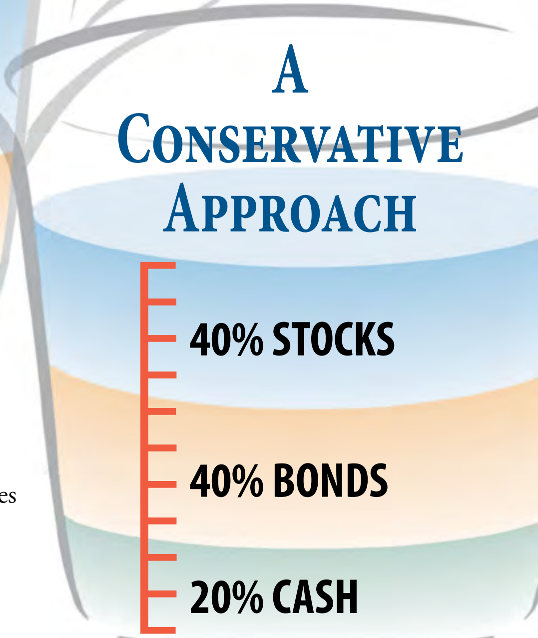
While you can't pinpoint when rates will change or the timing and intensity of any of the other factors—such as corporate earnings, unemployment rates, or political uncertainty—that affect investment performance, you can count on asset allocation to smooth, though not eliminate, the impact on your portfolio value. In contrast, if you owned only stocks when stock markets were falling, there would be nothing to cushion the blow. One word of caution, though: Asset allocation doesn't guarantee a profit or insulate you from losses in a broad market downturn.

INTO THE FUTURE

It's just as important to allocate the investments in your retirement funds as it is to direct the money you're investing on your own. That may mean putting a substantial part of your 401(k) or IRA account, for example, into stocks and some into fixed-income investments, though probably little or nothing in cash.

It also means looking at the bigger picture of your retirement and non-retirement investments together. For example, if you're putting most of your 401(k) money in stock mutual funds, you may want to balance that by putting a larger share of your nonretirement money into fixed-income investments.

Or, if you know you're eligible for a specific, fixed-income pension when you retire, you may want to invest more heavily in stocks on your own. Sorting out all the details and figuring out the best overall allocation is one of the ways working with your financial adviser may make a real difference to your bottom line.



ANTICIPATING RESULTS

It's impossible to predict investment return for any asset class in a single year, but you can calculate historical average annual return, which lets you anticipate probable long-term future return. That is essential to choosing the appropriate asset allocation. For example, large-company stocks tend to have a higher return than long-term bonds over time, despite having deeply negative returns in some years. That's why these stocks tend to command the largest allocation in many portfolios.

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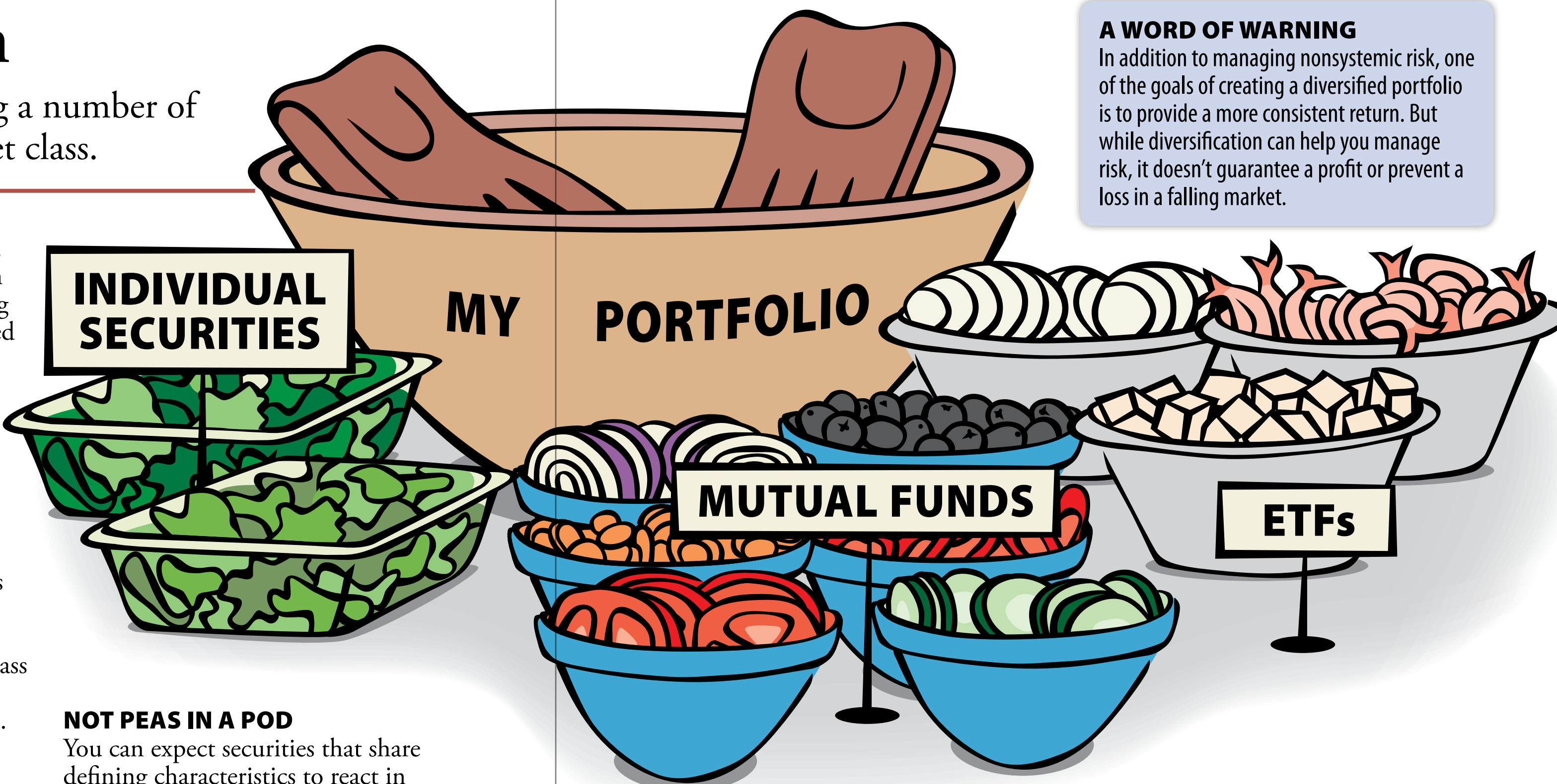
INTRODUCTION TO INVESTING

Diversification

Diversifying means buying a number of investments within an asset class.



No matter how good a recipe is, it doesn't guarantee high-quality results. You also need superior ingredients. In investment terms, this means building your portfolio by selecting a diversified group of securities for each asset class you invest in and ensuring that each of these securities meets your criteria for investing.

For example, if you are investing part of your portfolio in US equities, you might choose a number of individual stocks. Or you might diversify by choosing a variety of mutual funds or exchange traded funds (ETFs) investing in US stocks.

Diversification within each asset class is important because it allows you to offset, or dilute, security-specific risks.

FINER DISTINCTIONS

Most **asset classes** are defined in fairly sweeping terms, such as equities or long-term debt. In the United States, there are more than 5,700 listed common stocks that belong to the equity category, several thousand that aren't listed, and more than 3,300 ETFs and 7,200 mutual funds that invest in stocks. Long-term US debt includes several million corporate, federal government, and municipal issues.

Subclasses, or smaller categories, within the broad classes typically behave differently from each other even though they share the essential defining features of the class to which they belong.

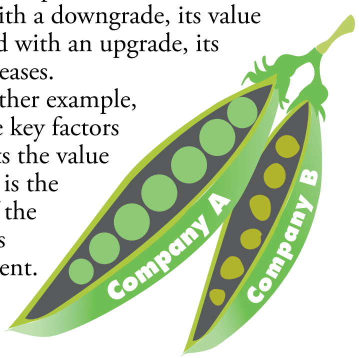
For example, companies issuing equities can be divided by **market capitalization** into large, mid, small, and micro subclasses. Differences in capitalization generally indicate differences in growth potential, share-price volatility, and the likelihood that the issuing company will survive an economic downturn.

Other ways to distinguish equity subclasses are by industry, sector, and valuation—that is, whether they're overpriced or underpriced based on a criterion such as average **price/earnings ratio (P/E)**—and whether they're domestic or international issues.

On the fixed-income side, differentiators include taxable and tax-free status, interest rate, term, callability, and rating.

NOT PEAS IN A POD

You can expect securities that share defining characteristics to react in much the same way to specific factors or situations. For example, one of the major determinants of the value of any long-term corporate bond is its credit rating. With a downgrade, its value drops, and with an upgrade, its value increases.



As another example, one of the key factors that affects the value of a stock is the quality of the company's management. Some companies have exceptional management and, as a result, tend to outperform their peers. Other companies have inferior management and tend to falter even though they may be producing comparable products or providing similar services.

As an investor, it's often hard to know which companies are well-managed and which are poorly managed—except in hindsight. However, in a diversified portfolio of stocks, the effects of superior and inferior management tend to balance out. Therefore the impact of management quality is an example of security-specific risk that you can reduce or even eliminate through diversification.

A WORD OF WARNING

In addition to managing nonsystemic risk, one of the goals of creating a diversified portfolio is to provide a more consistent return. But while diversification can help you manage risk, it doesn't guarantee a profit or prevent a loss in a falling market.

LIMITING YOUR EXPOSURE

The possibility of a downgrade in a long-term corporate bond's rating that dramatically reduces its return represents a significant source of risk. Compounding the problem, it's hard to predict when the credit quality of a particular bond will change. While this risk is significant with any single bond, you can reduce your overall risk by buying an assortment of similar bonds.

If, for instance, instead of owning one bond you own a diversified portfolio of bonds, then the credit quality of some of the bonds may be upgraded while the credit quality of others is downgraded. Over time, the upgrades and downgrades may equalize so that, overall, the impact of credit rating changes on your portfolio's return is reduced. In other words, diversification can limit a certain amount of credit risk.

But adding investments randomly is unlikely to achieve the diversification you seek. The quality and range of investments and the care with which they're selected is more important than how many you own.

DIVERSIFYING WITH FUNDS

A well-diversified portfolio is likely to contain securities from various subclasses—though not necessarily from all of them—within each of its asset classes.

For example, short-term bonds, which mature in less than a year, tend to be less vulnerable to inflation risk than bonds with 30-year terms. They're also much less likely to expose you to credit risk since the issuer's ability to pay will not be subject to as many changing factors. But in most environments short-term bonds pay lower rates.

Another approach to diversification is concentrating your investment assets in mutual funds and ETFs. Because each fund is diversified in its own right, you don't have the responsibility of choosing individual investments or owning enough different securities in any category to get the variety you need. And because you can choose among a broad range of funds, each of which invests to meet a particular objective, you can create a diversified portfolio of diversified funds.

As part of your selection process, you'll want to evaluate the fees and other costs of owning the funds you're considering. The higher the annual expenses, the lower the return you realize.

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Reallocating and Rebalancing

Rethinking your investment mix is a critical part of smart investing.

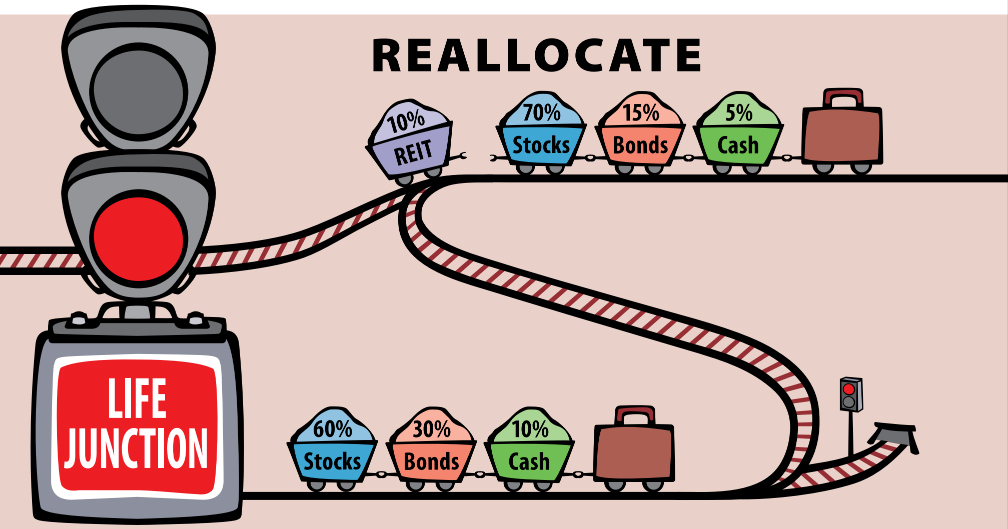
When you use an asset allocation strategy, you select a mix of investments to help you achieve your financial goals. Making this approach work for you requires your attention from time to time. For example, you may need to reallocate your assets to reflect changes in your goals, time frame, or the risks that concern you most. In addition, you'll almost certainly have to rebalance your portfolio over time to keep it aligned with your allocation strategy.

THE RIGHT MIX

It can be easy to confuse reallocating and rebalancing. Both involve modifying the way your portfolio is spread across a variety of asset classes. And you make the modifications in similar ways, often by selling some investments and buying others. But the two serve quite different purposes.

When you **reallocate**, you alter the mix of asset classes in your portfolio to be more appropriate for your new investment focus. The change typically involves assigning different percentages of your account value to particular asset classes and sometimes adding new classes.

When you **rebalance**, you bring your portfolio back in line with the asset allocation you have chosen as an appropriate way to meet your goals. Without this readjustment, you could drift into an allocation mix that exposes you to greater investment risk, or one that is likely to provide a lower return, than you had anticipated.



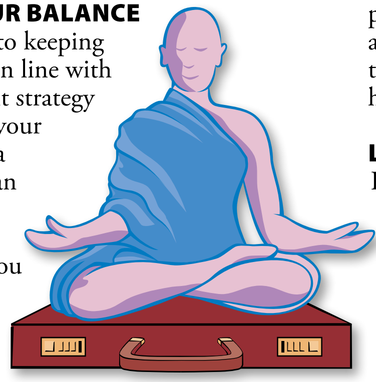
A NEW PERSPECTIVE

By gradually increasing the proportion of insured and income-producing investments in your portfolio mix as your child gets ready to start college or you're starting to think about retirement, you can help protect what you've accumulated and put new emphasis on owning assets that pay out regular interest or dividends.

You might want to begin reallocating by identifying some higher-risk, often more volatile, investments that have increased in value. By selling them and reinvesting the proceeds in a timely way, you can help protect against the risk of a major market downturn in the years just before you start withdrawing the money. You might also include asset classes you hadn't focused on before, including real estate investment trusts (REITs) on the equity side and certificates of deposit (CDs) and US Treasury bills and notes in the cash category.

You can also modify your allocation by directing the new money you invest into income-producing or asset-preserving investments. This might allow you to hold on to some investments that have served you well over the years, and that you'd prefer not to sell, while still altering your asset mix.

KEEPING YOUR BALANCE



One approach to keeping your portfolio in line with your investment strategy is to rebalance your portfolio once a year as part of an annual financial assessment. Alternatively, you may want to rebalance only when your portfolio's strongest asset class exceeds your target allocation by a specific percentage, say 10% or 15%. This approach reduces transaction costs and potential capital gains taxes.

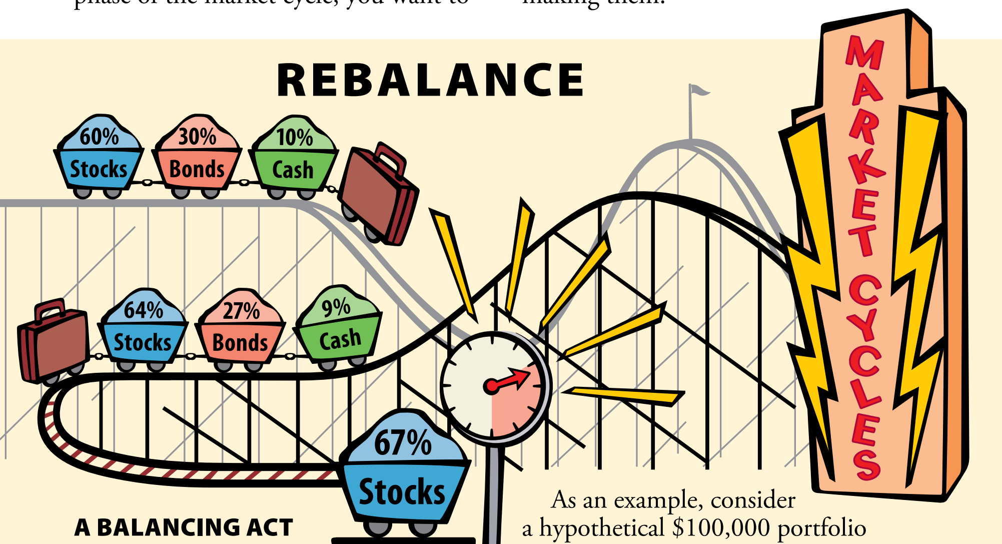
You can rebalance your portfolio in a number of ways, similar to the ways you reallocate: selling off some holdings in the asset class that's currently strongest or shifting new investments to the lagging class. Since the lagging class is likely to outperform in the next phase of the market cycle, you want to position yourself to take advantage of the opportunity to buy low now so you can sell high later.

LOOKING AT HIDDEN COSTS

If you have online access to your portfolio, you may be able to reallocate or rebalance as often as you wish. But there are a number of potential drawbacks to constant trading.

Most buying and selling comes with a price tag, which includes not only potential commissions or sales charges but also transaction costs. And, unless you're trading in a tax-deferred account, you'll owe capital gains taxes on any profits you realize. If you've owned an investment for less than a year before selling, those taxes are calculated at the same rate as on your ordinary income.

So there is a real risk that you may be spending more to make portfolio changes than you earn from making them.



A BALANCING ACT

One result of the normal ups and downs of the financial markets is that, at any given point, your actual portfolio allocation may be significantly different from the one you have chosen and would prefer to maintain.

This is because the various asset classes move through constantly recurring performance cycles. As a result, the return on equities is stronger in some periods and weaker in others. The same is true of debt and cash investments. And when one asset class is strong, the others often lag. This, in turn, affects the proportional weight of the asset classes within your portfolio.

As an example, consider a hypothetical $100,000 portfolio with 60% allocated to equities, 30% to long-term debt securities, and 10% to cash. If stocks, ETFs, and mutual funds provide a one-year total return that's higher than the average historical rate while the return on fixed-income and cash investments is lower than average, the balance of the three asset classes in the portfolio shifts, perhaps to something closer to 64%-27%-9%.

While this shift isn't particularly dramatic, another year or two of similar returns could increase the equity allocation to closer to 70% while reducing fixed income to 22% and cash to less than 8%. At this point, your portfolio is clearly more aggressive than you intended.

Figuring Total Return

Return is what you get back in relation to the amount you invest.

As your portfolio grows, you'll want to monitor its performance to determine whether you're on track to meet your goals. As you evaluate your progress, you'll need to be prepared to make changes—by selling some investments and buying others—if certain ones aren't meeting your expectations.

As you monitor, though, you have to be realistic. If stocks in general are struggling to stay positive, as sometimes happens, you can't expect the stocks or stock funds you own to provide a strong return. Selling them and substituting others isn't likely to improve performance. And, in the long term, neither will selling everything and putting what's left in a savings account.

By the same token, if the stock market is gaining value, you may want to consider replacing a stock whose return is still lagging. Similarly, you may want to replace a stock if the issuing company is in serious financial trouble from which it seems unlikely to emerge, and you want to avoid deeper losses.

DESIGNING THE TEST

The key to performance testing is **return on investment (ROI)**, or what you get back in relation to the amount you invest, called your investment **principal**.

If you start out with $1,000 and end up with $2,000, your return is $1,000 on that investment, or 100%. If a similar $1,000 investment grows to $1,500, your return is $500, or 50%—though of course you could also have a negative return in any period.

But unless you hold different investments for the same time period, you can't determine which has a stronger performance. What you need to compare your returns is the **annual percent return**, the average percentage that you've gained on each investment over a series of one-year periods.

For example, if you buy a stock for $15 a share and sell it for $20, your profit is $5. If that happens within a year, your rate of return is an impressive 33% ($5÷$15=33.3%). If it takes five years, your average annual return will be closer to 7%, since the profit is spread over a five-year period.

Sell at	Profit	Return
Year 1	$5	33%
Year 3	$5	11%
Year 5	$5	6.6%

MEASURING TOTAL RETURN

In addition to any change in value measured by a gain or loss in market price, an investment's **total return** includes any income it has provided, whether you reinvest the money or take it as cash. Examples are stock dividends, bond interest, and income distributions from mutual funds and other pooled investments.

Change in value +/– Income = Total return

You don't actually have to sell, or realize your gain or loss, to calculate total return. You can figure it based on your unrealized gain. That's also known as a paper profit or a paper loss.

GETTING A GOOD RETURN

There's no absolute standard for determining a good return. The average return on different classes of investments—small company stocks, for example—over a specific historical period are a matter of record. And total return figures for mutual fund performance are reported regularly. You can compare how well your investments are doing against those numbers as a starting point.

Another factor to take into account when evaluating return is the current inflation rate. Your return needs to be higher than the inflation rate if your investments are going to increase in value. In fact, **real return** is reported return minus the inflation rate.

INVESTING STYLES

As a **buy and hold** investor, you select securities you plan to keep for an extended period because you expect long term positive returns. If you trade investments, you make tactical buy and sell decisions, choosing investments when you expect them to gain value and selling when their growth matches your expectations or if the price stagnates or falls. Both approaches may produce strong returns, though the second requires more constant attention and incurs larger trading costs. What doesn't work is trying to time, or outsmart, the market with constant buying and selling.

Figuring Return Is Not That Simple

Figuring out the actual return on your investments can be difficult because:

- The amount of your investment changes. Most investment portfolios are active, with money moving in and out.
- The method of computing return can vary. For example, performance can be **averaged** or **compounded**, which changes the rate of return dramatically, as the chart below demonstrates.
- The time you hold specific investments varies. When you buy or sell can have a dramatic effect on overall return.
- The return on some investments—such as limited partnerships or some real estate investments—is difficult to pin down, partly because they're not publicly traded. You have to evaluate them by different standards than you do stocks or bonds, including the diversification they provide.

COMPOUND vs. AVERAGE RATE OF RETURN

Here are six sets of investment returns each totaling 27% over three years. While the average annualized return in each case is 9%, compound annual returns vary significantly. The most volatile investment, number 6, provided the weakest compound return despite having the highest one year return, at 40%, in part because it also had the two lowest, or –5% and –8%, and those losses occured in the first two years, creating an initial deficit.

Investment	1	2	3	4	5	6
Year 1	9%	5%	0%	0%	–1%	–5%
Year 2	9%	10%	7%	0%	–1%	–8%
Year 3	9%	12%	20%	27%	29%	40%
Average return	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
Compound return	9.00%	8.96%	8.69%	8.29%	8.13%	6.96%

USING BENCHMARKS

One of things you'll want to know as you evaluate performance is how well your investments are doing currently in comparison with other investments that have similar characteristics and return potential—large US corporations, for example, or telecommunications companies. That's where **benchmarks** help.

A benchmark is an index or average that reflects the changing value of a particular financial market or part of a market, called a sector. The benchmark serves as a standard against which to compare the performance of an investment that is part of that market or sector.

For example, the Standard & Poor's 500 Index (S&P 500) tracks the performance of 500 large, widely held US companies. It's the benchmark for large-company US stocks and the mutual funds and ETFs that invest in those stocks. Other benchmarks track small and mid-sized companies, long-term government bonds, types of mutual funds, and every other market segment you can think of, both in the United States and around the world.

Comparison with a benchmark provides relevant information, however, only when the investment belongs within the segment of the market that the benchmark tracks. You can usually find a list of relevant benchmarks by visiting the website of a company in which you're interested.

Investment Professionals

Expert advice can smooth the path to investing.

Investment professionals provide a variety of indispensable services, whether you're a new investor, have acquired a substantial portfolio, or fall somewhere in between. Depending on their qualifications and areas of expertise, they can help you create a financial plan, craft an investment strategy, select specific investments, and execute trades.

The challenge is finding someone with the right credentials, reputation, and experience to provide the services you need. Just as important, you want to choose a person or a team of people with whom you can build a collaborative and trusting long-term relationship.

TYPES OF PROFESSIONALS

The first step in building a working partnership with a professional is deciding on the type of expertise you need.

If you're actively making investments and accumulating a portfolio, the services of a stockbroker are essential. **Registered representatives**, who are commonly known as stockbrokers and may have titles such as financial adviser or account executive, work for brokerage firms. They must pass qualifying examinations administered by FINRA, the Financial Industry Regulatory Authority, and are licensed to buy and sell investments for their clients. As part of their job, they provide advice about specific investments that are in the best interest of each investor, based on age, risk tolerance, investment experience, and financial situation.

If you're seeking a professional to manage your investment portfolio and provide investment advice, you may choose to work with a firm known as a **registered investment adviser (RIA)**. The firm and its **investment adviser representatives**, who work directly with customers, must register with the Securities and Exchange Commission (SEC) or the state or states where they have offices. They have a fiduciary duty to provide investment advice that's in the best interest of each client. If you work with an RIA, you generally have an account with an affiliated brokerage firm, which handles buy and sell orders.

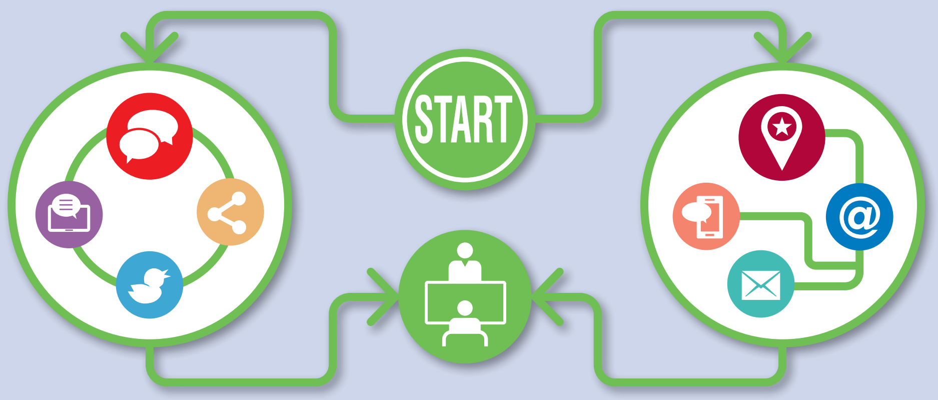
STARTING THE SEARCH

The most effective way to begin your search for a broker or adviser is by asking for recommendations from the other professionals with whom you work, such as your attorney, accountant, or tax adviser, and friends and family who are investors themselves. If that's not an option, make a list of the brokerage firms, RIAs, and financial planners, large and small, with offices in your area and check out their websites. You can then decide which ones to contact. The tone of the response, the questions you're asked, and the kind of information you're given will help you decide whether to schedule an interview.

While many investors prefer to meet face to face with the professionals they're working with, especially during preliminary meetings, others are equally comfortable being in contact remotely, by phone, email, video-conferencing, or other digital connections. What's important, either way, is whether you believe the potential relationship will be a good fit.

REGULATION OVERVIEW

The US system of federal and state securities regulation is designed to protect investors by ensuring they have enough information to make informed buy and sell decisions. So corporations must submit detailed documentation and secure SEC approval before offering a security for public sale. They must also regularly file updated reports on their financial health and risks they face. In addition, both the investment professionals who sell securities and the exchanges where they're sold are regulated by self-regulatory organizations (SROs), including FINRA and the Commodities Futures Trading Commission (CFTC).



If you're married or in a long-term relationship, you should try to attend an interview together. It's crucial that the three of you be a compatible team. If each of you has had your own broker or adviser before you married, you might want to meet with each of these professionals before you make a decision.

You're likely to discover that your final choice of an adviser will be based on a combination of substance—with regard to knowledge and credentials—and a personal style with which you're comfortable.

DOING YOUR PART

The more clearly you've identified your goals and understand where you stand financially, the better you'll be able to explain the help you're looking for.

CHECKING CREDENTIALS

Before choosing a broker or adviser, it's essential to check his or her credentials.

For brokers and brokerage firms, you can use the BrokerCheck link on the FINRA website (www.finra.org) or call the hotline at 800-289-9999. You should also check with your state's securities regulator for information from the Central Registration Depository (CRD). States may have more comprehensive information about disciplinary issues and other complaints than FINRA does. You'll also want to be sure the firm is a member of the Securities Investor Protection Corporation (SIPC), which insures your account up to $500,000 if the firm fails and goes out of business.

For RIAs that manage more than $100 million of assets (AUM), you can check credentials with the SEC. For firms that manage less, check with the state where the RIA's principal office is located. The information you're looking for is in Form ADV. Part I describes the firm's business and any regulatory problems it has had. Part II explains the business practices, fees, and other information, typically in narrative form. Part III is a relationship summary (Form CRS) covering the services it provides, its fees and other costs, standard of conduct, and potential conflicts of interest.

If you're interested in a financial planner, one credentialed as a certified financial planner (CFP), chartered financial consultant (ChFC), or personal financial specialist (PFS) may be an appropriate choice. There's no regulator for the financial planning community, but the major credentialing organizations maintain lists of certified planners. You can check the details of various designations, including the requirements for certification, using the professional designations tab on the FINRA website. However, FINRA doesn't evaluate the various designations or suggest which may be more valuable than others.

REGULATION BI

Regulation Best Interest (BI) requires SEC-registered brokers to provide retail investors with Form CRS .

Working With a Broker

Brokerage firms link investors to financial markets.

Your orders to buy or sell publicly traded securities must be handled through a brokerage firm. You can buy and sell mutual funds, annuities, nontraded investments, limited partnerships, and a long list of other financial products through a firm as well.

A brokerage firm, also known as a **broker-dealer**, may be a multinational organization, a public or privately held national or regional company, or a small partnership. The larger the firm, the more offices it may have, and the greater the variety of services it may offer.

You'll discover, too, that firms also differ in style and cost. And there will be differences among individual brokers as well.

YOUR BROKERAGE STATEMENT

Keeping track of your investments is an essential part of being a smart investor. Your brokerage firm will send you an account statement, typically every month, or make it available online in real time.

Each brokerage firm's statement looks a little different, but all provide similar information:

- **The account summary**, which reports the total value of your holdings plus any gains or losses since the previous statement
- **The portfolio snapshot**, which shows how your assets are allocated across asset classes
- **The income summary**, which lists the dividends and interest for the statement period and year-to-date
- **The portfolio detail**, which shows the values of your holdings on the day the statement was issued, the estimated income or yield they provide, and your basis, or original cost, among other details
- **Daily activity**, which reports all the activity in the account during the period. If yours is a discretionary account, which means your broker is authorized to buy and sell without notifying you before a trade is executed, it's especially important to pay close attention to this section.

ROBO-ADVISERS

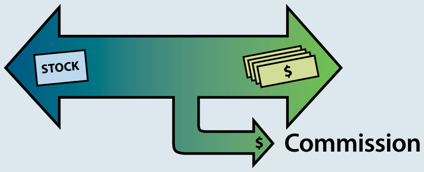
Robo-advisers are digital platforms that gather personal and financial data from their clients to create and automatically rebalance algorithm-driven investment portfolios appropriate to meet the clients' goals. Fees are low, often 0.2% to 0.5% of the account balance, and with many platforms there is no initial minimum investment, making the opportunity to invest available to a wider audience than had been typical in the past.

Remember that the statement will reflect what's happening in the financial markets, as well as report on your individual account. When stocks are down overall, your equity holdings are likely to lose some value. You'll probably be more concerned, however, if your equities don't increase in value during periods when the stock market is expanding.

HOW BROKERS ARE PAID

The way you pay your broker depends on the type of account you have, the frequency with which you trade, and the level of advice you receive.

TRANSACTION-BASED

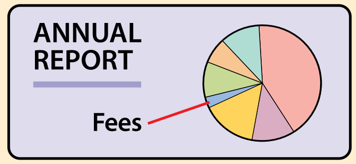


In transaction-based brokerage accounts, you pay a **commission**, or sales charge, and other fees each time you buy or sell, though the commissions vary by the type of product you trade. These arrangements apply to retirement or education savings accounts you may have with the firm as well as to taxable accounts.

If you pay commissions, you're generally charged a percentage of the transaction price or a flat fee for the trade, up to a specific number of shares of stock or comparable quantities of other securities. These charges can vary, sometimes significantly, from one firm to another. You may also find that commission-based transactions incur lower rates for orders you give online than they do for phone orders or other broker-assisted trades.

Firms may offer a more flexible commission arrangement if you trade frequently or buy and sell in large lots, so that you pay less per trade than someone who trades only a few times a year.

FEE-BASED



Or, if an investment adviser representative who works at the firm manages your portfolio, you may pay an annual asset-based fee based on the value of your account. This fee covers the more extensive investment advice you're given, plus some, if not all, of the trading costs.

You should ask for a summary of all potential expenses as part of choosing the firm you'll work with. In some cases, transfer fees may apply if you want to change firms, there may be account maintenance fees, and custodial fees may be levied on an IRA.

The firm with the lowest fees isn't necessarily the right choice for you, although it is true that the more you pay in fees, the greater the impact will be on the return you realize. On the other hand, when you have a personal relationship with a broker or account manager, you can discuss your investment ideas and those the manager suggests, weighing each choice on its own merits and for what it might add to your portfolio. For many investors, this expertise more than justifies the added expense.

Remember, too, that if you see something you don't understand or that appears to be wrong, the faster you bring it to your broker's and the firm's attention, the better.

RECEIVING CONFIRMATIONS

You should receive a confirmation of every purchase or sale that occurs in your account, either in hard copy or online. It should include the date of the transaction, the settlement date, the quantity, a description of the security including the CUSIP number, and the price per unit, the applicable fees, and the total cost or proceeds. You'll want to review all confirmations carefully to be sure the information is correct.

XYZ Brokerage Services
10 Any Street, Suite 100, Anytown, USA 10000
1-888-123-4567 www.xyzbrokerage.com

Charles Kim
20 Parker Place
Anytown, USA 10000

Brokerage Account Statement
Account Number: A5X-000001
Statement Period: January 1 – January 31

Account Summary

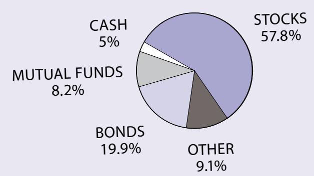
Beginning Value	$126,500.00
Change in Value	$2,200.00
Total Value	$128,700.00

Income Summary

Interest Taxable/Non-Taxable	$85.00
Dividends Taxable/Non-Taxable	$995.32

Portfolio Summary

Asset Allocation



Daily Activity

Type of Activity	Current Period
Opening Balance	$126,500.00
Securities Bought	$2,175.00
Securities Sold/Redeemed	$0.00
Deposits Made to Your Account	$220.00
Withdrawals From Your Account	$0.00
Withholding	$0.00
	$0.00
	$0.00

Financial Advisers

There's a lot to be gained from a professional perspective on your financial situation.

If you're looking for advice you can trust as you make major financial decisions, you might consider building a long-term collaborative relationship with a financial adviser.

An adviser can help you:

- Create a financial plan
- Understand potential investment opportunities and common investment mistakes
- Evaluate your tolerance for investment risk
- Determine an appropriate asset allocation by looking at the full range of your investments, including those in your retirement accounts
- Analyze how effectively you're meeting your financial objectives
- Reallocate your portfolio as your financial situation or your goals change
- Rebalance your portfolio as the value of different asset classes alters your preferred allocation

INTERVIEWING FINANCIAL ADVISERS

While you can work effectively with a stockbroker with relatively infrequent person contact, you may want a more direct relationship with an adviser who is guiding you through a variety of financial decisions in addition to selecting among specific investments.

That's one of the reasons an interview is an important part of the selection process. Before you schedule an appointment, you can find basic information about the firm on the adviser's website, though you'll want to verify its accuracy when you can with the SEC or your state regulator before moving forward.

Before your conversation, you'll want to think about what you want to learn from the interaction. Some of the direct questions you may want to ask:

- What experience do you have in working with people whose financial situation is similar to mine?
- How will we work together and how will you keep me up-to-date?
- What types of investments do you recommend most and why?
- What are your ideas on how someone like me should be investing?
- How are you paid for the services you provide and how are those fees calculated?

A TWO-WAY STREET

From the outset, you should put a premium on clear communication. And one of the best ways to ensure that you and your adviser understand each other is that important decisions, including any changes in investment objectives or portfolio allocation, should be in writing.

Five Ways Advisors Charge

THE PRICE OF FINANCIAL ADVICE

Advisers charge for their services in different ways. Sometimes the cost is built into the price of the investments you purchase, sometimes it is added to that cost, and sometimes you pay separately. You should ask for a statement of costs from those advisers who don't provide one automatically.

There are five ways you may pay for financial advice. Some of these have potential drawbacks that you'll want to evaluate carefully before choosing the person with whom you'll work.

The first, and for many the most preferable, is a **fee-only** charge. These advisers may earn a percentage of the assets they oversee or a flat monthly or annual fee. But because they don't buy or sell investments or earn commissions, they have nothing to gain by recommending one product over another.

Fee-based advisers charge a fee and also earn commissions on some of the products they sell, such as insurance-based annuities, life insurance, and mutual funds. You'll want to be sure you know which products those are, what the cost is, and why they are preferable to products that don't involve a commission.

Some financial advisers are paid exclusively on a commission basis, as stockbrokers are. The charge is typically calculated as a percentage of purchases you make based on their recommendations. The size of the commissions and how they are assessed vary by product.

Some advisers are salaried. One risk is that their recommendations may be primarily products offered by their employer. Others charge by the hour.

At least as important as the questions you ask are the questions a potential adviser asks you. Among the things a good adviser will want to know are the financial goals that are important to you, your current income, assets, and debts, and how knowledgeable you are about investing and investment risk.

CREATING A FINANCIAL PLAN

Putting a financial plan on paper is generally a necessary step in successful investment planning, and it's an area where a financial adviser can be an enormous help.

By clearly reflecting your objectives and the time frame for meeting them, a plan establishes a benchmark against which to measure progress. And by including your current financial situation, a summary of your current investments in both tax-deferred and taxable accounts, your need for liquidity, and any special concerns that will affect your investment choices, the plan lays out the foundation on which future actions will be built.

WEIGHING THE COST

You can evaluate the advice you're receiving by weighing what it's costing you against what you feel you're gaining. If it's clear to you, for example, that without your adviser's input you'd still be putting off reallocating your portfolio or changing your beneficiary designations, you're probably getting your money's worth. Or if you want help choosing between two insurance alternatives or aren't sure whether to add some alternative investments to your portfolio, you'll have a greater appreciation of the benefits of financial advice.

Of course, there are times when even the best advice doesn't work out, or when your portfolio isn't providing as strong a return as you'd like. You have to pay for that advice, too. But over time, most investors find that the cost of professional help pays for itself.

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Investor Protections

You'll want to be sensitive to things that could go wrong and seek solutions if they do.

The vast majority of investors have good relationships with their brokers and advisers. But difficulties do occasionally occur, ranging from minor problems to serious concerns about inappropriate advice or even fraud.

To protect yourself and your accounts, you should know:

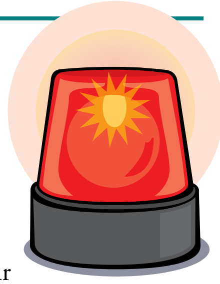
- How to avoid potential problems
- How to spot problems that do emerge
- What you can do to remedy the situation

The first step, of course, is checking credentials. If you do business with an unlicensed broker or unregistered investment adviser, for example, regulators may be less able to help you recover lost assets if something goes wrong.

PROFESSIONAL RESPONSIBILITIES

You have the right to expect that people who provide investment advice and those who buy and sell securities on your behalf will be honest and fair. That standard includes:

- Providing complete and accurate information about an investment, including how it works and the factors that could affect return
- Telling you about an investment's risks, including that a stock's return isn't guaranteed or that a bond's market value may fluctuate
- Providing full disclosure about the costs of an investment, such as fees, sales charges, and other expenses including those that may be deferred
- Advising you if an investment is **illiquid**, or hard to convert easily to cash, or carries a high redemption fee
- Providing accurate records of the status and value of your account



RESPONDING TO PROBLEMS

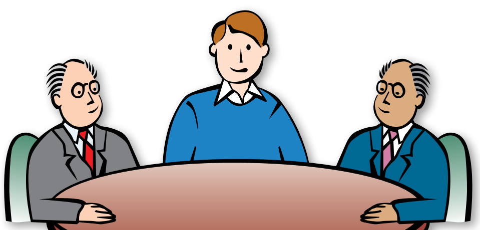
If you spot an error in your statement or other documents, or if you feel that excessive trading is going on in your account, contact your broker or adviser right away. That should be enough to resolve the situation if it's simply a misunderstanding. But, to protect yourself, keep a record of what you said, what the response was, and the date of your exchange.

If the problem is not corrected promptly, write to the broker or adviser's manager. If you get no response, contact the firm's compliance department and the chairman or president of the firm. If you come up empty-handed, take your complaint to your state's securities office, the SEC for RIAs, or FINRA for brokers.

MEDIATION AND ARBITRATION

If a problem with your broker remains unresolved you can call the FINRA Office of Dispute Resolution in your region or visit www.finra.org/arbitration-mediation for information on next steps.

With mediation, you and the firm work with an impartial third party to facilitate negotiations and hopefully



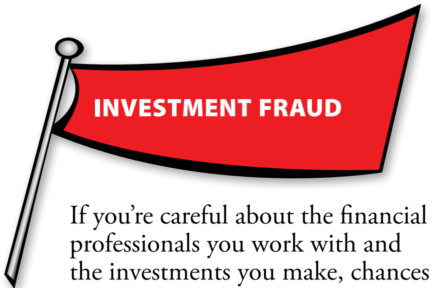
reach an agreement. It's less expensive that other approaches to dispute resolution. However, the mediator won't impose a solution, so there may be no progress.

Arbitration may be your only remaining option if you signed an arbitration clause when you opened

INVESTMENT PROFESSIONALS

your account, as most brokerage firms require. You or your lawyer present your case before a panel of one or three arbitrators selected by you and your opposing party. The decision is based on fairness rather than on legal precedent, and, in most cases, is binding.

Any firm that is a member of FINRA is required to go to arbitration if a customer requests it. The fee for a hearing is tied to the amount of your claim. If your claim is small or you can't afford to hire a lawyer, you may qualify for legal representation through a legal clinic run by a law school in your state.



INVESTMENT FRAUD

If you're careful about the financial professionals you work with and the investments you make, chances are you can avoid becoming a victim of investment fraud. But even experienced investors can be taken in by persuasive scammers.

The abundance of information available online has made it easy for skilled con artists to mine investors' personal information and target people based on their investing habits or their social, professional, or religious affiliations. Online bulletin boards, chatrooms, newsletters, and email enable dishonest brokers to act with little risk of detection.

CHECK WITH THE SEC
For information on how to handle investment problems, visit the SEC's Office of Investor Education and Advocacy at www.sec.gov/investor or call 800-SEC-0330.

Investment scammers make their living by convincing investors to put their money into high-risk, worthless, or even imaginary securities. They succeed by winning investors' trust and feeding them misleading information.

While investment fraud comes in many guises, there are some recurring warning signs:

- High-pressure sales tactics that encourage you to make decisions quickly or to do business in ways that are out of the ordinary
- Claims of high returns from investments that they say pose limited or no risk to your principal
- An opportunity that is presented to you as a tip, based on information unavailable to the general public
- An investment that doesn't have an official offering circular or prospectus available

Keep in mind, too, that you can't spot fraud by the quality of the presentation or the appearance of the con artist.

WARNING SIGNS
Be wary of any broker or adviser who

- Guarantees the return you'll receive
- Insists that an investment has little or no risk
- Suggests you put all your money into one or two products
- Argues with you or ignores your instructions
- Asks you to sign any documents you haven't read or don't fully understand

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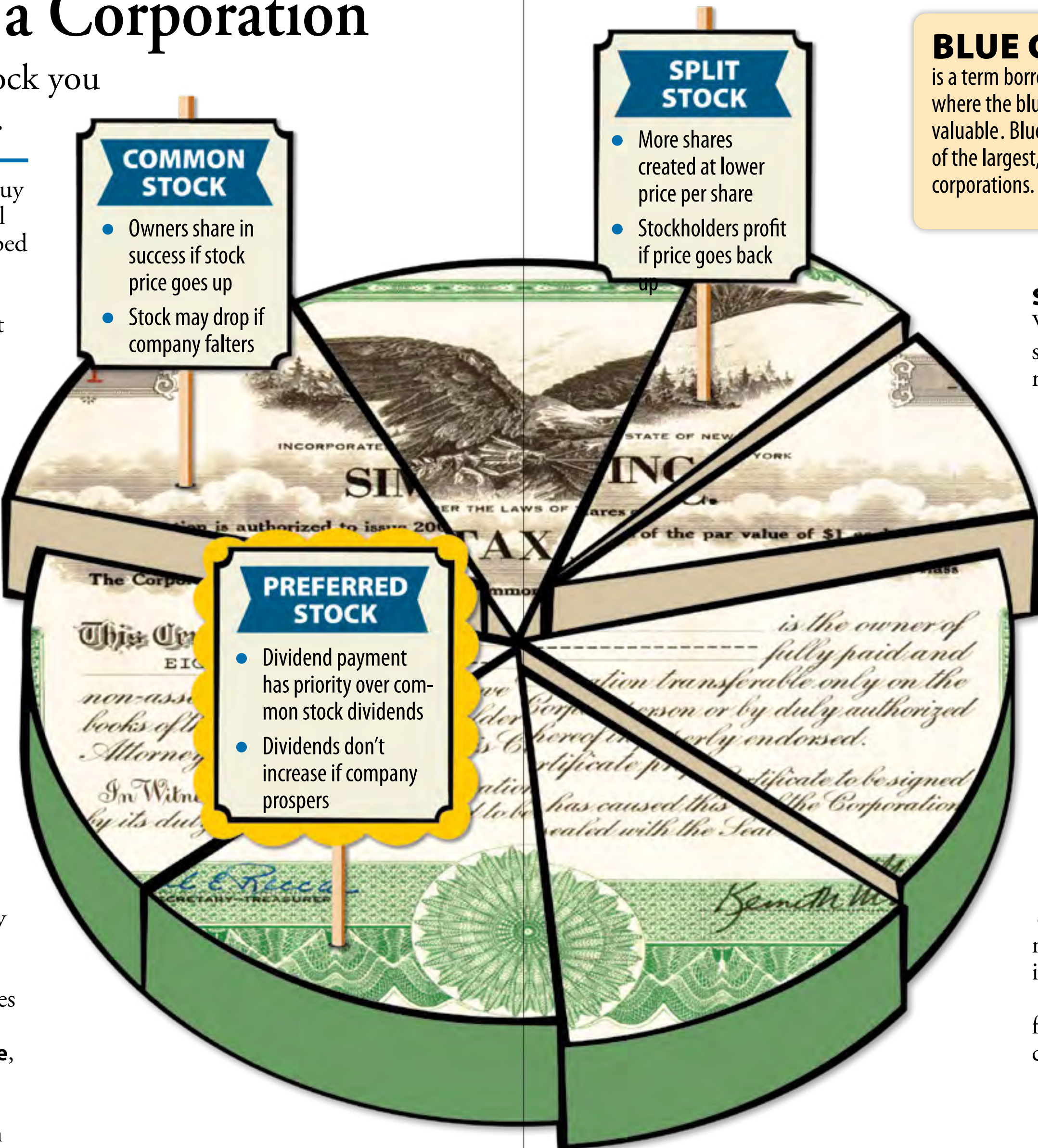
Stock: Sharing a Corporation

When you buy shares of stock you own a slice of the company.

Stock is an **equity** investment. If you buy stock in a corporation, you own a small part of that corporation and are described as a **stockholder** or **shareholder**. You buy stock because you expect it to increase in value, or because you expect the corporation to pay you dividend income, or a portion of its profits. In fact, many stocks provide both growth and income.

When a corporation issues stock, the company receives the proceeds from that initial sale. After that, shares of the stock are traded, or bought and sold among investors, but the corporation gets no income from those trades. The price of the stock moves up or down depending on supply and demand—or how many shareholders want to sell and how eager investors are to buy. Increased supply drives prices down. Increased demand drives prices up.



COMMON STOCK

Most stock issued in the United States is **common stock**. Owning it entitles you to collect dividends if the company pays them, and you can sell shares at a profit if the price increases. But stock prices change all the time, so your shares could lose value, especially in the short term. Some common stocks are **volatile**, which means their prices may increase or decrease rapidly.

Despite the risk, investors have been willing to buy common stock because over time stocks in general—though not each individual stock—have provided stronger **returns**, or price increases plus dividends, than other securities.

PREFERRED STOCK

Some companies issue **preferred stock** in addition to common stock. These equity investments, which also trade in the secondary market, are listed separately from the company's common stock and trade at a different price.

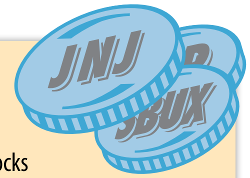
Preferred stock dividends are paid before common stock dividends, and preferred shareholders are more likely to recover some of their investment if the company fails. And, in some cases, preferred stock can be converted to common stock at a preset price.

THE RIGHT TO VOTE

As a stockholder, you have the right to vote yes, no, or abstain on a company's policy proposals and shareholder proposals, and to vote for or against nominees to its board of directors. You can vote in person at the annual meeting, by proxy online, over the phone, or by mail, or authorize your broker or financial adviser to vote on your behalf.

Before the annual meeting you'll receive a proxy statement that reports on the company's performance and the compensation of the five highest paid executives, introduces the nominees, and makes recommendations on the proposals.

BLUE CHIP



is a term borrowed from poker, where the blue chips are the most valuable. Blue chips refer to the stocks of the largest, most consistently profitable corporations. The list isn't official—and it does change.

STOCK SPLITS

When the price of a stock increases significantly, you and other investors may be reluctant to buy, either because you think the price has reached its peak or because it costs so much. Corporations have the option of splitting the stock to lower the price, which they expect to stimulate trading. When a stock is split, there are more shares available, but the total market value is the same.

Say a company's stock is trading at $100 a share. If the company declares a two-for-one split, it gives you a second share for each one you own. At the same time the price drops to $50 a share. If you owned 300 shares selling at $100 you now have 600 selling at $50—but the value is still $30,000.

The initial effect of a stock split is no different from getting coins in exchange for a dollar bill. But the price may move up toward the presplit price, increasing the value of your stock.

Stocks can split three for one, three for two, ten for one, or any other combination.

The prices of preferred stock tend to change less than the prices of common stock over time, and the dividends typically aren't increased if the company's earnings increase.

These characteristics help explain why preferred shares are sometimes described as hybrid investments—a combination of fixed income and equity.

CLASSES OF STOCK

Companies may issue different classes of stock, label them differently and list them separately on a stock market. Sometimes a class indicates ownership in a specific division or subsidiary of the company. Other times it indicates shares that sell at different market prices, have different dividend policies, provide greater voting rights, or impose sales restrictions on ownership.

REVERSE SPLITS

In a **reverse split** a corporation exchanges more shares for fewer—say ten shares for five—and the price increases accordingly. Typically the motive is to boost the price so that it meets a stock market's minimum listing requirement or makes the stock attractive to institutional investors, including mutual funds and pension funds, which may not buy very low-priced stocks.

The Value of Stock

A stock's value can—and does—change all the time.

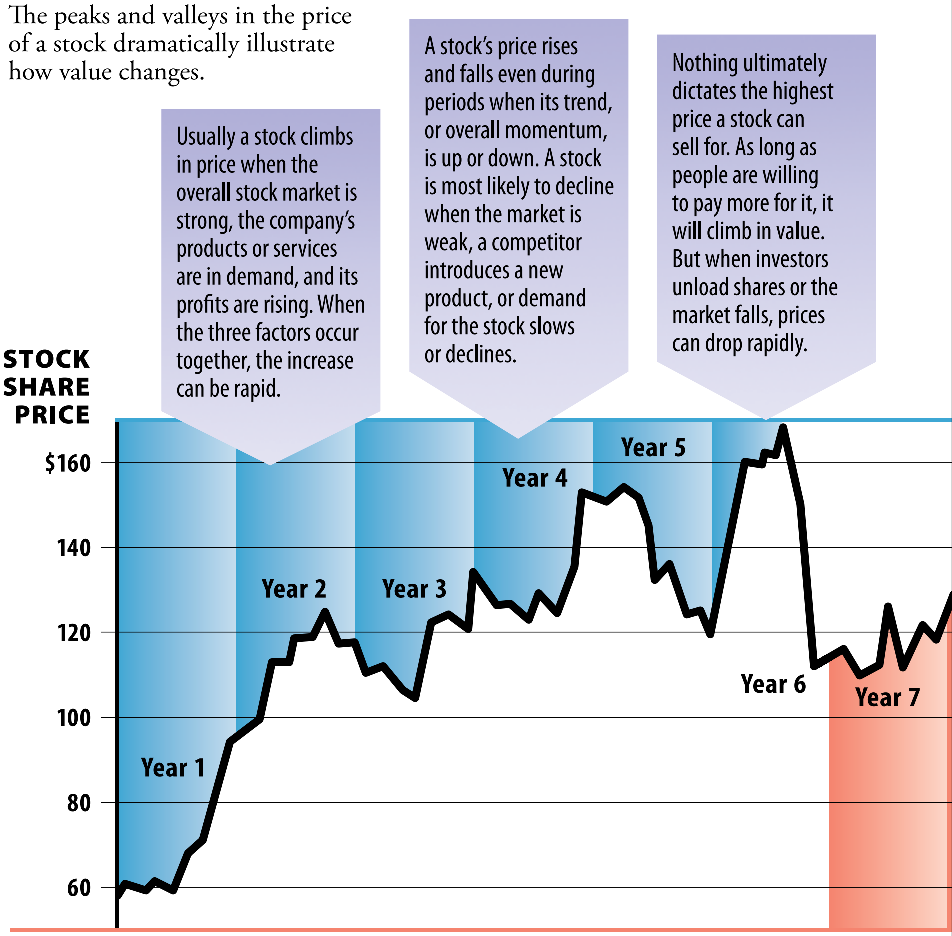
When you talk about a stock's value, you're usually referring to its current market price. That price isn't fixed. In fact, it varies all the time, with changes sometimes measured in pennies and sometimes in dollars.

Buying and selling stock is influenced by a combination of factors, including what's happening at the company that issued the stock, in the overall market, and in the economy at large. But what investors as a group expect to happen also has a major impact. As a result, stocks can sometimes be **overvalued**, commanding a higher price than they seem to be worth, or **undervalued**, selling for less than seems justified.

Buy-and-hold investors typically ignore price fluctuations and may buy on dips if they think the stock is a good investment.

THE UPS AND DOWNS AT BIGCO.

The peaks and valleys in the price of a stock dramatically illustrate how value changes.



THE MOVING AVERAGE

A moving average charts a stock or other security's changing price over a specific period. Every time it's modified—hourly, daily, or weekly, for example—the most current price is added and the oldest one is dropped. If, for example, the figure for the week beginning July 1 is the most recent entry in a 52-week moving average, the figure for the week beginning July 8 of the previous year would be the oldest entry. The following week, the newest entry would be for the week of July 8, and the oldest for the previous July 15.

The moving average can provide a visual representation of the way the price is trending. The longer the interval—a weekly update rather than an hourly one—the smoother the curve and the stronger the indicator of market sentiment.

BETTING WITH THE ODDS

Investing involves taking some risks with your money, but it's not like betting on horses. A long shot can always win the race even if everyone puts money on the favorite. In the stock market, where the money goes influences the outcome. If lots of investors buy Atlas stock, Atlas's price will go up. The stock becomes more valuable because investors want it. The reverse is also true: If investors sell Zenon stock, it will fall in value. The more it falls, the more investors will sell.

If you're buying stocks for the quarterly income, you can check the **dividend yield**—the percentage of purchase price you can expect to get back through dividends. For example, if you buy stock for $100 a share and receive a $2 dividend per share, the dividend yield is 2%. But if you get $2 per share on stock you buy for $50 a share, your yield would be 4% ($2 is 4% of $50).

Purchase Price	Annual Dividend	Yield
$100	$2	2%
$ 50	$2	4%

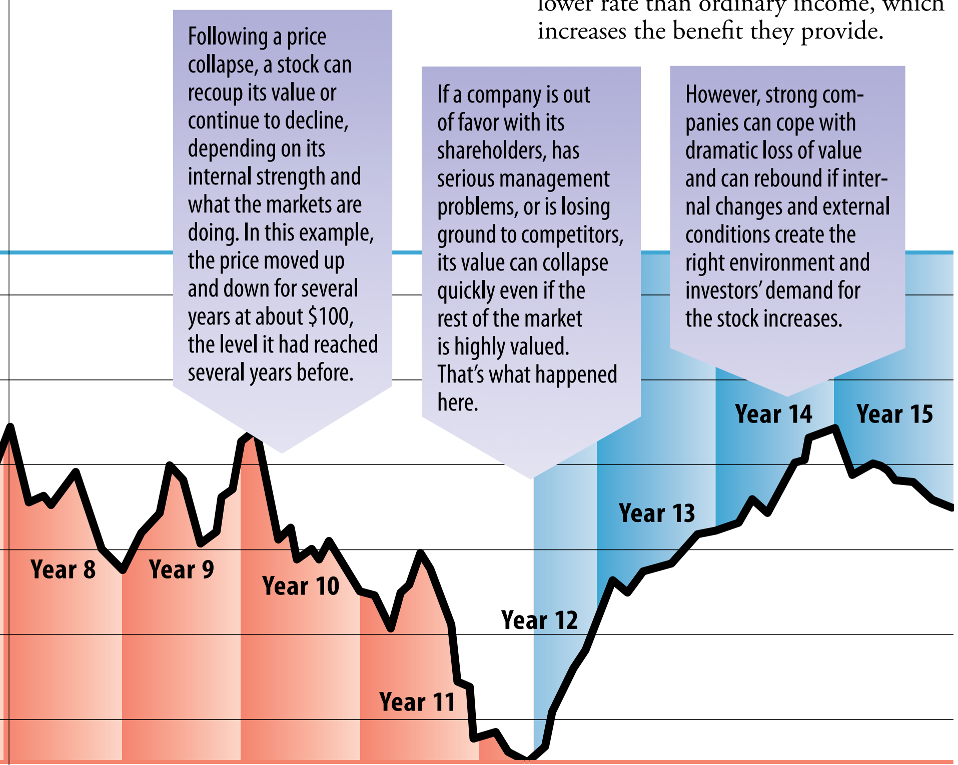
MAKING MONEY WITH STOCKS

You can make money with stocks by selling your shares for more than you paid for them or by collecting dividends—or both.

The profit you make on the sale of stock is a capital gain. Dividends are the portion of the company's profit paid out to its shareholders. A company's board of directors decides how large a dividend the company will pay, or whether it will pay one at all.

Dividends not only have the potential to increase your income. In periods when markets are weak, stocks that pay dividends, as a group, tend to outperform those that don't.

What's more, long-term capital gains and qualifying dividends are taxed at a lower rate than ordinary income, which increases the benefit they provide.



EVALUATING RETURN

You can also measure a stock's value by its **total return**, or the change in stock price—up or down—plus dividend income.

For example, if you purchase 500 shares for $25 a share and sell them for $32 a share, you'll have a $7 per share profit before sales charges, or $3,500. If your dividends were 80 cents per share, or $400, your total return would be $3,900.

To compare the total returns of different investments, you can calculate percent return by dividing total return by the investment amount. Here, it's 31.2%.

You can also calculate **return on investment (ROI)** by subtracting your purchase price of $12,500 from the sales price of $16,000 and dividing the result—in this example $3,500—by the purchase price. That's a ROI of 28%.

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STOCKS

Public and Private Companies

There's a range of differences between what's public and what's private.

The terms *public* and *private* have a range of opposite meanings that are relevant to a discussion of stock. Public means open or available to everyone and private means restricted to a particular group. Thus, anyone can buy shares in a **public company** but not in a **private company**. When a private company goes public, it sells shares through an initial public offering (IPO). When a public company goes private, all its shares are purchased by a limited group of investors.

What can be confusing, though, is that both public and private companies are part of the **private sector**. That's the opposite of the **public sector**, which refers to federal, state, and local governments. As companies can move from public to private, or the reverse, they can also move between sectors.

THE PUBLIC SECTOR

The public sector includes the departments, offices, agencies, and corporations run by municipal, state, and federal governments. These public enterprises may be funded by tax dollars, by money raised by selling bonds, or, in some cases, by charging fees for services they provide.

The public sector provides citizens with services, such as education, transportation, law enforcement, and social welfare programs, through their agencies or offices. Privatization occurs when a government sells all or part of a government enterprise to individual and institutional investors or turns over previously public functions to private firms.

WHY PRIVATIZE?

There are many reasons to privatize, most of them economic. Some people believe that private sector enterprises are more efficient than public sector ones, so that privatization provides better service at lower cost. Whether those benefits materialize or not, privatization shifts responsibility for those services from the government to the private sector.

Selling off attractive assets or making them available for private development can raise substantial amounts of cash to offset public debt or provide cash infusions to bolster the economy and reduce taxes. Another reason to privatize is to dispose of holdings that may be a drain on public resources, such as hospitals or public transportation systems, because they're expensive to operate and are often not profitable. Similarly, turning over the operation of prisons, schools, and other facilities to private companies reduces the number of public employees.

TAKING SOME RISKS

Investors take risks whether they buy shares in a privately held company that has become public or a former government enterprise that has been privatized—though the risks are somewhat different.

In both cases, there are the questions of whether the company will be profitable in the marketplace, whether it will provide income from dividends and growth in the form of increased share price, how much debt it has, and whether that debt will hamper its ability to succeed.

In the case of privatized assets, investors must consider the potential for government interference, especially if it remains a partial owner or regulator.

PROS AND CONS

There are strong arguments for and against privatization, often fueled by political philosophy.

Pros:

- Provides infusion of capital
- Introduces stronger management
- Eases or eliminates debt

Cons:

- Potential loss of jobs and employee benefits
- Reduction in quality of service
- Redistribution of wealth into few hands

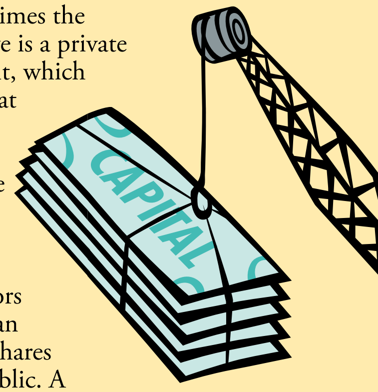
THE PRIVATE SECTOR

WHY GO PUBLIC?

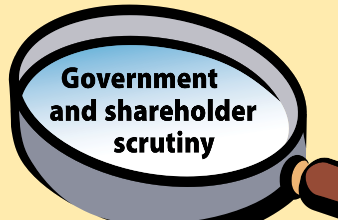
Business owners, who typically sell only a portion of their company when taking it public, may have a number of motives. Sometimes it's primarily a way to raise enough capital to expand the business and outstrip the competition. It's also a way for the founders to reap substantial financial rewards from their ingenuity and business success.

If the founders continue to run the company successfully while owning a substantial number of shares, they can be richer and more powerful than they might have been at the head of a private firm. In other cases, founders or the descendants of founding families leave the firm once it has become a public company.

Of course, not all private companies go public. For many small firms, it's not a viable alternative even if it seems a potential way to attract capital. And there are a number of large, powerful companies in the United States and around the world that continue to be privately held.



Sometimes the alternative is a private placement, which means that a private company sells some or all of its shares directly to investors rather than offering shares to the public. A private placement generally doesn't have to be registered with the SEC or meet other disclosure criteria since the shares can't be traded among investors.



In contrast, **nationalization** occurs when a government takes over a private company. It may occur for economic reasons—if companies need public subsidies to survive, as a way to preserve jobs, or in an effort to keep profits within the country—or for a variety of political reasons.

MUTUAL COMPANIES

Some insurance companies aren't really publicly held, but they're not completely private either. Rather, they're mutual companies, which means that they are owned by their policyholders. Any profit the companies make is shared by these owners, as it might be in a publicly held company, in the form of dividends or rebates on future premiums. But the dividends these mutual companies pay are not the same as dividends paid by a public company.

Certain savings banks and federal savings and loan associations are mutual companies as well, with their depositors entitled to a share of the profits. In the case of insurance companies and savings and loans, members have a right to vote for directors, as shareholders of public companies do. That's not the case with savings banks.

Some mutual companies convert to public ownership and sell shares to outside investors, though in some states they may have to use any profits to benefit their customers before they can pay dividends to their shareholders.

STOCKS OR SHARES

The words *stocks* and *shares* are sometimes used interchangeably, but they don't mean exactly the same thing. A share is a unit of ownership, while stock is the outstanding capital of a corporation. You can own shares of stock, but never stock of shares.

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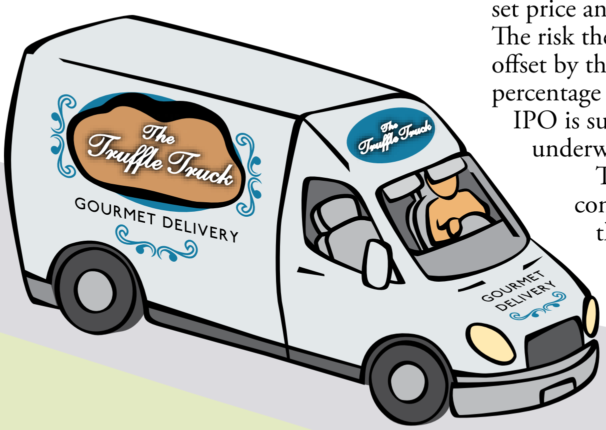
Initial Public Offerings

The first time a company issues stock, it's called going public.

Going public, or taking a company public, means making it possible for outside investors to buy the company's stock. Selling shares gives the company's owners access to more capital than they can raise elsewhere and, unlike a loan, it never has to be repaid.



A company raises money only when its stock is issued. All subsequent trading in the stock means a profit or loss for stockholders, but not for the company.

GOING PUBLIC

The **initial public offering (IPO)** process traditionally begins when a company that wants to be publicly traded contacts an **underwriting firm**, usually an investment bank. The underwriter agrees to buy all the public shares at a set price and resell them to the public. The risk the underwriter assumes is offset by the fee it charges, usually a percentage of each share's price. If the IPO is successful, those fees are the underwriter's profit.

The underwriters and the company prepare a prospectus that is filed with the Securities and Exchange Commission (SEC) and made available to potential investors as a way to assess the potential strengths of the company and the risks that investing in it may pose. The SEC must approve the offering before it can proceed.

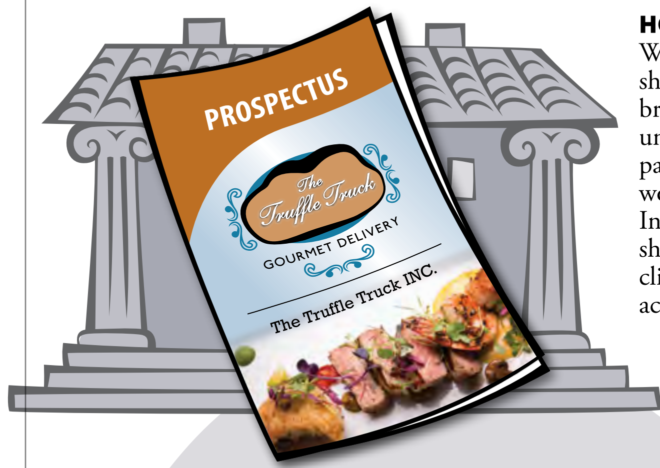
DIRECT SALES

Some companies may prefer a **direct public offering (DPO)**. In this case, shares are offered to the public with the anticipation of raising capital but without using underwriters to help create a market for the stock. This approach is significantly simpler and cheaper than a traditional IPO.

A company using a DPO lists its shares directly on an exchange where it meets listing requirements and sets the offering price. As with an IPO, the company must file a registration statement with the SEC before the offering and comply with SEC reporting rules.

LOVE ME TENDER

Just as it may issue additional shares, a company may choose to **repurchase**, or buy back, shares of its stock, either gradually in the stock market or by **tender offer**, giving shareholders the right to sell at a specific price. The company's motive may be to boost its stock price or to reduce dilution that results from granting stock options. Or it may decide a buyback is a better use of extra cash if it thinks the market undervalues its stock.



UNDERWRITING FIRM

HOW YOU INVEST

When an IPO comes to market, shares are available through brokers affiliated with the chief underwriter or a firm that's part of the selling syndicate working with the underwriter. In most cases, though, the shares go to the broker's best clients—those with the biggest accounts, longest history, or some other advantage.

You can buy shares as soon as trading begins, but there may be good reasons to wait at least six months, until the first analysts' reports are available. Despite the buzz they may create, many IPOs trade at lower prices than comparably sized companies for several years after issue.

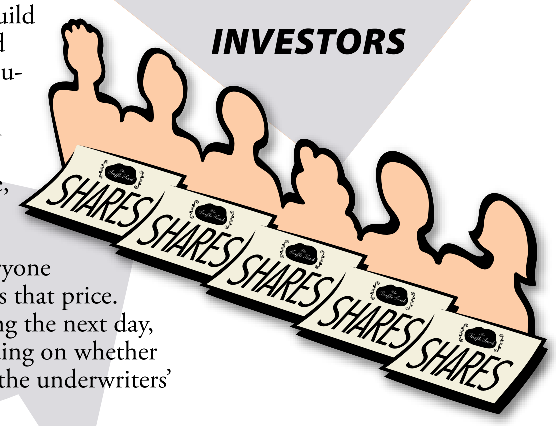
ATTRACTING INVESTORS

The proposed stock sale is publicized in a traveling **roadshow**—sometimes described as a dog and pony show—designed to have the company's managers build a buzz among stock analysts and institutional investors. The enthusiasm they are able to generate often determines how successful the launch will be.

The day before the actual sale, underwriters **price the issue**, or establish the price at which it will be offered to investors. Everyone who buys shares in the IPO pays that price.

When the stock begins trading the next day, the price can rise or fall, depending on whether investors agree or disagree with the underwriters' valuation of the new company.

INVESTORS



LISTED OR UNLISTED

As part of a public offering, companies that meet the listing requirements of a national securities exchange—including market capitalization and net worth—typically choose to list their stock. This means investors can buy and sell shares easily in what is known as the secondary market.

Unlisted stocks may be traded in the over-the-counter (OTC) market. But trading may be less liquid, and information about some OTC stocks may be limited.

Other stocks, including some issued in a DPO, may be nontraded. This means investors should expect to hold them for extended periods and may not be able to sell even if they need the money. Some nontraded stocks are registered with the SEC though others are not.

SECONDARY OFFERINGS

If a company has already issued shares, but wants to raise additional **capital**, or money, through the sale of more stock, the process is called a **secondary offering**.

Companies are often wary of issuing more stock, since the larger the supply of stock outstanding, the less valuable each share already issued may be.

For this reason, a company may issue new shares when its stock price is relatively high. As an alternative way to raise money, it may decide to issue bonds, or sometimes convertible bonds or preferred stock.

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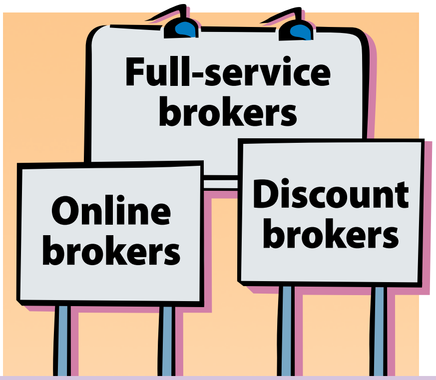
Buying and Selling Stock

The process of buying and selling stock has its own rules, its own language, and a special cast of characters.



INVESTORS
BUY AND SELL STOCKS
BY GIVING ORDERS, OR INSTRUCTIONS, TO THEIR
BROKERS
WHO AUTHORIZE THE TRANSACTIONS

As an individual investor—sometimes called a retail investor—you buy and sell stocks for your portfolio through a brokerage firm where you have an account. The firm sends, or routes, your orders for execution, and reports back to you when the trade has been completed. If you're buying, the purchase price is debited from your account—or you transfer payment from your bank—and your new shares are credited. If you're selling, the reverse occurs: The shares are debited and payment is credited.

The transaction and the **clearance and settlement process** that transfers ownership are, almost always, handled electronically. The price you pay or receive depends on the size of your order and the activity in the market. Regulation NMS—for National Market System—requires your firm to seek what's called **best execution** by sending your order to the trading site with the best price or executing it at a higher price, known as price improvement.

Institutional investors, including mutual funds, pension funds, hedge funds, insurance companies, and money managers, are more active in the stock market than individual investors. They trade more often and in greater volume, typically a minimum of 10,000 shares in one transaction and often more. Together, these investors hold about 70% of all publicly traded US stocks, and a higher percentage in the biggest companies.

You may have a stake in the investment decisions these institutions make—indirectly in the case of stock mutual funds you own—or directly in the case of managed accounts, where you own shares an investment manager has chosen. Or you may benefit from the value that stocks add to institutional portfolios—for example if you have a pension or life insurance policy or if you receive an academic scholarship from a university endowment.

THE PLAYERS

The brokerage firm where you have an account is known as a **broker-dealer (BD)**. BDs—with a few exceptions—must register with the SEC by completing Form BD, which is filed with the Central Registration Depository (CRD). You have access to the information the firm provides through FINRA or your state securities regulator.

A registered BD must be a member of a self-regulatory organization (SRO) and the Securities Investor Protection Corporation (SIPC). SIPC insures a firm's customer accounts up to $500,000 in the event of bankruptcy or other firm failure, though not for investment losses.

Brokers act as agents, buying and selling securities for the firm's clients. Some brokers have only retail clients, some have only institutional, and some work with both. Stockbrokers—officially known as **registered representatives**—must register with FINRA and pass a the Securities Industry Essentials (SIE) and Series 7 exams. Assistant representatives who take unsolicited buy and sell orders must also be licensed.

Dealers act as principals rather than agents, buying and selling securities for the firm's account rather than on a client's behalf. Among other things, dealers may regularly buy and sell a particular security or securities, which is called **making a market** in the security.

In contrast, **registered traders**, also called competitive traders, buy and sell securities for their own portfolios. Certain employees who handle a firm's securities trading are also known as traders.

GIVING ORDERS

Because you act through an intermediary—your broker—to buy and sell stocks, you give an order to initiate a trade. Most individual investors use four order types:

A **market order** instructs your broker to buy or sell at the current price, whatever that is at the time the order is executed. The risk, of course, is that you will pay more or receive less than you expect.

A **limit order** means the trade should occur at a specific price, called the **limit price**, which is higher or lower than the current price. This lets you choose the point at which you believe the trade is appropriately priced. The goal is not to pay more or receive less than you wish. The risk is that in a fast market, where prices change quickly, your order may never be acted on.

A **stop order** means the trade will take place when the stock hits the **stop price**. You typically use stop orders to limit potential losses or protect profits, in both cases when the current price seems likely to fall. The risk is that a stop order becomes a market order when the stop price is reached, and the actual sales price could be less than you hoped. A combined **stop-limit order** tells your broker to sell when the stock hits the stop price but not for less than the limit price.

Contingent orders, such as one-cancels-all or one-triggers-all, are linked orders to be executed only under specific market conditions.

INSTITUTIONAL ORDERS

Institutional investors use many more order types. The New York Stock Exchange (NYSE) lists 30 for its traditional exchange and more than 50 on its electronic platform, NYSE Arca. Many order types are opaque, and some have been criticized as providing undue advantage to certain investors.

WHERE THE COMMISSION GOES

A commission you pay to buy and sell stocks is divided—by prearranged contract—between your broker and the brokerage firm. Commissions and any additional fees are set by the firm, but your broker may be able to give you a break if you trade often and in large volume. Generally, the higher the commission rate the firm charges, the more room there is for negotiation.

CUSIP IDENTIFIERS

Every security in the United States is assigned a unique nine-character CUSIP identifier that encodes the name of the issuer and the specific issue. Using these identifiers means that broker-dealers communicate orders clearly, trades are handled accurately and efficiently, and dividends and interest are paid on time to the right owner. Unless its issuer has a major structural change, an issuer's CUSIP remains the same as long as it's in the market.

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Where Stocks Trade

Thousands of stocks change hands every day in US secondary markets.

Stocks listed on a national securities exchange—described as **national market system (NMS) stocks**—can be traded in a number of competing venues.

Stock Exchanges

EXCHANGE TRADING

There are more than a dozen stock exchanges in the United States, but the number isn't fixed. The list is headed by the venerable New York Stock Exchange (NYSE), which traces its roots to 1792, and the Nasdaq Stock Market (Nasdaq). It was the world's first electronic market when it opened in 1971. They account for a majority of the daily trade column, followed by activity on CBOE's BATS exchange. In addition, the vast majority of stocks are listed on either the NYSE or Nasdaq.

All exchanges are registered with and regulated by the SEC under the Securities Exchange Act of 1934. In addition, each exchange has a self-regulatory organization (SRO) that's responsible for ensuring an orderly market that's both competitive and fair because it is **transparent**. In this context, transparent means that details on price and volume are reported in real time.

Most transactions are handled electronically, often instantaneously, as a sophisticated network matches each order to buy with a corresponding offer to sell—and each order to sell with an offer to buy. **Market makers**, who provide liquidity that keeps trading going, are obligated to buy and sell a specific number of shares at the prices they post on the network, making money on the **spread**, or price difference, between the buy price—called the **bid**—and the sell price—called the **ask** or offer. Together the bid and ask are known as a **quotation**, or quote.

The NYSE, where the vast majority of transactions are matched electronically in data centers miles away from Wall Street, was originally an auction market. Floor brokers representing buyers and sellers competed for the best price at the post of the single **specialist** who handled transactions in a particular stock. Today it's a hybrid market. There are still floor brokers and market makers who handle the opening and closing auctions and facilitate price discovery.

Alternative Trading Systems (ATSs)

KEEP IT QUIET

An **alternative trading system (ATS)** is a securities market that registers with the SEC. In most cases it chooses to be regulated as a broker-dealer (BD) under Regulation ATS, not as an exchange. However, an ATS meets the definition of an exchange in the sense that it is a venue that brings together multiple buyers and sellers to trade securities. These participants are the ATS subscribers.

As is the case on modern exchanges, the transactions are handled electronically, without middlemen or specialists. What's different is that most ATSs are **dark pools**. Very little about their operations is transparent.

LANGUAGE CHECK

Exchange-based transactions in listed securities occur in the secondary market. But when these stocks change hands anywhere but on an exchange, the transactions—but not the stocks—are described as over-the-counter (OTC) or third-market trades. OTC stocks, on the other hand, are unlisted securities that trade in an OTC or third market, never on an exchange.

Internalized Transactions

Internalization means a broker-dealer fills its clients' orders itself or through interactions with one or more other firms. The advantage to the firm is that it keeps the difference between the price it paid for a stock and the price it receives when it sells, increasing its profit.

The profit motive similarly encourages trading platforms to increase the number of transactions they handle. In fact, some are willing to pay brokerage firms to attract their business, a practice known as **payment for order flow**.

A STREET BY ANY OTHER NAME

Wall Street, which got its name from the stockade built by early settlers to protect New York from attacks from the north, was the scene of New York's organized stock trading. Now it lends its name to the financial markets in general—though lots of traders never set foot on it.

DARK POOLS

In dark pools, the prices of orders are not publicly displayed to other participants. The buyers and sellers are anonymous. Anonymity is an advantage since it means a major trade by a well-known market participant won't trigger volatility or tip the investor's hand.

Anonymity also makes it possible to buy or sell large blocks of stock at a single, and perhaps, but not necessarily, better, price than would be available on an exchange. Cost saving is not a primary characteristic of ATS trading.

What is an advantage is that while most exchange-based transactions occur during standard trading hours—9:30 am to 4 pm ET—some but not all ATSs facilitate trades both before and after the exchanges close, and, in some cases, almost around the clock.

Another benefit is that ATS trading can add liquidity to securities markets overall. When a market is liquid,

securities can be bought and sold more quickly because there is constant movement.

ADDING CLARITY

ATSs do not govern the conduct of their subscribers or disciple misconduct. In fact, if they were to be self-regulating, they would be considered exchanges. But, as BDs, they must be members of FINRA and abide by FINRA rules.

In addition, the SEC requires, under its Fair Access Rule, that any ATS where 5% or more of the average daily volume is traded in an NMS stock, other equity product, municipal security, or corporate debt security, must set standards for granting access to trading and enforce those standards equally.

The SEC also requires certain ATSs to be more transparent about their operations, including about conflicts of interest that might exist or preferences given to certain subscribers. For example, there are rules prohibiting the operator of a dark pool allowing its proprietary trading desk unfair advantages over other pool subscribers.

Other types of ATSs are known as electronic communications networks (ECNs), crossing networks, call markets, or multilateral trading facilities.

TRADING COMMISSIONS

When you trade stocks and exchange traded funds (ETFs), you have typically paid either a flat fee or a percentage of each trade as a commission, or sales charge. But many large online brokerage firms have reduced purchasing costs to $0 for stocks and ETFs.

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STOCKS

Trading Specifics

There's a lot going on as stocks change hands.

Stock prices reset continuously, in a competitive process known as **price discovery**. If investors are eager to buy, they make a higher bid. And when sellers know buyers are interested, they ask a higher price. The reverse is true when interest in a stock lags. When bids are lower, sellers ask less to unload the stock before its value sinks further.

Specialists and market makers who act as intermediaries in stock transactions are interested in the **spread**, or the difference between bid and ask. That's their profit.

How does the spread affect you? The larger it is when you buy, the more the stock's price will have to rise for you to make a profit by selling. However, that's a greater issue if you intend to sell quickly than if you're a buy-and-hold investor.

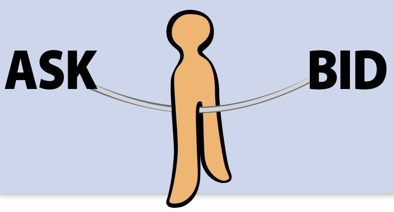
PROTECTED PRICES

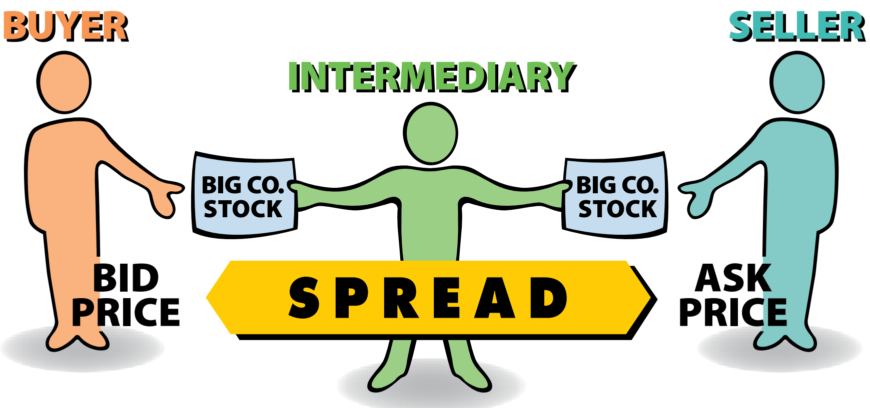
The SEC's Regulation NMS requires that investors be guaranteed the best possible price when they buy or sell. That price is the **NBBO**—for **national best bid and offer**—or the most recent automated quote for a specific transaction size of a particular stock. These data are reported to a securities information processor (SIP) where it is consolidated and disseminated on an electronic ticker.

Orders must be routed to the trading center offering the best price unless another center provides a better one, or what's known as price improvement. There are some exceptions, including for a **directed order**, which means the investor asks that execution be handled at a specific venue.

SPLITTING THE DIFFERENCE

At some trading centers, transactions may be executed at the midpoint of the current bid and ask, called the *midpoint peg*. This eliminates the spread.





FASTER AND FASTER

High frequency trading (HFT) uses algorithmic programs to place orders transmitted in microseconds through optic cable or microwaves. HFT:

- Accounts for more than 50% of stock market volume
- Increases market volatility, but not necessarily liquidity
- Reduces trading costs, though primarily for the traders' own benefit
- Takes advantage of tiny price differences to buy low and sell high

What's at issue with HFT are transparency and fairness, including paying for order flow and efforts to co-locate. **Payment for order flow** means brokerage firms are compensated for sending orders to a specific venue, in this case a trading firm. Co-location means being as close as possible to or inside data centers where trade execution occurs. This proximity enables faster trades.

There are issues, however, not with the intent of this rule but rather with whether it can be enforced, given the speed at which transactions occur and the significant levels of trading taking place in private facilities where prices aren't posted.

CIRCUIT BREAKERS

Market volatility is high on the list of the risks equity investors face. A large, sudden drop in the price of an individual stock or in the market as a whole has the potential to create major losses, whatever the underlying explanation for the movement. To stop the selling frenzy that could result, the SEC uses two types of **circuit breakers** that halt trading and allow the market to stabilize.

The **limit up-limit down rule** prevents trading in a stock whose price moves above or below a band that's dynamically calculated over rolling five-minute trading periods. The price variation for each stock is a percentage level—5%, 10%, or 20%, depending on the stock's price—above or below the average price of the stock in the most recent five-minute period. Price bands are doubled in the last five minutes of trading and increased up to 150% for the lowest priced stocks.

Market-wide circuit breakers, in contrast, are triggered to stop all trading across all venues if there's an intraday drop in the S&P 500 that reaches one of three percentage levels: 7%, 13%, or 20%. If there's a 7% or 13% drop before 3:25 pm, trading stops for 15 minutes. A similar drop after 3:25 pm will not cause a halt. But, if there's a 20% drop at any point during the day, trading is halted for the rest of the day.

The index levels at which those halts occur are calculated daily for the following day, based on the closing price of the S&P 500.

OVER THE COUNTER

Stocks in many publicly traded companies aren't listed on an exchange. Instead they are bought and sold over-the-counter (OTC). The term originated at a time when US investors actually bought stock at their broker's office, literally over the counter. But most OTC trading today is conducted online or sometimes over the phone.

The OTC market is large and diverse. There's trading in new micro-cap stocks that don't qualify for listing and well-known large caps that have decided not to bother listing. There are financially sound companies and others in serious distress. And there are companies registered with the SEC and others who provide no information about their financial status or operations.

Some investors trade OTC issues regularly, but others ignore this market entirely.

In addition, while Reg NMS forbids trading in increments of less than one cent for stocks that trade at $1 or more, algorithmic traders use dark pools to trade in sub-pennies, or 1/100 of a penny ($0.0001). But the volume of trading can turn sub-pennies into millions.

High frequency traders have not been required to register with the SEC and FINRA and have been able to limit access to information about their operations and trading volume. New SEC rules are expected to address those and other issues.

IN THE BLINK OF AN EYE

The speed at which stock trading information can be calculated and communicated seems to have no limits, but the human eye does. So electronic stock tickers report changing quotes only as fast as you can read them—a maximum of 900 characters a minute.

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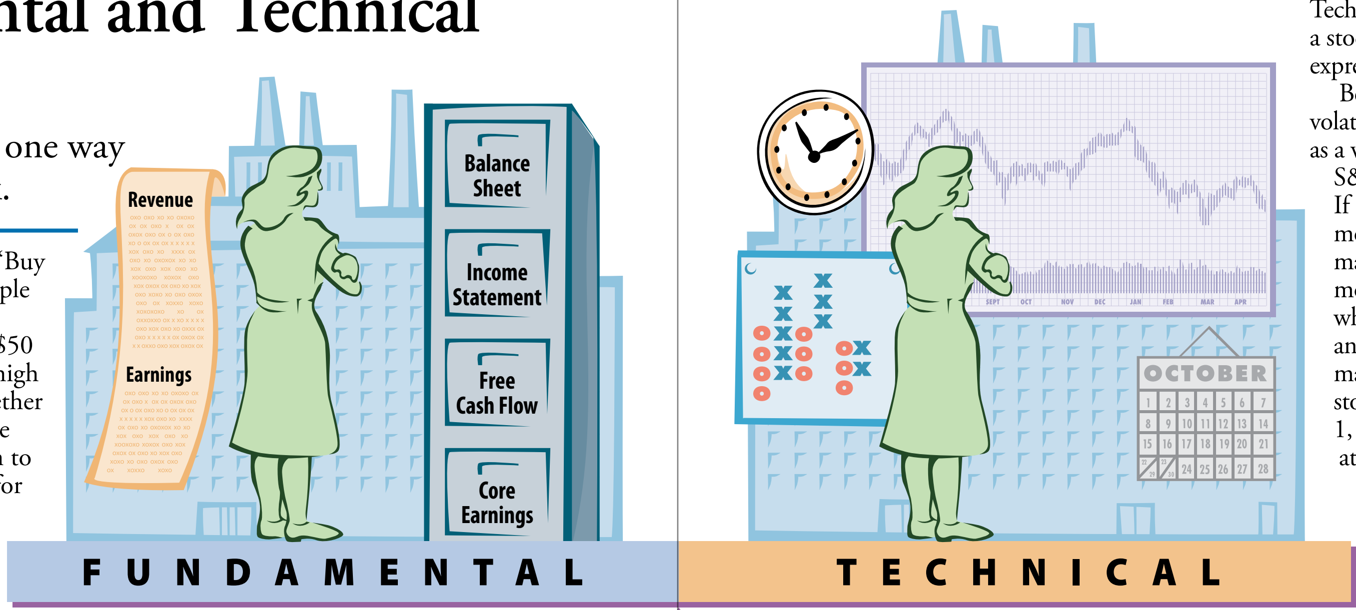
STOCKS

Fundamental and Technical Analysis

There's more than one way to evaluate a stock.



Following the old adage, "Buy low, sell high," isn't as simple as it sounds. After all, the price of a stock selling at $50 per share could be either high or low, depending on whether that price is about to move up to $100 or spiral down to $20. But you can't know for sure until it happens.

While no investor can predict the future with absolute certainty, careful analysis of present conditions may provide an indication of how individual stocks are likely to behave, at least in the near term. To assess those conditions, investors rely on two types of analysis: **fundamental** and **technical**.

Fundamental analysts evaluate a company's financial strength and potential for increasing profits, while technical analysts anticipate investor demand for the stock by looking for patterns in price movement and trading volume. In practice, investors may use both types of analysis: fundamental to find companies worth buying (or selling) and technical to pinpoint the right time to make investment decisions.

IN GOOD COMPANY

Most investors begin with fundamental analysis, since long-term changes in a company's value derive ultimately from its business success. That success relies on a complex interplay of factors, internal and external. Internal factors include the quality of a company's management, business strategies, and operating efficiency, while external factors include the trends or events affecting the entire industry—including the company's competitors—and the economy in general.

As a starting point, fundamental analysts use information in a company's financial balance sheet and income statement, which are filed annually in Form 10-K with the SEC and updated quarterly.

WHO'S COUNTING THE EARNINGS?

Among the numbers that fundamental analysts focus on are revenue, or income, and earnings, or profits after expenses are paid. A pattern of steady increases in revenue and earnings often leads to a positive assessment.

There are many ways to measure a company's earnings, however, so it can be hard to draw meaningful conclusions from reported numbers. That's partly because despite the standards known as GAAP—for generally accepted accounting principles—companies have had leeway in how they report their earnings. **Pro forma** earnings, for example, indicate what a company's results would have been if certain events had occurred earlier or hadn't occurred at all.

Another common measure, earnings before interest, taxes, depreciation, and amortization (EBITDA), was designed to discount certain accounting items to give a clearer picture of the earnings of companies with expensive assets to write down over time.

With **free cash flow**, all cash expenses are subtracted from revenue, investments, and other sources of income to determine how much, if anything, is left over. Many analysts see free cash flow as a better measure of a company's health and future worth than EBITDA since it identifies money that can be used to pay dividends, buy back stock, or be reinvested. Free cash flow also identifies the risk that may result from debt.

Some analysts look at operating **earnings per share (EPS)** in an effort to exclude non-recurring or unusual items. But in part because operating EPS is not a GAAP-defined number, there is potential for subjectivity in determining what should be included. Some items that a company calls "special" or "non-comparable" might still be included in operating EPS if they're considered relatively normal parts of doing business.

IT'S ALL IN THE CHARTS

If you've ever looked at a chart showing the movement of a stock's price over a period of time, you might have wondered how anyone could make sense of its complex patterns. But to a practiced technical analyst, the patterns can provide vital clues of what's likely to happen to a stock's price based on supply and demand.

Technical analysts look for meaningful patterns or trends that have heralded price increases or declines in the past and that may signal price movements to come. For example, an upsurge in volume may mean that big institutional investors are starting to trade in a particular stock. Or a particular shape in the pattern of price movements may signal classic market behavior, such as a downward correction before a rise.

Another aspect of technical analysis is a focus on duration, or how long a trend will last. It varies. But what doesn't vary is the principle that if you're making investment decisions based on a trend, you should stick with your approach until the trend ends.

SPEED BUMPS

Technical analysts also focus on a stock's **volatility**, sometimes expressed as its **beta**.

Beta compares a stock's volatility to the stock market as a whole—represented by the S&P 500—which is set at 1. If the stock's price moves more dramatically than the market—typically gaining more on a percentage basis when the market is going up and losing more when the market is going down, that stock has a beta higher than 1, and is considered more volatile. In contrast, if a stock's price typically fluctuates less than the market, its beta is lower than 1, and it's less volatile.

Volatility risk may play a large part in investment decisions. For example, you may have reasons to avoid a highly volatile stock even if a fundamental analyst gives it a strong buy recommendation. Conversely, you may have reasons to seek out highly volatile stocks in a rising market.

VOLATILITY AND RISK

Investments with the highest potential return and therefore the greatest risk are often the most volatile. One effect of volatility is that if you sell a stock when the price drops—for whatever reason—you give up the opportunity to benefit should the price move back toward its average, or median, price or even higher.

But if you keep the stock in your portfolio for an extended period, barring any unforeseen developments that could negatively affect its value, you may be in a position to benefit from volatility since at some point its price is likely to exceed its average price.

Volatility may be the result of **systemic** risk that affects an entire market or asset class. Or the risk may be **nonsystemic**, which means specific to the particular stock.

STANDARD DEVIATION

Standard deviation measures the difference between the actual closing price and the average closing price of a stock over a certain period of time. The larger the **dispersion**—or difference between the values—the higher the standard deviation and the more volatile the investment is considered to be. The smaller the standard deviation, the lower the dispersion and the volatility.

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Evaluating Companies

How can you tell if a company has the potential to be a good investment?

Evaluating a company means taking a close look at what that company makes or sells, how the company is managed, what it earns, the amount it owes, and how it performed during the ups and downs of the last full economic cycle. That information lets you evaluate its profitability, its growth potential, and its valuation.

RESEARCHING RESEARCH

A stock analyst's job is to provide guidance on whether to buy a stock, sell it, or wait and see. Sell-side research, which is created for individual investors, is available from two sources. Brokerage firms provide their clients with in-house analysis at least in part to stimulate trading. Independent analysis comes from firms whose primary business is creating and selling research.

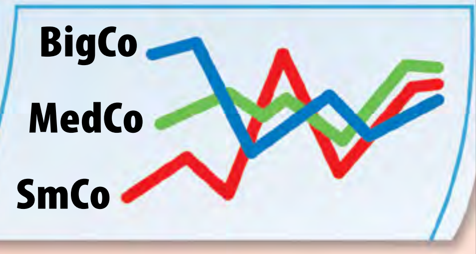
When an analyst is unambiguous, he or she advises you to buy, sell, or hold. One complication is that research reports don't always use the same language. It's easy to conclude that *accumulate* means buy. But does *underweight* mean sell some or sell all shares? Firms that provide **consensus information**, or a synthesis of what different analysts are saying, generally handle this issue by grouping all the ways to say buy or sell under a single term.

Keep in mind, though, that buy recommendations generally outnumber sell recommendations, even in weak markets. And while many analysts and the firms they work for are widely recognized and highly respected, that's not always the case. You'll want to evaluate the evidence used to support an analyst's conclusions and his or her track record before acting on any recommendation.

IT'S ALL IN THE NUMBERS

One revealing statistic about any company is **earnings per share (EPS)**, which is computed by dividing the company's earnings during a specific period by the number of outstanding shares. Using a per-share calculation rather than the dollar value of the earnings makes it easier to compare the results of companies of different sizes. But, remember that acceptable profit margins vary widely by industry and sector.

$$\frac{\text{Earnings}}{\text{Outstanding shares}} = \textbf{Earnings per share (EPS)}$$



Other important measures of profitability are **return on assets (ROA), return on equity (ROE)**, and **return on invested capital (ROIC)**. The three also measure the efficiency with which capital is used. If a company's ROE is higher than its ROA, it may be a sign that it's using leverage, or debt, to increase profits and profit margins. The details should be included in the Form 10-K that it files with the SEC.

WHAT'S THE POTENTIAL?

A pattern of annual percentage increases in sales and earnings is a key indicator of a company's potential success. Regular growth, especially when it's the result of new products or marketing strategies, is generally a better signal than a one-time spike resulting from price increases or other market conditions without an accompanying growth in sales.

Remember, though, that growth potential varies for different-sized companies. Smaller, newer companies in an expanding industry may grow at a faster rate than larger companies in established industries.

STOCKS

LOOKING FOR THE LEADERS

Analysts may focus on companies that are leaders in industries with promising futures. In those industries, the companies leading the pack often show distinct, sustainable advantages over their competitors, such as superior products or services, an effective marketing strategy, sound management, and operating efficiency. It's important to look for weak spots, though, especially if there are up-and-coming competitors.

No company evaluation would be complete without a thorough assessment of the risks it faces. That means asking what needs to happen for a company's business strategy to succeed, and what could throw that strategy off course. In making this assessment, analysts imagine a variety of scenarios and decide which are the most likely. The impact of the credit collapse of 2008 illustrates the dangers of ignoring warning signs.

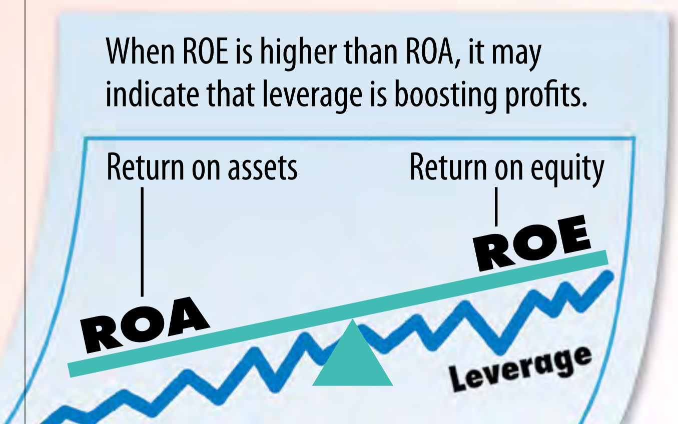
WHAT'S ITS VALUE?

You can use various ratios, also called **multiples**, to measure a company's valuation, or its stock price in relation to the company's financial situation. One of the most widely cited multiples is the **price-to-earnings ratio (P/E)**, which is computed by dividing the stock's current price by EPS. P/E is a measure of how much investors are currently willing to pay for each dollar of a company's earnings.

$$\frac{\text{Current price}}{\text{EPS}} = \textbf{Price-to-earnings ratio (P/E)}$$

For example, a company with a P/E of 30 has a significantly higher multiple than a company with a P/E of 10. This may mean that investors believe that the company with the higher P/E is a promising investment whose price will continue to climb. But it may also mean that the stock is **overvalued**, or costs more than future earnings may justify.

Similarly, it's possible that the company with the lower P/E is **undervalued**, and actually worth more than investors are currently willing to pay for it. But it could also mean that the company has serious problems that investors believe may limit its future success.



SAY AHHH!

A company's financial health is affected by how much debt it carries. A company that's taken on substantial debt and is not managing it well may find that its earnings potential is limited by its liabilities. In severe cases, heavy debt may even indicate that the company is veering toward insolvency.

One ratio commonly used to gauge financial strength is **debt-to-equity**, which divides total debt by the company's market capitalization, or the value of outstanding shares. The higher the resulting percentage, the greater the company's debt level.

$$\frac{\text{Total debt}}{\text{Value of outstanding shares}} = \textbf{Debt-to-equity ratio}$$

For companies in financial difficulty, another key measure is **current ratio**, which compares liquid assets—cash on hand or assets easily converted to cash—to the liabilities due within the year.

How much debt is too much? The answer varies, depending on the type of business, the company's ability to pay it back, how the debt is being used—to pay off other debts or to invest in new products or acquisitions—and the perspectives of the analysts who study the company.

Choosing Stocks

You'll want to consider a stock on its own merits and how it fits into your portfolio.

When you invest in stocks, you can select among publicly traded companies listed on US stock exchanges, public companies whose stocks trade over-the-counter (OTC), and those that are nontraded. You may also buy stocks issued by companies based in other countries, especially those listed directly on US markets or sold as American depositary receipts (ADRs).

Given this variety, you need a strategy for choosing among them—or perhaps a number of strategies geared to specific market conditions. For example, you may take a different approach to selecting investments in bear markets than you do in bull markets, or in periods of higher as opposed to lower interest rates.

Whatever your approach, selecting appropriate stocks is usually a two-step process: first, finding stocks that are strong contenders on their own merits, and second, identifying those that will fit well into your investment portfolio.

BUILDING A PORTFOLIO

If you buy stocks solely on the basis of their individual merits, rather than as part of a broader portfolio strategy, you risk committing too much of your principal to stocks that tend to behave the same way.

For example, if your entire portfolio is made up of blue-chip stocks, you'll probably benefit in the years when large, well-established companies are providing strong returns. But you may suffer in years when these stocks provide negative returns, which all types of investments do from time to time.

One of the keys to maintaining a balanced portfolio is **diversification**. You diversify by investing in a variety of stocks that react differently to changing market conditions. That way, you can benefit from those that are flourishing at any point in the economic cycle and ride out the disappointing returns of those that are foundering. Remember, though, that diversification doesn't guarantee a profit or protect against losses in a falling market.

One way to begin diversifying your portfolio is to recognize the different ways that stocks can be grouped.

- **Market capitalization**, often shortened to market cap, is a measure of a company's size. The performance of small-, mid-, and large-cap stocks varies in a recurrent but unpredictably timed pattern, with each type providing better returns at some times and weaker returns in others.
- At times when **domestic stocks** may falter in a general downturn in the US economy, **international stocks** may be providing strong return, or the reverse.
- **Cyclical stocks** in economy-sensitive industries, such as automobiles and travel, tend to lose ground when the economy is weak and gain when it's strong. In contrast, the performance of **defensive stocks** issued by companies supplying staples, such as food, utilities, and medicines, is typically independent of turns in the general economy.

SWIMMING UPSTREAM

A **contrarian** goes against the flow—buying what other investors are selling and selling what other investors are buying. If others are unloading technology stocks, contrarians look for tech stocks to buy. If large-cap stocks are in demand, contrarians sell them. Bucking the trend has been a successful strategy for some investors, but it does have risks.

STOCKS

DO YOU PAY FULL PRICE?

Another portfolio consideration is the difference between **growth** and **value** stocks. You may look for growth in young companies in burgeoning industries poised to increase their earnings at a faster-than-average rate. However, established firms can also provide substantial if sometimes slower growth.

The general assumption about growth companies is that their future earnings will be significantly higher than they are now. As a result, these stocks often trade at P/E values higher than the market average. In contrast, value stocks may be worth more than investors are currently willing to pay for them. Since these stocks often have P/Es lower than the norm, you might liken value investing to bargain shopping.

The classic value stock has been issued by a reputable company with quality assets, operating in an established industry in which investor interest has lagged—sometimes deservedly so. The expectation in buying a value stock is that the market will sooner or later realize the company's strengths and demand for the stock will increase again, pushing the stock price higher.

OWNING COMPANY STOCK

One of the most perplexing decisions is whether to buy stock in the company you work for or hold onto the stock you're granted by the firm or that you have the opportunity to buy at a favorable price.

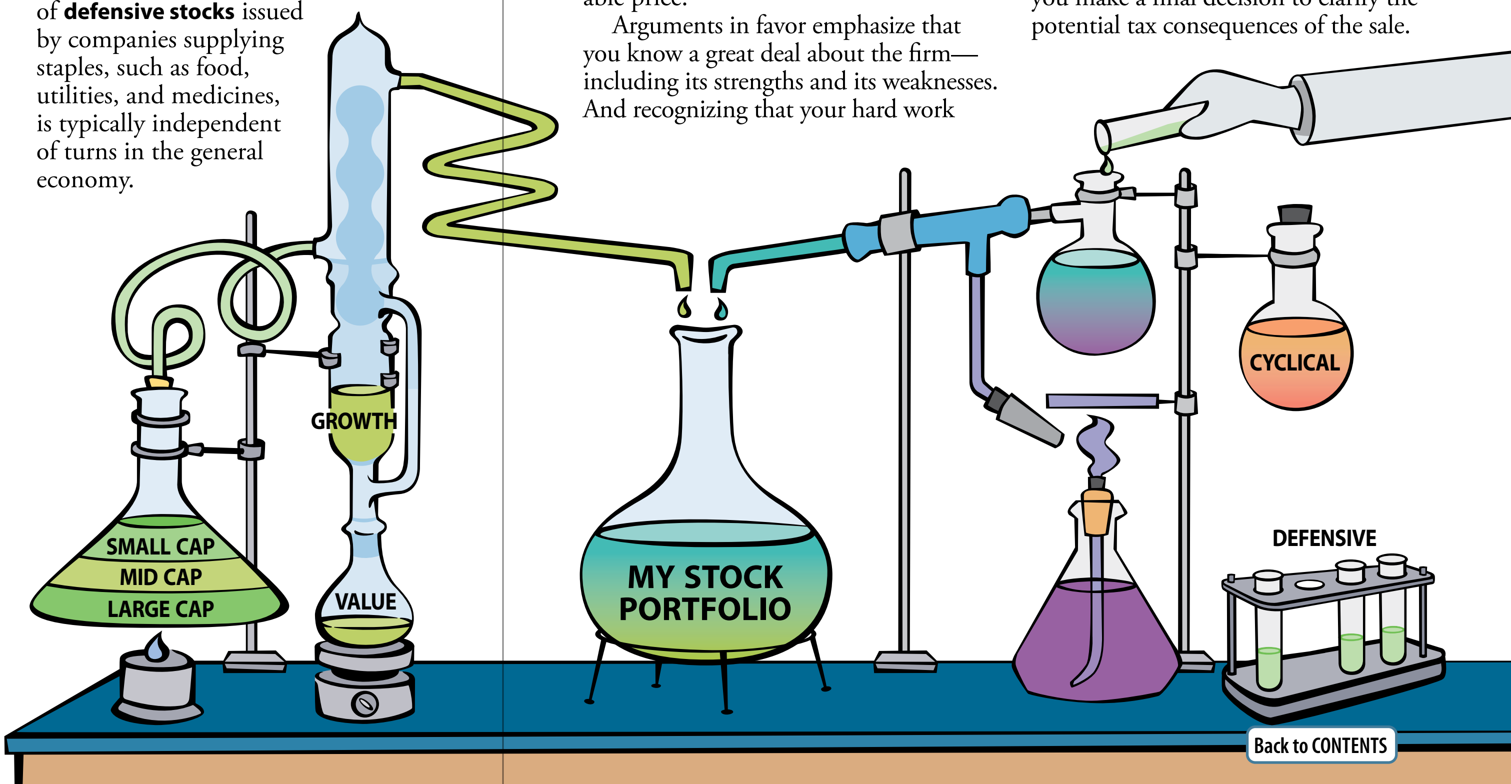
Arguments in favor emphasize that you know a great deal about the firm—including its strengths and its weaknesses. And recognizing that your hard work will put you in a position to share in the company's success may make going to the office early or working overtime easier. Further, if you work for a profitable company whose shares split and whose stock price rises over time, your investment may be extremely profitable.

On the other hand, concentrating your portfolio in any one company—especially your own—makes you more vulnerable to losses than if you diversified across market capitalization, sector, and style. When a company in which you invest is also the one providing your paycheck, that risk is magnified. A solution may be to cap your ownership in your company's stock at a certain percent of your total portfolio.

A TIME TO SELL

Buying a specific stock at a particular time can have a major impact on your portfolio. But don't underestimate the importance of a timely sale. In fact, it's just as important to have a strategy for selling as it is to have one for buying. Choosing when and what to sell often depends on changes in the issuing company's financial stability or management, changes in the overall economy, or a major change in the stock's price that doesn't necessarily reflect what's happening in the markets as a whole.

You may want to sell to realize capital gains, perhaps as a precaution if the stock seems to be losing value. But it's a good idea to consult your tax adviser before you make a final decision to clarify the potential tax consequences of the sale.



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It's All in the Details

You don't have to wonder what's happening with stocks you own or may buy. Data are plentiful and easy to find.

If you want current price and performance information about stocks in general or one stock in particular, you can find it updated in real time online, on news and research-company websites, and on the issuing company's site.

Earnings per share (EPS) is the net income over the past four quarters divided by the number of outstanding shares. EPS provides a sense of how profitable the company is. You can calculate what percentage of net earnings the company is paying in dividends by dividing the annual dividend by the EPS. Here, it's $1.46.

Dividend and **yield** tell you the amount of the dividend paid in the most recent quarter and the annual dividend as a percentage of the current price. In this example, the dividend is 22 cents per share for the quarter, and the yield is 3.4%. Typically the annual dividend is paid in four installments during the year. Percent yield lets you compare your earnings on a stock with earnings on other investments. When there's no dividend, there's no yield.

GOING TO THE SOURCE

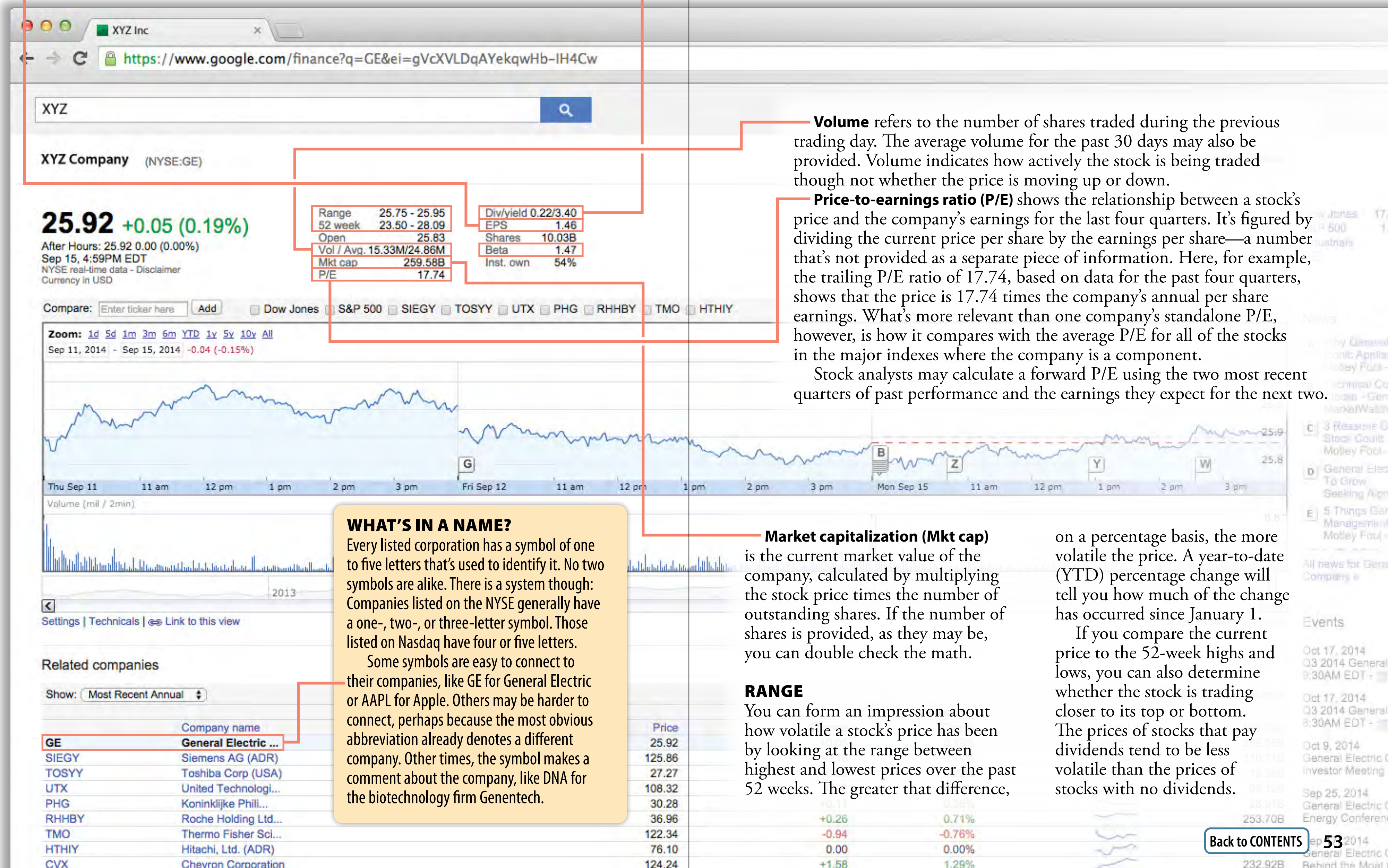
One of the most up-to-date sources for timely trading information about a particular stock is the issuing company's website. While you may have to drill down from the home page to find these details, a good bet is to look for the sections called investor services or financial information. You'll often find charts and graphs illustrating price movements as well as numbers indicating recent highs and lows, closing prices, net change, and volume.

Some companies also provide a wealth of other information, including P/E and other valuation ratios, dividend yield, market capitalization, per-share data, and debt-to-equity ratios.

You can also sign up on a number of news and financial sites to track, through email updates, the trading activity of a portfolio of stocks, either those you already own or those you're interested in following.

TOTAL RETURN

Finding **total return**, or the sum of the dividends you received plus the change in a stock's value, helps you evaluate what that stock has contributed to your portfolio. Once you've determined that amount from your records, you can calculate **percent return** by dividing total return by the amount you invested. This allows you to compare returns on different securities. If you've owned the stock more than a year, you can find **annual percent return** by dividing percent return by the appropriate number of years.



Volume refers to the number of shares traded during the previous trading day. The average volume for the past 30 days may also be provided. Volume indicates how actively the stock is being traded though not whether the price is moving up or down.

Price-to-earnings ratio (P/E) shows the relationship between a stock's price and the company's earnings for the last four quarters. It's figured by dividing the current price per share by the earnings per share—a number that's not provided as a separate piece of information. Here, for example, the trailing P/E ratio of 17.74, based on data for the past four quarters, shows that the price is 17.74 times the company's annual per share earnings. What's more relevant than one company's standalone P/E, however, is how it compares with the average P/E for all of the stocks in the major indexes where the company is a component.

Stock analysts may calculate a forward P/E using the two most recent quarters of past performance and the earnings they expect for the next two.

WHAT'S IN A NAME?

Every listed corporation has a symbol of one to five letters that's used to identify it. No two symbols are alike. There is a system though: Companies listed on the NYSE generally have a one-, two-, or three-letter symbol. Those listed on Nasdaq have four or five letters.

Some symbols are easy to connect to their companies, like GE for General Electric or AAPL for Apple. Others may be harder to connect, perhaps because the most obvious abbreviation already denotes a different company. Other times, the symbol makes a comment about the company, like DNA for the biotechnology firm Genentech.

Market capitalization (Mkt cap) is the current market value of the company, calculated by multiplying the stock price times the number of outstanding shares. If the number of shares is provided, as they may be, you can double check the math.

RANGE

You can form an impression about how volatile a stock's price has been by looking at the range between highest and lowest prices over the past 52 weeks. The greater that difference, on a percentage basis, the more volatile the price. A year-to-date (YTD) percentage change will tell you how much of the change has occurred since January 1.

If you compare the current price to the 52-week highs and lows, you can also determine whether the stock is trading closer to its top or bottom. The prices of stocks that pay dividends tend to be less volatile than the prices of stocks with no dividends.

Selling Short

Some stock investors take added risks in the hope of greater returns.

Not all stock trades are straightforward buys or sells. There are several strategies you can use to increase your gains, though they also increase your risk of incurring losses. Among these strategies is **selling short**.

Typically investors sell short to hedge their portfolios against potential losses from other stocks they own. But speculators may sell short expecting to realize a profit from a major drop in a stock's price.

STOCKS

BUYING WARRANTS

Like a short sale, a warrant is a way to wager on the future price of a stock—though buying a warrant is definitely less risky. Warrants guarantee, for a small fee, the opportunity to buy stock at a fixed price during a specific period of time. Investors buy warrants if they think a stock's price is going up.

For example, you might pay $1 a share for the right to buy a stock at $10 within five years. If the price goes up to $14 and you **exercise**, or use, your warrant, you save $3 on every share you buy. You can then sell the shares at the higher price to make a profit ($14 – ($10 + $1) = $3), or $300 on 100 shares.

Companies sell warrants if they plan to raise money by issuing new stock or selling shares they hold in reserve. After a warrant is issued, it can be listed and traded like other investments. A **wt** after a stock table entry means the quotation is for a warrant, not the stock itself.

If the market price of the stock is below the set price when the warrant expires, the warrant is worthless. But since warrants are fairly cheap and have a relatively long life span, they are traded actively.

How Selling Short Works

While most investors buy stocks they think will increase in value, others invest when they think a stock's price is going to drop, perhaps substantially. What they do is described as selling short.

To sell short, you borrow shares you don't own from your brokerage firm and give a sell order. The proceeds are held in escrow until the shares are returned. Then you wait for the price of the stock to drop. If it does, you buy the shares at the lower price, return them to the firm (plus interest and commission), and your account is credited with the difference.

For example, you might sell short 100 shares of stock priced at $10 a share. If the price drops, you buy 100 shares at $7.50 a share, return them, and keep the $2.50-a-share difference—minus fees and commission. Buying the shares back is called **covering the short position**. In this case, because you sold them for more than you paid to replace them, you made a net profit.

You borrow 100 shares at $10 per share from your brokes	You sell the 100 shares at the $10 price, getting $1,000	You profit if stock price drops	You lose if stock price rises
	Share Price $10	Share Price $7.50	Share Price $12.50
Shares you owe your broker	100 Shares	100 Shares	100 Shares
Your cost to pay back the shares		$750	$1,250
Your profit—or loss*		$250 Profit	$250 Loss

WHAT ARE THE RISKS?

The risk in selling short is that the price of the stock goes up—not down—or that the drop in price takes a long time. The timing is important because you're paying your broker interest on the stocks you borrowed. The longer the process goes on, the more you pay and the more the interest expense erodes your potential profit.

An increase in the stock's value is an even greater risk. If the price goes up instead of down, you will be forced sooner or later to pay more to cover your short position than you made from selling the stock. In fact, you can have a major loss.

SQUEEZE PLAY

Sometimes short sellers are caught in a squeeze. That happens when a stock that has been heavily shorted begins to rise. The scramble among short sellers to cover their positions results in heavy buying, which drives the price even higher.

SHORT INTEREST

Selling short often increases when the market is booming. Short sellers believe that a **correction**, or drop in market prices, has to come, especially if the overall economy does not seem to be growing as quickly as stock values are rising. But short selling is also considered a bullish sign, or a predictor of increased trading, since short positions have to be covered.

FAILS TO DELIVER

The SEC's Regulation SHO restricts **naked short selling**, or selling short without confirmed access to the shares being shorted. Among other things, naked shorting can disrupt the settlement process, jump up brokerage fees, and undermine the value of the stock that's illegally shorted.

WHO'S THE LENDER?

You might wonder where brokers find the stocks to lend their clients who want to go short. While they may tap their firm's inventory of shares, they are more likely to borrow from other investors' margin accounts or from shares held in institutional accounts, such as mutual fund portfolios or pension funds.

There's a certain lack of transparency, in the sense that the actual shareowners may never be aware that their shares have been loaned. On the one hand, that's not really a problem. Their ownership is not at risk because brokers who act on short-sale orders hold the proceeds from the sales in escrow on behalf of the lender until the shares are returned.

But while the shares are safe, there is a potential downside to being a lender that may take you by surprise. Any dividends paid on your shares during the time they are on loan are taxed at your regular federal tax rate rather than the lower long-term capital gains rate that applies to qualified dividends. You may also be unable to vote on corporate issues with other company shareholders if that vote occurs when your shares are on loan.

*Before interest and commissions

SHORT SALES DATA

The SEC has adopted a rule to provide greater short sales transparency by requiring institutional investment managers to report short positions that exceed a specific benchmark. The data is aggregated and available on the SEC's EDGAR database.

THE LONG AND THE SHORT

The opposite of selling short is going long on a stock. This means buying stock to hold in your portfolio until you're ready to sell, either to realize a profit or to prevent further losses. The same idea is sometimes expressed as being long or as a long position.

In a related use of language, when you buy options on equities or other investment products, you are the long and an investor who sells options is the short. In options trading, unlike stock trading, the number of longs must equal the number of shorts.

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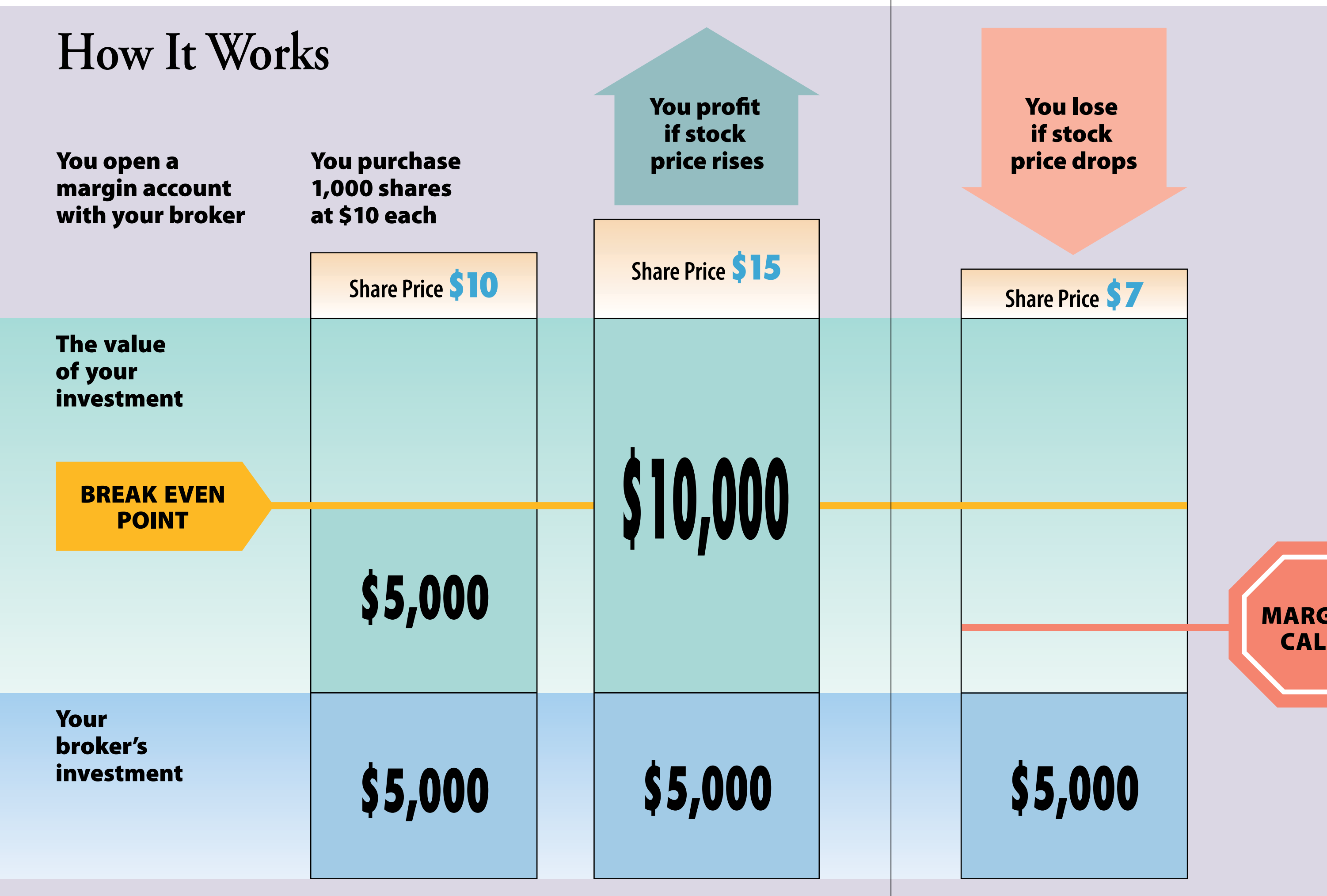
Buying on Margin

Buying on margin lets investors borrow some of the money they need to buy stocks.

To buy on margin, you open a **margin account** with your brokerage firm and deposit a minimum of $2,000 in cash or marginable securities. Most stocks, bonds, mutual funds, and ETFs qualify. With those assets as collateral, you're able to borrow up to 50% of the purchase price of a security that you expect to increase in value in the short term.

If you are correct in your expectation and can sell the stock at a higher price than it cost you to buy, you can repay the loan plus interest and commissions and keep the profit. But if it takes longer than you expect for the price to rise, interest charges mount. And, if the stock price falls, which it certainly could do, the loan must still be repaid, sometimes very quickly.

How It Works



CLOSING THE BARN DOOR

During dramatic drops in the market, investors who are heavily leveraged because they've bought on margin may not be able to meet their margin calls. The result is panic selling to raise cash and further declines in the market. That's one reason the Federal Reserve instituted Regulation T, which limits the leveraged portion of any margin purchase to 50%.

LEVERAGING YOUR STOCK INVESTMENT

Leverage means investing with money borrowed at a fixed rate of interest in the hope of earning a greater rate of return. Like the lever, the simple machine for which it is named, leverage lets you use a small amount of cash to exert a lot of financial power.

Companies use leverage—called **trading on equity**—when they issue both stocks and bonds. Their earnings per share may increase because they expand operations with the money raised by bonds. But they must use some of the earnings to repay the interest on the bonds.

PROFIT MARGIN

The most persuasive reason to invest through a margin account is the potential for a better return. In the example shown here, if you buy 1,000 shares at $10 a share, your total cost is $10,000. But buying on margin, you put up $5,000 and borrow the remaining $5,000.

If you sell when the stock price rises to $15, your account is credited with $15,000. You repay the $5,000 and keep the $10,000 balance (minus interest and commissions). The $5,000 is almost a 100% profit on your outlay. Had you paid the full $10,000 with your own money, your percentage profit would be 50%, though still $5,000.

MARGIN CALLS

Despite its potential rewards, buying on margin can be very risky. For example, the value of the stock you buy could drop so much that you could lose the entire amount you invested and perhaps more.

To protect brokerage firms from losses, FINRA, the Financial Industry Regulatory Authority, requires you to maintain a margin account balance of at least 25% of the purchase price of any stock you buy on margin. Individual firms can require a higher margin level—say 30%—but not a lower one.

If the market value of your investment falls below its required minimum, the firm issues a **margin call**. You must either meet the call by adding money to your account to bring it up to the required minimum, or sell the stock, pay back your loan in full, and take the loss.

For example, if shares you bought on margin for $10 a share declined to $7 a share, your equity would be $2,000, or 28.6% of the total value of the shares ($7,000 – $5,000 = $2,000 ÷ $7,000 = 0.286 or 28.6%). If your broker has a 30% margin requirement, you would have to add $100 to bring your margin account up to $2,100 (30% of $7,000).

When the margin call comes, there's still a cushion protecting your broker's share—in this case, $5,000. Because your shares will be sold if you don't meet the call or sell the shares yourself, your money is at risk. In fact, your broker could sell other stock in your margin account to recoup a loss that selling the shares didn't cover. You may not be notified before such a sale occurs or be able to select the stock to be sold.

EXTRA CASH

Another appeal of buying on margin is that it can free up cash for additional investments, which you could also leverage or pay for in full. The more you borrow, though, the more attentive you need to be to changing prices and the amounts you may be required to add to your account if you receive a margin call.

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Market Cycles

Market ups and downs can't be predicted accurately—though they often can be explained in hindsight.

The ups and downs of a market, like the ups and downs in the value of an individual stock, are driven by investor behavior. If investors are putting money into the market, it gains value. If they're pulling money out, the value drops.

Most of the time the strength or weakness of the stock market as a whole is directly related to economic and political forces. For example, when earnings are strong and interest rates are low, indexes tracking stock prices tend to rise. But when corporate earnings fail to meet expectations or investor confidence is shaken, stock prices drop, or the market is flat, or stagnant.

BULL AND BEAR MARKETS

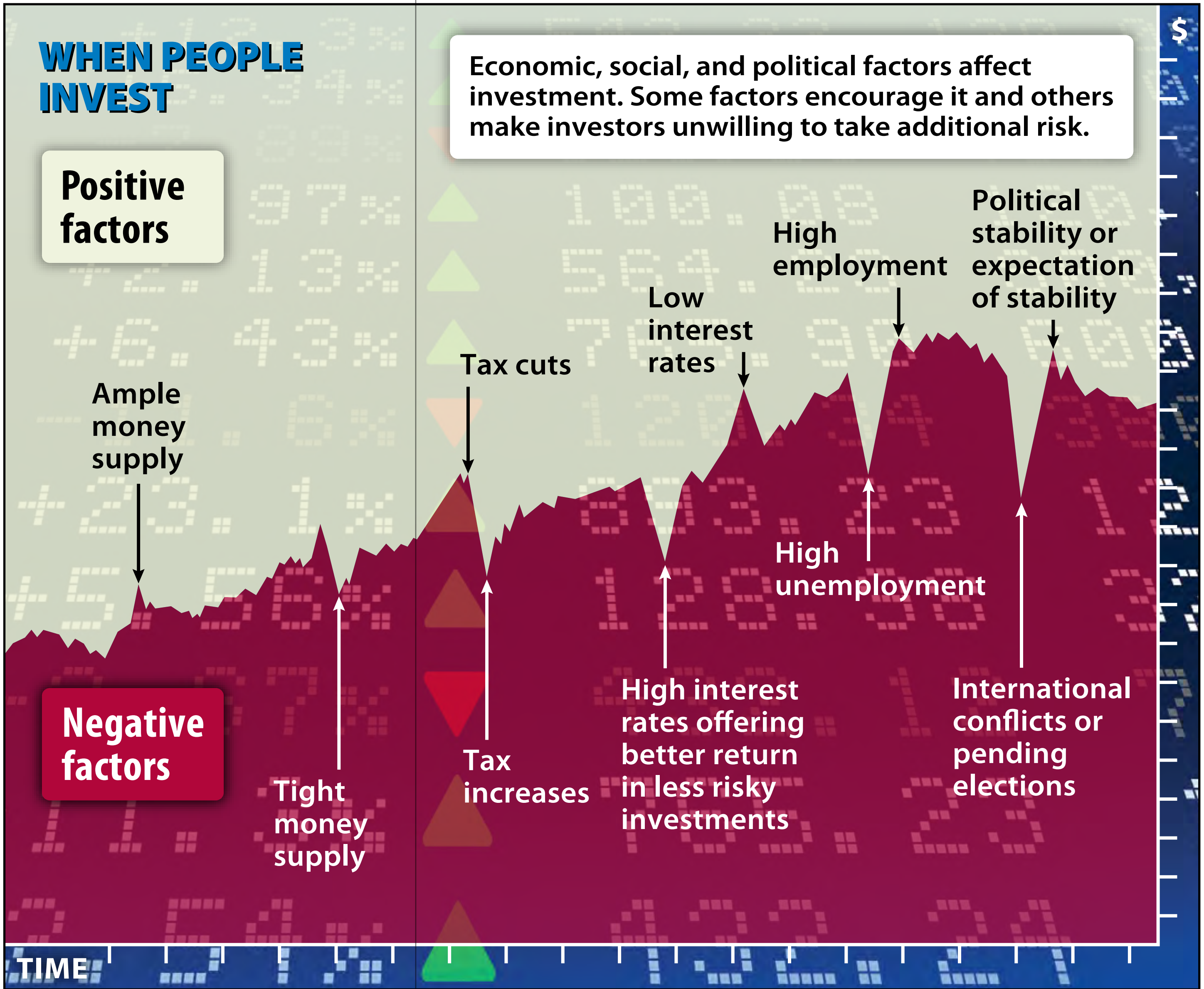
The stock market moves up and down in recurring cycles, gaining ground for a period popularly known as a **bull market**. Then it reverses and falls for a time before heading up again. Generally, a falling market has to drop 20% before it's considered a **bear market**. Sometimes market trends last months, even years. Overall, bull markets have tended to last longer than bear markets.

But drops in the market tend to happen quickly, while gains take more time. It's much like the law of gravity: It takes a lot longer to climb 1,000 feet than to fall that distance. Markets also experience **corrections**, or across-the-board losses, that aren't as severe or sustained as a real bear market.

MOVING WITH THE CYCLES

Pinpointing the bottom of a slow market or the top of a hot one is almost impossible—until after it has happened. But investors who buy stocks in companies that do well in growing economies—and buy them at the right time—can profit from their smart decisions or their good luck.

One characteristic of expanding companies is their ability to raise prices as the demand for their products and services grows. Increased income means more profit for the company and may also mean larger dividends and higher stock prices for the investor.



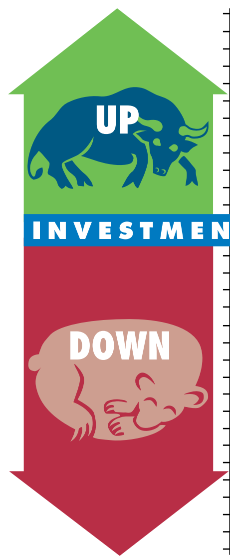
It's generally difficult to predict which companies will falter during a downturn and which ones will survive and prosper. No economic cycle repeats earlier ones exactly. So the pressures that companies face in one recession aren't the same ones they face in another. In most cases, though, long-term financial success depends more on the internal strength of the company and the goods or services it provides than on the state of the economy.

OPPOSITES ATTRACT

Stocks typically produce their strongest returns in recognizable economic climates because of the way they respond to particular market stimuli. For example, when interest rates are high, cash equivalents, such as Treasury bills, tend to provide a stronger-than-average return and stock returns tend to be disappointing.

Correlation is a measure of how similarly or differently two asset classes behave in a particular climate, ranked on a scale from –1 to 1. If the values of two classes always rise and fall together, their correlation is 1. If they always move in opposite directions, their correlation is –1. In addition, some asset classes, such as stocks and nontraded REITs, are noncorrelated because their returns are influenced by different factors rather than different reactions to the same factors.

The strategy called **asset allocation** stresses the importance of including negatively and noncorrelated assets in an investment portfolio as a defense against the cyclical downturns that affect each of the asset classes at certain times.



When the DJIA closed above 1,000 in 1972, it broke what had been considered a nearly absolute ceiling. In January 2022, it closed at 36,799.

The bear market that followed the Internet bubble took the DJIA from 11,723 in January 2000 to 7,286 in October 2002. An even greater drop followed the Great Recession, from 14,000 in July 2007 to 6,547 in March 2009.

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Clearance and Settlement

A lot happens between the time you place an order and the time you own the stock.

Placing an order to buy a stock initiates a continuous flurry of activity that doesn't end until the shares are credited to your brokerage account and payment is credited to the seller's account.

The action begins when your broker sends the order to a trading platform and receives confirmation of execution. At that point the process of **clearance and settlement** begins, confirming the details of the transaction and finalizing the transfer of ownership and payment. It works the same way if you're the seller.

THE ROLE OF THE MIDDLEMAN

Once, the end of a day's active trading signaled the beginning of a mass migration of papers. Stock certificates representing thousands of shares were carted from the firms that sold them to firms that bought them, where they were exchanged for the checks that paid for them. But with about a billion shares currently trading daily on the NYSE alone, a physical exchange of securities and checks each evening would prove a filing and accounting nightmare, assuming it were physically possible.

Fortunately, mountains of paper are no longer necessary. Most trades in North America are cleared and settled electronically through The Depository Trust & Clearing Corporation (DTCC). One DTCC subsidiary, the National Securities Clearing Corporation (NSCC), handles the trade matching and clearing. Another subsidiary, The Depository Trust Company (DTC), facilitates the trades that NSCC clears. Part of DTC's job is to act as a bank, holding and transferring money and securities for NSCC and for the brokerage and clearing firms involved in the transactions.

Getting Settled

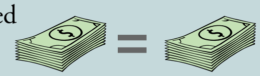
Clearance and settlement is basically a three-step process:

1 Shares bought must equal shares sold

Matching shares is the essence of the clearing process. Any discrepancies must be resolved before clearing can be completed.

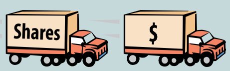
2 Money paid must equal money received

A trade is settled when the account of the firm selling a security is credited with the purchase price paid by the firm buying that security.



3 Shares and money must move

Shares must be transferred from sellers to buyers, and money from buyers to sellers. In practice, these exchanges take place electronically, when accounts and records are updated to show new ownership and new account balances.



GOING PAPERLESS

Stocks held in **street name** are registered in your brokerage firm's name at DTC, but the firm records you as the **beneficial owner**, or stockholder, on its own books. Owning in street name makes trading easier, since the firm can transfer shares more efficiently.

Some companies register ownership of securities you purchase from them using a direct registration system (DRS). This means that the company holds the stock for you and keeps records of your ownership.

Issued securities were once delivered in the form of paper certificates that represented your ownership of a stock. In many cases, these certificates were immobilized, or stored, in vaults at DTC. But now, most securities are never issued in paper form at all, and instead are strictly electronic—otherwise known as **dematerialized**.

SETTLEMENT SPEEDS UP

Equity transactions settle one day after their trade date, or T+1. Increasingly sophisticated technology, the predominance of online payments, and the digitization of records made it possible to reduce the time required to finalize trades to 24 hours or less.

Netting Down

The clearance and settlement process begins when the details of the transaction are **compared**, or matched, at the point of execution using the security's CUSIP number.

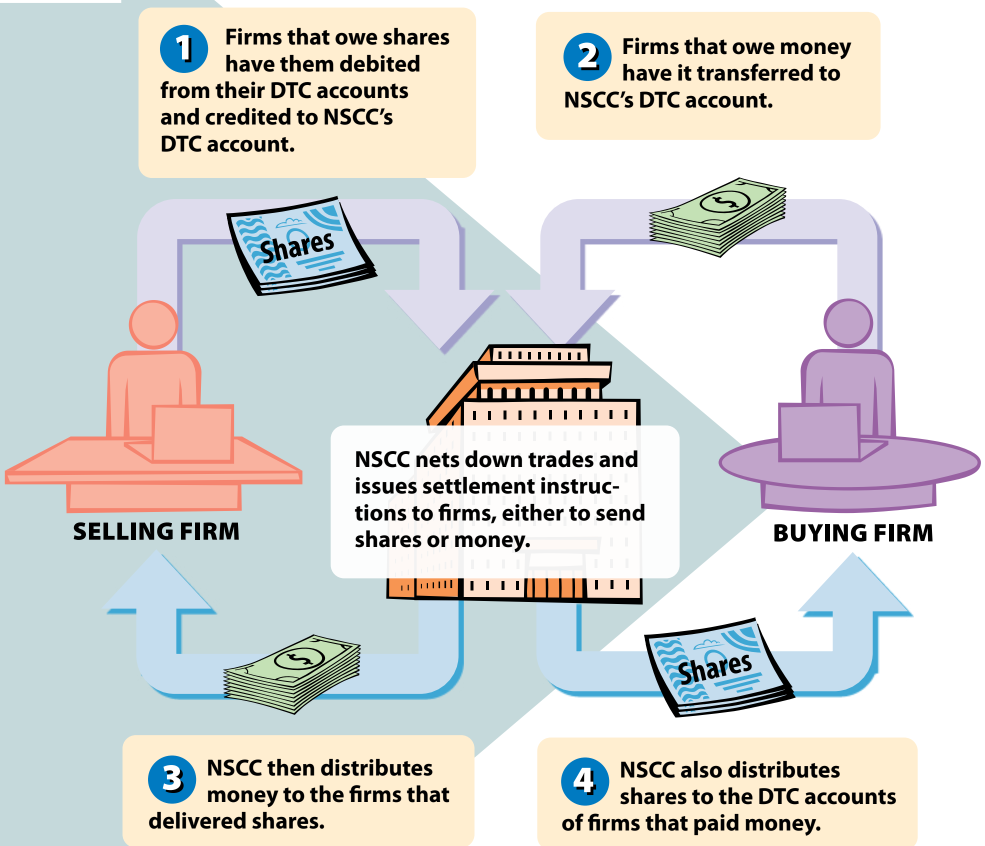
The next step is **netting down**, or reducing, the number of transactions that need to be forwarded to NSCC by offsetting each firm's own buy and sell orders.

For example, if at the end of the day a brokerage firm's clients have bought 1,000 shares of a particular stock and sold 1,000 shares of the same stock, those orders offset each other—they net down. The firm simply needs to shift money and shares among its own clients' accounts.

Of course, there's little chance that buy and sell orders at any firm will match up perfectly, though some clearing and settlement may be handled among affiliated firms. All remaining transactions—on average, about 2% of a day's trades—are forwarded to NSCC, which acts as the **counterparty** to both buyer and seller in each transaction.

These trades are sent to DTC for settlement. Buyers pay for and receive shares and sellers deliver shares in exchange for payment.

HOW THE PROCESS WORKS



PROTECTING YOUR TRADE

How do NSCC and DTC ensure that each firm involved in a transaction can meet its settlement obligations? For example, what would happen if a firm were to go bankrupt sometime between the trade date and settlement?

To address such an event, NSCC requires that member firms deposit cash and securities in a DTC account as collateral, which can be liquidated to settle transactions if a firm is unable to meet its obligations. In addition, NSCC limits the amount each firm is allowed to owe on unsettled trades. This system is designed to ensure that DTC always has enough assets on hand to settle the trades that NSCC clears.

International Investing

In the new economy, investors looking for ways to diversify their portfolios have a world of opportunity.

To diversify a portfolio that's concentrated in US securities, you may want to add the equity and debt of companies that are registered in other countries. Global investing can be an effective way to help offset investment risk, in large part because while world markets are interconnected, they're not always positively correlated.

In fact, the cyclical ups and downs in a country's or region's securities markets tend to be more sensitive to the local environment, including interest rates and employment levels, than to what's happening globally—though there are exceptions.

THERE ARE RISKS

Investing globally means taking on many of the same risks you face when you invest at home. Prices may fall rather than rise. Dividends may be cut. Interest earnings may decline. But it may also mean taking on some risks that you hadn't anticipated.

- Some markets may be less liquid than others, so it may be hard to buy or sell at the price you want.
- Some less regulated markets may provide fewer investor protections.
- It may be harder to find reliable information about the potential risks an investment poses.
- Political and economic instability in a country or region can affect investment values.
- Changes is currency values can have major consequences.

...AND ALSO REWARDS

Investment return in an overseas market, as in a domestic one, depends on growth in the value of the investments you make, your dividend or interest income, or a combination of growth and income. But there's another factor in play when you invest away from home: **floating currency values**. A significant gain or loss in the value of the dollar in relation to the value of the currency in which an investment is priced can have a major impact on your profit or loss if you sell.

Unlike a volatile stock, whose price can change quickly, shifts in currency rates tend to occur gradually. While you can't predict when your financial interests will align with what's happening in the stock market, in most cases you should have time to buy or sell while currency values are still working to your advantage.

STOCKS

WAYS TO INVEST

There are many ways to add international exposure to your investment portfolio.

Perhaps the easiest is to buy the securities of multinational companies that operate in more than one country, realize a large percentage of their profits outside the United States, but are listed on a US exchange.

The stocks of many large non-US companies are listed on US exchanges though their primary operations are elsewhere.

You can buy mutual funds and exchange traded funds (ETFs) that invest in different asset classes and subclasses on a worldwide, regional, or individual country basis.

Large US brokerage firms registered with the SEC operate internationally and can buy and sell investments anywhere they have a presence.

THE CURRENCY RISK—AND ITS REWARD

Whether you invest directly or indirectly in securities priced in currencies other than the US dollar, it helps to understand how changing currency values affect the cost of investments you make. Generally speaking, buying securities when the dollar is strong means investing costs you less. The same is true when you pay for any other product, such as a sweater or a train ticket, denominated in a currency that is weaker than the dollar.

Conversely, selling a stock when the dollar is strong reduces your return. That's because the weaker currency in which you invest translates into fewer dollars.

	Cost of stock in euros	Exchange rate €/$	Cost of stock in dollars	
BUY Euro and dollar at par	€50	1:1	$50	
BUY Euro gains against dollar	€50	1.1	$55	Euro is 1.10 to dollar
BUY Euro gains more against dollar	€50	1.2	$60	Euro is 1.20 to dollar
BUY Euro weaker than dollar	€50	0.9	$45	Euro is .90 to dollar
BUY Euro loses value against dollar	€50	0.8	$40	Euro is .80 to dollar

To convert the price per share from one currency to another, you calculate the exchange rate by dividing one currency by the other. If you are using US dollars to buy stocks priced in euros, you divide euros by dollars.

In the example shown in the chart, if the euro is 1:10 to the dollar, the exchange rate is 1.1 (€1.10 ÷ $1 = 1.1). If the euro is 0.90 to the dollar, the exchange rate is 0.9 (€0.90 ÷ $1 = 0.9).

To find the price (C) in the currency you're using, you multiply the security's price (A) times the exchange rate (B).

A x B = C
€50 x 1.1 = $55

GAIN OR LOSS

If you buy a stock priced in euros when the euro and the dollar are at par, the amount you pay is the same. In the example here, it's $50 or €50 a share.

If the value of the euro is stronger than the value of the dollar, it costs you more per share to buy than it would cost an investor using euros. When the euro is 1.10 to the dollar, a €50 stock would cost a US investor $55. If the euro gains value, the per-share cost in dollars increases.

But if the dollar is stronger than the euro, the cost per share for an investor using dollars is less than the price in euros. When the euro is 0.90 to the dollar, a €50 stock would cost a US investor $45. If the dollar gains more, the cost per share drops still further.

If the underlying stock increases or decreases in value, the gain or loss for an investor using dollars will reflect, but not necessarily be identical to, the gain or loss for an investor using euros. The greatest gain in dollars occurs if the share price increases and the dollar loses value.

*These hypothetical examples, which don't include the impact of commissions or taxes, do not reflect the performance of any specific investments.

Global Capital Markets

The quest for capital—and for places to invest it—extends beyond national borders.

When companies open business operations abroad, or form joint partnerships with companies based in other countries, they become players in an international capital marketplace. The same is true when individual or institutional investors put their capital to work outside their national borders.

UPS AND DOWNS

One benefit of cross-border investing is that strong economic growth in one part of the world can stimulate growth in other regions. That can be good for the investors and good for the economies where the markets operate. One potentially negative consequence of globalization, however, is that problems in the economy of one nation or region may have a ripple effect on the economies of many others—even though the major factor in any nation's financial health is what's happening at home.

MATURE AND DEVELOPING

Broadly speaking, world markets fall into two categories: mature and developing.

Mature markets, including those in Europe, North America, Australia, New Zealand, and Japan tend to be highly regulated and provide a welcoming environment for matching seekers with providers of capital, They also foster an active secondary market.

Developing markets, also known as emerging markets or economies, are usually newer than mature markets and have fewer active participants, resulting in less liquidity and greater volatility. The trading mechanisms are often less efficient as well. These markets may also be more vulnerable to political control or instability, particularly if the country has a short history of democracy or if ethnic and religious controversies threaten to disrupt economic development.

Being labeled as developing or emerging is not always a clear indication of how a market operates. For example, some of these markets are more vibrant and stable than others, and tend to attract more investor attention because they offer opportunities for long-term gain. This is especially true where local populations are becoming more affluent and the economies have shown sustained growth.

When the World Bank identifies member nations as developing countries, its main criterion is income per capita rather than the sophistication of its financial markets.

MARKET EVOLUTIONS

Some markets are open to all investors, while others limit the participation of nonresidents. That's because some nations face a dilemma in seeking international capital: On the one hand, this capital can provide welcome growth. But at the same time, it may have the potential to undermine domestic control and stability.

When they do seek to attract international investment, securities markets in emerging economies have strengthened their regulatory practices, improved transparency, and streamlined their clearance and settlement systems for handling the exchange of securities and cash payments.

WHAT'S GOOD FOR THE GOOSE

US investors seeking greater diversification may look abroad when they have capital to invest. At the same time, companies based abroad may want to tap the wealth of the US markets. If they do, they may offer shares of their stock on the US market through a US bank, which is known as a depositary.

In this arrangement, the depositary bank holds the issuing company's shares, known as **American depositary shares (ADSs)**. The bank offers investors the chance to buy a certificate known as an **American depositary receipt (ADR)**, which represents ownership of a bundle of the depositary shares.

To have their ADRs listed on an exchange, companies must provide English-language versions of their annual reports, adhere to accepted US accounting practices, and grant certain shareholder rights. In addition, they must meet listing requirements imposed by the exchange or market where they wish to be traded.

In reality, many ADRs aren't listed on an exchange, often because they are too small to meet listing requirements. Instead, they're traded over-the-counter (OTC). Some of the issuing companies register with the SEC and submit the required filings. Others do not, which means you may not be able to get the same level of information about the company as you can with a registered ADR. The OTC markets are also generally less liquid than the major exchanges, which can make OTC ADRs more difficult to sell at the time and price you want.

GOING GLOBAL

When a company makes depositary arrangements to sell its stock in two or more countries, the shares are called global depositary shares and they are sold as global depositary receipts (GDRs). In all other ways, they work the same way as ADRs.

THE WORLD BANK

The World Bank, or, more formally, the International Bank for Reconstruction and Development (IBRD), is an investment bank that raises money by issuing bonds to individuals, institutions, and governments in more than 100 countries. The bonds are guaranteed by the governments of the 189 countries who own the bank.

The World Bank lends the money from its investors to the governments of developing countries at affordable interest rates to help finance internal projects and economic policy reforms. In fact, long-term loans to the poorest nations through the bank's International Development Association (IDA) are interest free.

The Bank's International Finance Corporation (IFC) provides funds for private enterprise in developing nations and helps stimulate additional financing from other investors. Its affiliate, the Multilateral Investment Guarantee Agency (MIGA), promotes private investment by providing guarantees that protect investors from political risks, such as the possibility that public corporations could be nationalized. Without this safety net, investors might otherwise be reluctant to participate.

BROADER HORIZONS

Rules governing securities trading, investor protections, and accounting standards have traditionally varied from country to country. But conflicting requirements can restrict the flow of capital across international borders and inhibit the ability to control global fraud. So the United States and the European Union, in particular, are collaborating to create a common regulatory environment that fosters investment.

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BONDS

Bonds: Financing the Future

Bonds are loans that investors make to corporations and governments. The lenders earn interest, and the borrowers get the cash they need.

A bond is a loan that pays interest over a fixed **term**, or period of time. When the bond matures at the end of the term, the **principal**, or investment amount, is repaid to the lender, or bondholder.

Typically, the rate at which interest is paid and the amount of each payment is fixed at the time the bond is offered for sale. That's why bonds are known as **fixed-income securities**. It's also why a bond may seem less risky than an investment whose return might change dramatically in the short term.

A bond's interest rate is competitive. This means it is comparable with that of other bonds of similar risk and term being issued at the same time and reflects the cost of borrowing in the economy at large.

TYPES OF BONDS

You can buy bonds issued by US companies, by the US Treasury, by cities and states, and by various federal, state, and local government agencies. Many overseas companies and governments also sell bonds to US investors. When those bonds are sold in dollars rather than the currency of the issuing country, they're sometimes known as **yankee bonds**. The advantage for individual investors is that they don't have to worry about currency fluctuations in figuring the bond's worth or interest payments.

ISSUERS MAY PREFER BONDS

When companies need to raise money, they often prefer issuing bonds to issuing stock. New stock tends to **dilute**, or reduce, the value of existing stock. What's more, companies may raise more money through a bond offering and can deduct interest payments on their tax returns. But bonds are debts that must be repaid. Too much debt can be a major drag on a company's success.

Unlike companies, governments can't issue stock because they have no equity to sell. Bonds are the primary way they raise money to fund capital improvements and keep everyday operations running when revenues, such as taxes and tolls, aren't available to cover current costs.

MAKING MONEY WITH BONDS

There are two ways to make money with bonds: income and capital gains. Conservative investors use bonds to provide a steady income. They often buy a bond when it's issued and hold it, expecting to receive regular interest payments until the bond matures and the principal is paid back. Then, they can invest in a new bond. Other investors may trade bonds, or buy and sell as they might with stocks, hoping to increase their total return.

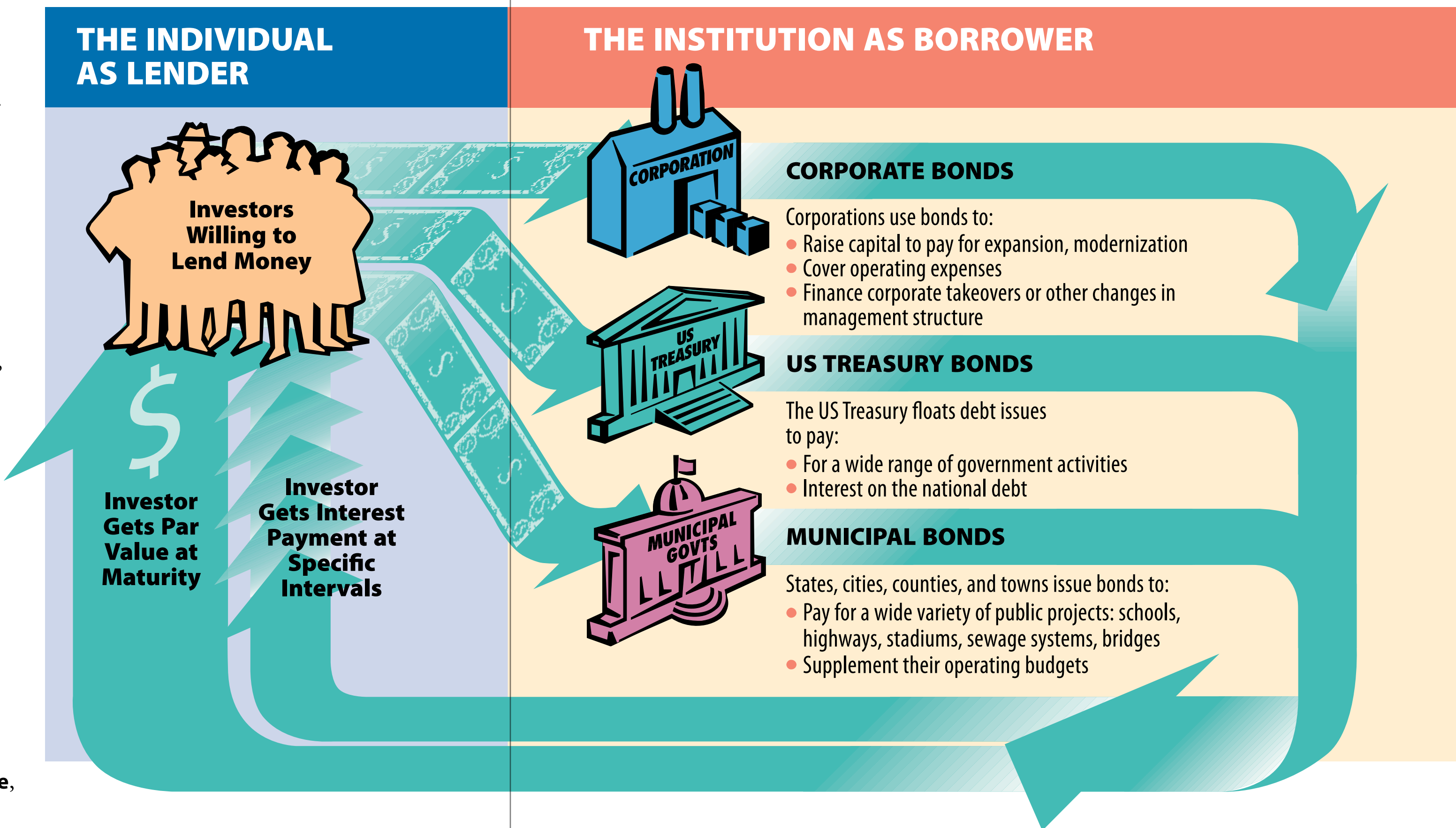
It's also possible to sell bonds at a profit when interest rates fall. For example, investors may be willing to pay more than the face value of an older bond paying 8% interest if new bonds are paying 5%. An increase in the price of a bond, or **capital appreciation**, may produce more profits than holding bonds to maturity.

There are risks in bond investing. Issuers could default. If interest rates go up, you can lose money if you want to sell an older bond paying a lower rate of interest because potential buyers will typically want to pay less than you spent to buy it.

Inflation is another risk. Since the amount you earn on a bond usually doesn't change, its value can be eroded over time. For example, if you have a 30-year bond paying $50 annual interest, the income will buy less at the end of the term than at the beginning.

DOES IT FLOAT?

When a company or government wants to raise cash, it tests the waters by **floating a bond**. That is, it offers the public an opportunity to invest for a fixed period of time at a specific rate of interest. If investors think the rate justifies the risk and buy the bond, the issue floats.



THE LIFE OF A BOND

The life, or **term**, of any bond is generally fixed at the time of issue. It can range from **short-** (usually a year or less), to **intermediate-** (two to ten years), to **long-term** (more than ten years). Generally speaking, the longer the term, the higher the interest rate that's offered to make up for the additional risk of tying up your money for a lengthy period. If interest rates are low and seem likely to rise in the fairly near future, you may decide to stick with short- or intermediate-term bonds.

ISSUING BONDS

For corporations, issuing a bond is a lot like making an initial public offering. An investment firm helps set the terms and underwrites the sale by buying the bonds from the issuer. In cooperation with other companies, together known as a **syndicate**, it then offers the bonds for sale.

The underwriter profits from the fees the issuer pays and the spread between the cost of buying the bonds and what it earns from selling them. If demand lags, it may need to reduce the price and even take a loss.

After issue, bonds trade in the **secondary market**, which means they are bought and sold through brokers, similar to the way stocks are. The issuer gets no money from these secondary trades.

US Treasury issues, with a face value, or **par**, of $100, are available directly to investors through an online system called **TreasuryDirect** or through brokers. Most agency bonds and municipal bonds are sold through brokers, who buy bonds in large denominations and sell pieces of them to individual investors.

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Bond Basics

Bonds have their own vocabulary, but it's easy to master.

When you invest in a bond at the time it's **issued**, or first offered for sale, you lend money to an **issuer**.

In return, you expect to earn **interest** the borrower pays for access to your capital and to have your **principal**, or investment amount, repaid when the bond matures at a specified future date. Interest is sometimes called the **coupon**, and the rate the bond pays is called the **coupon rate**.

Before 1983, bond buyers received certificates that detailed the terms of the loan. Originally, these **bearer bonds** had coupons that could be detached and exchanged for interest. Coupons are long gone, and certificates have mostly disappeared. Instead, **book-entry bonds** are registered electronically in your brokerage account. Interest is credited directly to your account, as is repayment of the principal when the term ends.

US SAVINGS BONDS

To many people, bonds mean the US savings bonds you buy through a regular savings program at your job or online at www.treasurydirect.gov, where you establish a TreasuryDirect account. Savings bonds share some similarities with bond securities. You earn interest on your investment principal and can redeem the bonds for cash at maturity.

But they also differ in several important ways. Savings bonds aren't marketable, which means you can't sell them to another investor, and there's no secondary market where they are traded. You simply buy them and hold them until you cash them in. Or, you can buy savings bonds as gifts for other people.

You can find helpful information at www.treasurydirect.gov about how the different types of savings bonds work, the interest they pay, the way that interest is taxed, and the different ways to buy them. The site also explains how to use the interest you earn on eligible Series I and Series EE bonds to pay higher education expenses without owing any income tax on those earnings, provided you qualify based on your adjusted gross income (AGI).

WHAT'S AVAILABLE

There are Series EE and Series I savings bonds, each with some distinctive features:

Series EE bonds. You buy electronic EE bonds at face value in any amount from $25 to $10,000, in increments of as little as one cent, and earn a fixed rate of interest for the 30-year life of the bond. Series EE bonds are guaranteed to double in value in 20 years.

Series EE bonds issued before May 2005 continue to earn interest to maturity at a variable rate, which is reset twice a year.

Series I bonds. You buy I bonds at par value and earn interest at a combination of a fixed rate and a rate that changes twice a year to reflect the current rate of inflation. Most I bonds are electronic, but you can use your tax refund to buy up to $5,000 in paper I bonds.

DEFINING BOND TERMS

When an issuer offers a bond for sale, all of its details are spelled out in a **prospectus** or offering circular that's filed with the SEC and available online at www.sec.gov/edgar or from your brokerage firm. It includes the information you need to make an informed decision.

Par value, or the dollar value of the bond at the time it is issued, is also the amount that will be repaid at maturity. Most bonds have a par value of $1,000. However, US Treasury issues have a par value of $100. Similarly, municipalities sometimes offer bonds with par values of $500, nicknamed baby bonds.

Interest rate is the fixed percentage of par value that is paid to the bondholder annually. For example, a $1,000 bond with a 4.5% interest rate pays $45 a year.

Term is the length of time between the date of issue and the date of maturity. The term helps determine the interest rate.

Maturity is the date the bond comes due and must be repaid in full. A bond may be bought and sold in its lifetime and re-registered in the new owner's name. Whoever owns the bond at maturity receives par value.

BEARERS STILL

Eurobonds are bearer bonds denominated in a major currency, such as pounds or yen, that are issued and traded in countries outside of the country whose currency is being used. They're not registered with any regulatory authority, and the certificates can be traded or redeemed by the bearer. You're not likely to own one, though, since they're sold in very large denominations. Typical buyers are corporations and governments.

Figuring a Bond's Worth

The value of a bond is determined by the interest it pays and by what's happening in the economy.

In most cases, once a bond is issued, its interest rate doesn't change, even though market interest rates do. If the bond is paying more interest than new bonds with the same credit risk and term, you, as an investor, may be willing to pay more than its face value to own it. If the bond is paying less, the reverse is true.

Interest rates and bond prices fluctuate like two sides of a seesaw. As the table below illustrates, when interest rates drop, the price of existing bonds usually goes up. When rates climb, the price of existing bonds usually falls.

CHANGING RATES

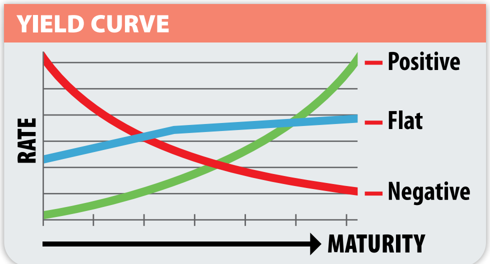
Generally, when inflation is up, the money supply is tightened and interest rates go up. And conversely, when inflation is low, interest rates drop because more money is available. It's the change in market interest rates that causes bond prices to move up or down. Those price fluctuations produce much of the trading that goes on in the bond market.

Suppose that a corporation floats a new issue of bonds paying 6% interest, and if it seems like a good investment, you buy some bonds at the full price, or par value, of $1,000 a bond. Two years later, interest rates are up. If new bonds pay 8% interest, no buyer will pay full price for a bond paying 6%. To sell your bonds, you'll have to offer them at a **discount**, or less than you paid. If you must sell, you might have to settle for a price that wipes out most of the interest you've earned.

But consider the reverse situation. If, three years later, new bonds offer only 3% interest, you'll be able to sell your 6% bonds for more than you paid—since buyers will pay more to get a higher interest rate. That **premium**, combined with the interest payments for the last three years, provides your profit, or total return.

THE YIELD CURVE

The relationship of the yields on bonds of the same credit quality but different terms can be represented as a **yield curve**, a graph that's created by plotting the yields of long- and short-term US Treasury issues, which are backed by the creditworthiness of the US government.



Normally, longer-term bonds provide a higher yield, and the result is a **positive curve**—higher to the right. But if short-term rates are higher, the curve moves the other way—higher to the left. That's a **negative** or **inverted curve**, and it's more unusual. In other cases, the line is essentially flat. That happens when there is very little difference in yields between the shortest and the longest maturities.

The structure of the current yield curve is one of the market indicators that bond analysts evaluate in trying to determine where interest rates are headed.

YIELD AND RETURN

Yield is what you earn, expressed as a percentage of what you invested. There are several ways to measure yield, so it's important to know which one you're looking at when you compare bonds.

Coupon yield is the most basic type. It's calculated using the face value of the bond as the price, and the yield is always the same as the bond's interest rate, or **coupon**. So, for example, the coupon yield for a bond with a par value of $1,000 that's paying annual interest of $60 is 6%.

FIGURING YIELD

$$\frac{\text{Annual interest}}{\text{Price}} = \text{Yield}$$

You can use this ratio to find coupon yield and current yield.

But if you buy a bond in the secondary market, you probably won't pay par. **Current yield** is based on the current, or market, price of the bond.

One measurement of yield, which is widely quoted by bond tables and brokers, is a more complicated calculation known as **yield to maturity (YTM)**. As the name suggests, YTM accounts for all a bond's earnings, on a percentage basis, from the time of the calculation until it matures. YTM includes the money you'll gain or lose (based on the price you paid) when par value is returned, all the interest the bond pays over its lifetime, and **interest-on-interest**, which is what you'd earn by reinvesting payments at the same coupon rate.

Because YTM assumes both that you reinvest every single payment at the same rate and that you hold the bond to maturity, your chances of actually realizing the YTM rate are slim. But it's a way to estimate a bond's total earnings potential. For example, you might compare the YTM for two bonds you are considering as possible investments.

SELLER		BUYER	RETURN*	YIELD
Original bond issuer is selling bond **AT PAR VALUE** Par value: $1,000 Term: 10 years Interest rate: 6%	**6%** At Issue	Interest rate at issue **BUYING AT PAR VALUE** • Pay par value at issue and keep to maturity • Receive 10 annual interest payments of $60 • Receive par value—$1,000—at maturity	Original buyer gets Par value $1,000 Interest (x10) + 600 $1,600 Less original cost – 1,000 **RETURN $600**	**COUPON YIELD 6%**
If bondholder sells two years after issue when interest rates are higher, the bond is **SELLING AT A DISCOUNT** Market value $800 Interest ($60 x 2) + 120 920 Less original cost – 1,000 **RETURN (–) – $80**	**8%** 2 Years Later	Interest rate at issue **BUYING AT A DISCOUNT** • Pay $200 less than par value • Receive 8 annual interest payments of $60 • Receive par value—$1,000—at maturity	New buyer gets Par value $1,000 Interest (x8) + 480 $1,480 Less original cost – 800 **RETURN $680**	**CURRENT YIELD 7.5%**
If bondholder sells three years after issue when interest rates are lower, the bond is **SELLING AT A PREMIUM** Market value $1,200 Interest ($60 x 3) + 180 1,380 Less original cost – 1,000 **RETURN (+) $380**	**3%** 3 Years Later	Prevailing interest rate **BUYING AT A PREMIUM** • Pay $200 more than par value • Receive 7 annual interest payments of $60 • Receive par value—$1,000—at maturity	New buyer gets Par value $1,000 Interest (x7) + 420 $1,420 Less original cost – 1,200 **RETURN $220**	**CURRENT YIELD 5%**

*Before commissions, fees, and other charges.

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Rating Bonds

Investors want to know the risks in buying a bond before they take the plunge.

Just as potential lenders turn to credit reporting agencies as a way to check the risk they'd be taking in extendeding credit to you, potential bond investors turn to bond rating firms for a sense of the credit risk they'd be assuming in buying a particular debt security.

The best known firms are Standard & Poor's (S&P), Moody's Investors Service, Inc., and Fitch Ratings. These companies assess the creditworthiness of a bond issuer or an issue rather than the bond's market appeal. They look at other debt the issuer has, how fast the company's revenues and profits are growing, the state of the economy, and how well other companies in the same business (or municipal governments in the same general shape) are doing. However, the firms' reputations have suffered since 2008, in the wake of the high ratings assigned to risky mortgage-backed securities (MBS).

WHAT IS RATED?

The rating services evaluate sovereign, municipal, corporate, and international bonds, and structured products, as well as MBS. US Treasury issues are not rated on an individual basis, though the US government is rated. Since Treasury issues are obligations of the federal government, they are backed by its **full faith and credit**. This means the government has the authority to raise taxes to pay off its debts.

What rating services don't evaluate is **market risk**, or the impact that changing interest rates and other factors will have on the market price of a bond that you sell before maturity. Even the highest rated bonds and US government issues are vulnerable to loss of market value as interest rates rise.

WHO USES RATINGS?

Individual investors use credit ratings to help make purchase decisions that are in line with their risk tolerance. In addition, they may want to check how much they could reasonably expect to recover if the issuer defaulted. But before investing in any bonds, including rated bonds, investors should do their own analysis or consult with their financial advisers.

Institutional investors, such as mutual fund companies, university endowments, and pension funds, typically use ratings in conjunction with their own credit analysis to evaluate the relative credit quality of specific issues. Some institutional investors operate under guidelines that require them to purchase issues of at least a minimum credit quality.

Businesses and financial institutions often use credit ratings to evaluate how much risk they would be taking by entering into a financial agreement with another firm, described as a **counterparty**.

In addition, issuers themselves use credit ratings to provide independent verification of their creditworthiness and the credit quality of their securities.

RATINGS REGULATION

The SEC's Office of Credit Ratings (OCR) was created by the Dodd-Frank Act to enhance investor protection by improving the quality of ratings and increasing the accountability, transparency, and competitiveness of the credit rating industry. It oversees the credit rating firms that have registered as **nationally recognized statistical rating organizations (NRSROs)**, including S&P, Moody's, and Fitch Ratings, and a number of other firms.

The OCR focuses on potential conflicts of interest in assigning ratings, compliance with securities laws and SEC rules, and adherence to internal methodologies the NRSROs have been required to develop.

REPLACING RATINGS

After several years of debate about the issues posed by credit ratings, the SEC adopted a rule requiring that any references to credit ratings or reliance on them be removed from its regulations and replaced by alternative standards of creditworthiness.

The standard the SEC has identified are structural credit risk models. These models use the issuer's current balance sheet measures of debt obligations to estimate the probability of default based on the market value and volatility of the firm.

THE RISK OF DOWNGRADING

One danger bondholders face is deterioration of the bond issuer's financial condition. When that happens, a rating service may downgrade, sometimes substantially, its rating of the issuer, based on how serious that financial difficulty is. If the downgrade is from investment grade to speculative grade, the issuer is sometimes known as a fallen angel.

If downgrading occurs, implying increased credit risk, investors usually demand a higher yield for the existing bonds to compensate for that higher risk. Then the price of the bond falls in the secondary market. It also means that if the issuer wants to float new bonds, it may have to offer them at a higher interest rate to attract buyers.

RATING SYSTEMS

Each credit rating firm focuses its analysis slightly differently and uses a slightly different grading system to indicate its opinions. A synopsis of the S&P and Moody's systems is illustrated below. The Fitch system is similar though not identical to S&P's.

Standard & Poor's	Moody's	Synopsis of meaning*
AAA	Aaa	Best quality, with the smallest risk
AA	Aa	High quality, slightly higher risk
A	A	High-medium quality
BBB	Baa	Medium quality, currently adequate
BB	Ba	Speculative element
B	B	Able to pay now but at risk of default
CCC	Caa	Poor quality, clear danger of default
CC	Ca	Highly speculative quality, high risk
C	C	Lowest-rated, often in default
D	*	In default

Investment grade generally refers to any bonds rated BBB or higher by Standard & Poor's and Fitch. The comparable Moody's ratings are Baa and higher.

JUNK BONDS

Junk bonds, which are the lowest-rated corporate and municipal bonds, have greater-than-average risk of default. But investors may be willing to take the risk of buying these low-rated bonds because the yields are much higher than on other, higher-rated bonds. However, the prices are volatile as well, exposing investors to increased market risk.

RATINGS MAY INFLUENCE RATES

Credit ratings can sometimes impact the interest rate an issuer must pay to attract investors. In bonds with the same maturity, typically the higher the bond's rating, the lower its interest and yield. Minor upgrades and downgrades tend to result in relatively small adjustments to yield. But if a bond's credit rating is moved up to investment grade or down to junk, there may be a big change in demand and therefore in yield.

TIME IS MONEY

When bonds have the same credit risk but different terms, those with longer terms typically pay higher rates. Offsetting the promise of higher yield are the potential for increased inflation, interest rates, and credit risks.

* Not actual rating definitions.

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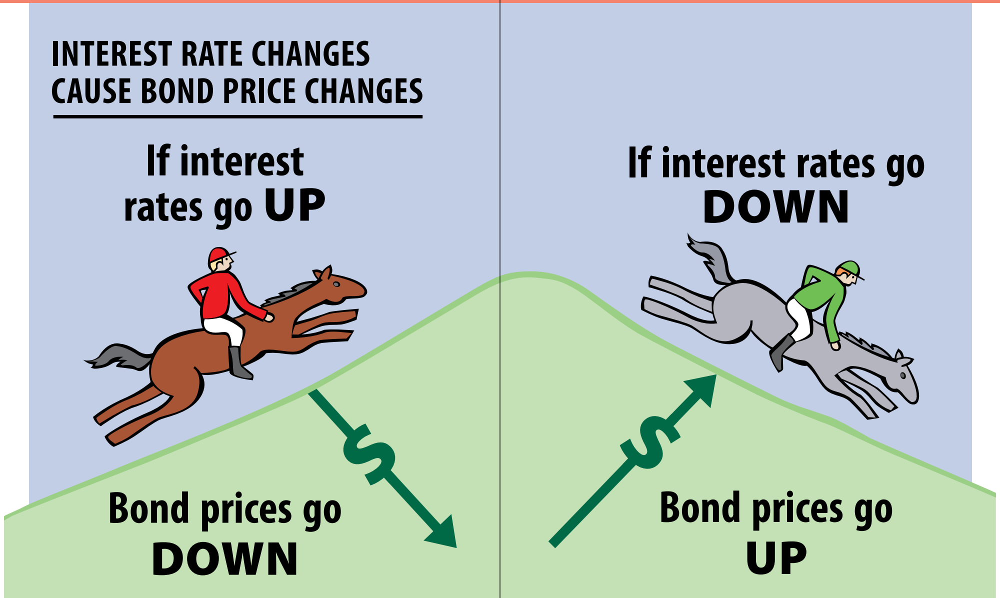
Bond Prices

A bond's price starts changing as soon as it's out of the gate.

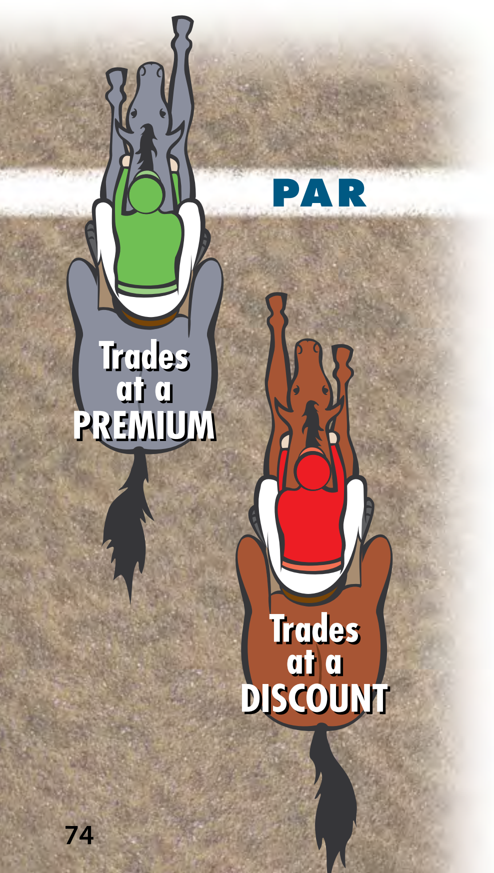
The only time a bond's purchase price is predictable is at issue, when you pay **par value**—usually $1,000—which is also the amount you expect to get back if you hold the bond to maturity. After issue, however, bonds trade at prices above and below par, in response to current interest rates, predictions about future rates, the rating they are assigned by a credit rating company, and shifts in investor demand.

When a bond trades at a price above par, it's said to trade at a **premium**. When a bond trades below par, it trades at a **discount**. In the shorthand of bond pricing, a bond at par value is said to be priced at 100. Figuring the dollar price of a bond is easy: Just multiply by 10. So a bond listed at 98.7 has a price of $987.

Like corporate and municipal bonds, US government issues are priced in dollars and cents. But par value for Treasury bonds, notes, and bills is $100 rather than $1,000. So if a bond is trading at 98.7, its price is $98.70. The lower price was introduced in 2008 to make the bonds accessible to more investors.



BONDS TRADE AT PRICES ABOVE OR BELOW THEIR PAR VALUE



WHY PRICES MOVE

Change—or the expectation of a change—in the current interest rates exerts the strongest influence on bond prices. When interest rates rise, the prices of existing bonds drop. That's because demand for existing bonds decreases when newer bonds that are paying higher rates attract investors with their better yield. This is called **interest rate risk**.

Small changes in a bond's credit rating may lead to small price changes. But if a bond drops out of investment grade, rises into investment grade, or rapidly jumps several ratings categories, the result could be a larger shift in price. This is **credit risk**.

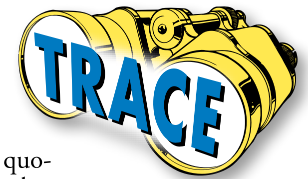
Bonds that have already been issued may also change in price to reflect what investors are buying and selling. If they're putting their money into bonds, bond prices go up, which means yields go down. If they're selling bonds, perhaps to invest in stocks, bond prices go down and yields go up. This up and down price movement is known as **market risk**.

TRACING A TRADE

Stock prices are everywhere, crawling across tickers and being updated as soon as they change. Bond prices tend to be less transparent.

The vast majority of bonds trade over-the-counter (OTC) as private arrangements between broker-dealers. Because of the current nature of the bond business, bond prices have been harder to track. But that's changing.

The FINRA Trade Reporting and Compliance Engine (TRACE) collects trading information on almost all OTC fixed-income transactions handled by member broker-dealers and makes the public data available for personal non-commercial use.



The real-time prices the site provides are for executed trades, not quotations, but those prices include markups, markdowns, and commissions. You'll have to contact your broker-dealer to buy or sell a bond, but the pricing data gives you a sense of what's happening in the current market. It may also help you negotiate a better price.

FINRA's Market Data Center has detailed information on municipal and Treasury issues as well as securitized products, plus relevant news articles and market analysis. And you can use a search function or set up a watch list to investigate possible investments based on the criteria you set.

MEET THE MARKS UP OR DOWN

Bond pricing differs substantially from stock pricing in the way dealers charge commissions. On a stock trade confirmation, you see the actual price of the stock and the price of the commission. In contrast, in a confirmed bond trade, the price includes the commission, which is figured as a loosely regulated percentage of the broker-dealer's price.

When you buy a bond, the difference between the price the dealer pays and the price you pay is the **markup**. Markups may be substantial—up to 4% or 5% for some bonds—which could amount to a whole year's interest and have a major impact on the bond's yield.

If your broker-dealer doesn't have the bond in inventory, there may actually be two markups embedded in the price. That's because the firm must buy the bond from another broker-dealer, who charges a separate markup.

The harder a bond is to sell, the higher the markup tends to be. For example, if interest rates are rising, older bonds with lower rates become harder to sell. Smaller trades also involve higher markups.

But if you're buying or selling a bond with a lot of active trading, such as a Treasury security, the markup will be much lower than it would be with a municipal bond that trades infrequently. (Markups on Treasurys generally stay under 0.5%.)

When you sell, the difference between the market price of the bond and the amount you receive is the **markdown**. It covers transaction costs and whatever profit the broker-dealer makes on the trade. The term may also refer to the practice of sometimes reducing the prices of slow-moving bonds to spur trading.

WHAT'S THE SPREAD?

One way to find the markup for a bond is by asking for its **bid-ask spread**. The **bid** is the price a buyer wants to pay, and the **ask**, or offer, is the price the seller wants.

For instance, a bond might have a market spread of 80 bid/83 ask, which is a spread of 3, or $300. The market spread is the spread for dealers—what they pay if they buy and sell. When you buy and sell, the spread will likely be wider. Commissions are negotiable, though. Your broker may be able to get you a better price—if you ask.

Corporate Bonds

From plain vanilla to bells and whistles—corporate bonds run the gamut.

When corporations need to raise money, they can borrow the cash from investors by issuing bonds. There's a substantial market for these bonds—as evidenced by the more than $8 trillion of corporate debt that's currently outstanding.

But investing in corporate bonds can require making a number of potentially complex decisions. For starters, the companies that issue debt range from large, well-known blue chips to small, new startups that are privately held.

What's more, corporations can craft a bond to control the cost of borrowing and to encourage investors to purchase. As a result, two bond issues from the same corporation may be very different investments.

Corporate bonds also involve risks that don't apply to government or agency bonds. Some of these risks are linked to the specific fortunes of a company, some to the state of the economy, and some to the special features of the bonds themselves.

To make up for these added risks, corporate bonds generally pay higher interest rates than Treasurys or municipals with comparable maturities. But there's a catch. Interest you earn from corporate bonds is taxed as ordinary income at federal, state, and local levels.

BIG HAS ITS BENEFITS

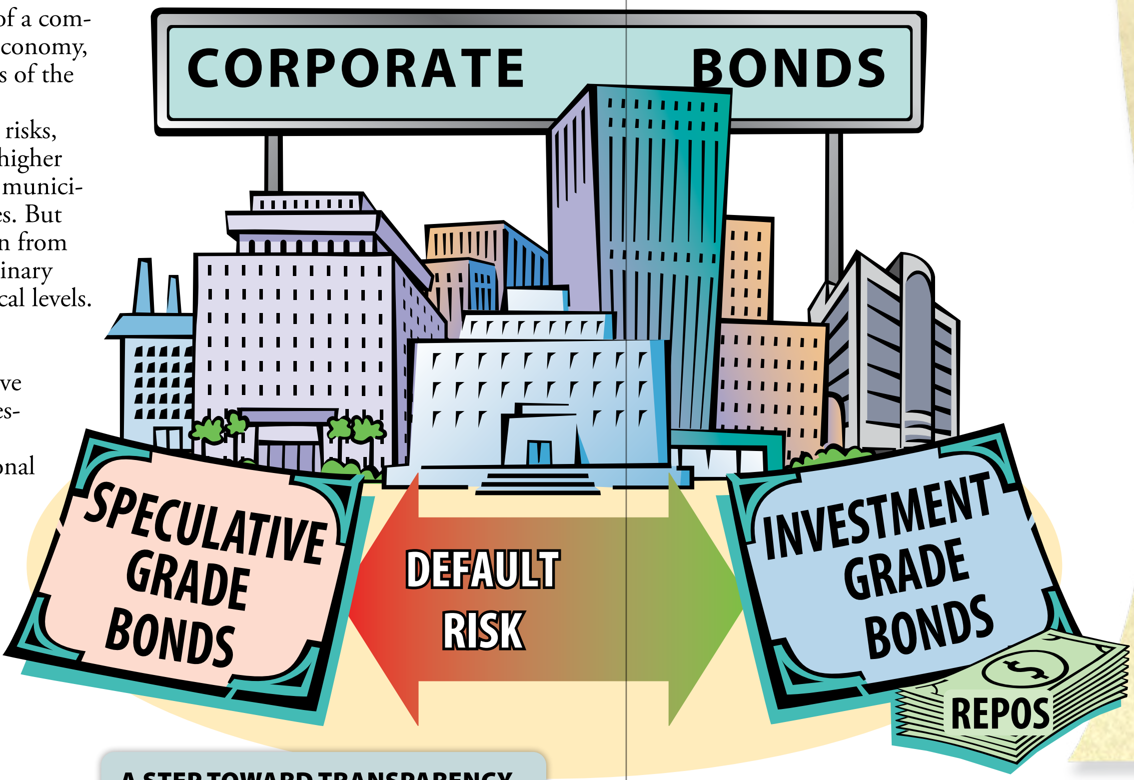
Large institutional investors have advantages over individual investors in purchasing corporate bonds. That's because institutional investors trade in larger lots—a minimum of $100,000 per transaction—so their markups tend to be lower. In addition, since broker-dealers cultivate institutional investors, they tend to give them preference on the most attractive bond offerings.

TAKING A RISK

Many institutional investors are required to limit their bond holdings to highly rated issues known as investment-grade bonds. So investment-grade pickings can be slim for individuals shopping for bonds, since the supply is limited.

In the market of bonds that fall below investment grade, however, individual investors find more opportunities. These bonds—known as **speculative grade**, high yield, or less flatteringly as junk—carry a higher risk of default than investment grade bonds, but they yield considerably more. Investing in high-yield bonds, however, requires a different strategy from investing in investment-grade bonds.

The most important difference is this: While the value of investment-grade debt depends mostly on shifts in interest rates, the value of junk bonds depends mostly on the credit risk of the companies that issue them. As a result, junk-bond markets tend to act more like stock markets, rising and falling with company performance.



A STEP TOWARD TRANSPARENCY

Trade confirmations for certain municipal bond transactions must show the dollar amount of the markup and that cost as a percentage of the price. The rule doesn't apply if the dealer has the bond in inventory or to the sales on the initial day of an offering.

NOT DEAD YET

Defaulted bonds aren't always worthless, since bondholders are fairly high on the priority list of who gets paid if a company emerges from bankruptcy or is reorganized. Bondholders may eventually get some, if not all, of their investment back. So some investors actually buy up defaulted bonds for pennies on the dollar, speculating on the eventual payout.

WHAT'S A REPO?

Repurchase agreements, better known as repos, are very short-term loans between financial institutions that help to keep markets liquid. What's unique about a repo is that the firm initiating the deal borrows collateral, usually a US Treasury issue, and, using a bank as intermediary, sells the collateral for cash, agreeing to buy it back at a slightly higher price, sometimes as quickly as the next day.

In a **reverse repo**, in contrast, an institution with excess cash may initiate an arrangement, agreeing to buy a security and sell it back in the future for a higher price.

Repos are low-risk products but they aren't risk free. A deal can fail if one of the counterparties fails to provide the required collateral. It can become more complicated if the value of the collateral changes, or if the collateral can't be transferred easily between parties, which may occur in a cross-border transaction.

THE PAPER ROUTE

Sometimes a company borrows money to finance a huge long-term project or a major expansion. Other times, they borrow to meet short-term bookkeeping needs—for example, to keep up inventories and make provisions for the uncertain timing of accounts receivable. If the company has a high credit rating, it's often cheaper and easier to borrow from investors than from a bank. This short-term, unsecured corporate debt is known as **commercial paper**. It's mostly issued by large financial companies, which need a lot of short-term loans to manage their cash flows.

Like other short-term debt, the paper trades at a discount and pays par at maturity, which is usually around 30 days from issue and no more than nine months. Unlike longer-term corporate debt, commercial paper doesn't have to be registered with the SEC. Investors consider it very safe and highly liquid in both US and international markets. That low risk typically translates into low yield.

Who buys commercial paper? Mostly, other companies do. That's because the paper comes in denominations of $100,000 and up—and sometimes over $1 million. Individual investors usually get exposure to commercial paper through **money market funds**, which invest heavily in short-term issues.

GOT COLLATERAL?

Some corporate issuers back up their bonds with collateral, which can be liquidated to repay bondholders if the company should default. For example, **collateral trust bonds** are backed by securities, usually those issued by wholly owned subsidiaries of the issuer. If a corporate bond has no collateral backing it up, it's known as a **debenture** or **note**.

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Municipal Bonds

Munis offer investors a less taxing way to earn bond income.

Municipal bonds, widely known as **munis**, are a way for governments below the federal level, such as states, cities, and counties, to raise money. Their major appeal for investors is their tax treatment. In most cases, muni interest isn't subject to federal income tax, though there are some exceptions.

If you invest in your own state's munis, the income is usually free of state tax, too. The same goes for the munis of your own city or county. So even though munis may offer a lower coupon rate than comparable taxable bonds, the tax break can push their value higher, especially if you're in a higher tax bracket.

You do take certain risks when you buy munis, however. Bonds with longer maturities are vulnerable to **interest rate risk**, which would mean receiving less than par if you sold. **Inflation risk** could reduce the buying power of the interest you earn. Also, some munis can be **called**, or redeemed by the issuer, before maturity.

WHERE THE MONEY GOES

State, county, and local governments issue bonds to fund ongoing activities, new projects, and improvements. So do other public enterprises and authorities, such as public hospitals, toll roads and bridges, universities, and public utilities.

When these municipalities or municipal agencies issue bonds, they release an **official statement (OS)** to investors, containing all the details about the bond—including how the issuer plans to raise the cash to pay its debt. If the interest will be paid out of tax revenues, the muni is a **general obligation (GO) bond**. If the bond will be paid with specific fees collected by the issuer—such as the tolls on a bridge—it's called a **revenue bond**. Sometimes an issuer uses a combination of taxes and fees to pay for a bond, known as a **double-barreled bond**.

Although some investors consider GO bonds safer than revenue bonds, it's rarely wise to generalize. Interest on many revenue bonds is paid with regular, predictable fees for services that are in constant demand, such as bridge tolls or airport departure fees. And some GO bonds are issued by governments in dire fiscal circumstances that can't raise enough in taxes to meet their obligations. Before you invest, it's best to review each bond on its own merits.

WHO INVESTS IN MUNIS?

Big institutional investors like pension funds, mutual funds, and life insurance companies don't dominate the muni market as they do other bond markets. So muni underwriters tend to cater to individual investors, in part by making it possible to make an investment in the $5,000 to $10,000 range. Another advantage of muni investing is that prices tend to be relatively stable, since individuals are less likely than institutions to trade bonds before maturity.

IT'S A TEAM EFFORT

Municipals' advisers work with governments to create borrowing plans, collaborate on determining the details of new issues, represent their interests in negotiations with underwriters, and help to prepare disclosure documents. These advisers, who are overseen by the Municipal Securities Rulemaking Board (MSRB), have a fiduciary responsibility to act in the best interests of their clients.

INCOME TAX-FREE

- State Muni
- GO Bond
- Public Hospital Muni
- Revenue Bond
- Double-Barreled Bond

TAX-DUE

- Private-Purpose Bonds

TAX EXCEPTIONS

Not all munis are tax exempt. Some, called **taxable munis**, are subject to federal income tax. They're issued by governments on behalf of private enterprises that don't provide qualifying public services. For example, proceeds from a taxable muni may be used to build a sports stadium or a shopping mall.

Other munis that are exempt from ordinary federal income tax are subject to the **alternative minimum tax (AMT)**. A small percentage of munis fall into this category, because the tax law defines them as **private-purpose bonds**. They're used to fund non-governmental projects like housing and airports.

You'll also have a taxable **capital gain** if you sell the bond at a higher price than you paid to buy it. The same is true if you buy a muni at a discount and redeem the bond at par. If you've held the bond for more than a year, you can figure the tax at your long-term capital gains rate, which is determined by your adjustable gross income (AGI).

GETTING A GUARANTEE

Better credit quality can mean greater investor demand and lower coupon rates. And the lower the rate, the less borrowing costs. So municipalities have found ways to improve the credit rating of their bonds. One way is through **bond insurance**, which guarantees coupon and principal payments. If the issuer defaults, the insurer makes the payments.

The companies that insure municipal bonds assess the credit quality of the issuer before agreeing to the coverage.

In that sense, investors may consider bond insurance to be an expert second opinion on credit risk. While bond insurance may help protect you from the credit risk of a municipal default, it doesn't protect against interest rate risk.

Keep in mind, however, that if these insurers suffer major losses on other investments they have guaranteed, they may have trouble meeting their obligations on a municipal bond default.

ASSIGNING RATINGS

The credit quality of municipal bonds tends, overall, to be higher and the default rate lower than for corporate bonds.

When rating agencies are assessing municipal credit risk, one element they look at is a ratio known as **debt coverage**—how much money an issuer has available for its debt divided by the amount it owes. If that ratio is below 1 then the rater concludes that the issuer doesn't have the money to cover the debt. A debt coverage ratio of 2 is considered good, and of 4 or higher, excellent.

BOND OFFERINGS

Municipalities seeking capital may bring bonds to market in two ways: through a negotiated arrangement or a competitive bid. In a negotiated arrangement, the issuer works with a securities firm—often the same one over a period of years. The firm underwrites the issue and guarantees a presale. In a competitive bid, the issuer is obligated to choose the firm that submits the lowest price for its services. In many states, the law requires competitive bidding in the issue of general obligation bonds.

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US Treasury Issues

Investors line up to make loans to the US government.

The US Department of the Treasury issues a variety of **debt securities** to raise money that, along with the taxes it raises and other revenues it collects, helps to pay for government operations. The amount the Treasury can borrow—known as the **public debt**—is authorized by Congress, as is the annual budget that determines how much the government needs to raise.

Investors of all types—individuals, corporations, state and local governments, Federal Reserve Banks, and non-US governments and institutions—own Treasury issues. They're sometimes described as **safe harbor investments**, because they're considered essentially free of credit risk and safe from default. Like all debt securities, though, individual US issues are subject to market risk, which means their market prices and yields are affected by changing interest rates and investor demand.

BONDS ON THE RUN

On-the-run Treasurys are the latest issues in a particular maturity. For example, all the notes sold in the most recent auction of 10-year notes would be the on-the-run 10-year issue. Any 10-year notes issued previously would become **off-the-run**.

When the financial press talks about Treasurys, it's generally talking about on-the-run issues because they're most in demand and the most frequently traded. So they're often more expensive than off-the-run issues, even if the coupon and maturity are almost identical. This makes off-the-run issues a potential bargain.

Types of Treasury Securities

The US Treasury offers six types of marketable securities that can be held to maturity or traded in the **secondary market** after issue. They differ from each other in length of term, the frequency with which they're offered, the interest rates they pay, and when the interest is paid.

The range of issues includes **bonds**, with 20- or 30-year terms, **notes**, with 2-, 3-, 5-, 7-, or 10-year terms, and **bills**, with 4-, 8-, 13-, 17-, 26-, and 52-week terms. You can also buy inflation-indexed notes and bonds known as **TIPS** (for Treasury Insurance Protected Securities). They're available with maturities of 5, 10, or 30 years.

Floating rate notes (FRN) were introduced in 2014. They're issued with 2-year terms and, unlike other notes, their interest rate changes daily, based on the 13-week T-bill rate, and is paid quarterly.

Bills, notes, and bonds—including TIPS notes and bonds and FRNs—are sold in $100 increments, and you can invest as little as $100 or as much as $10 million each time you make a purchase. You buy bills at a discount to par and receive par at maturity. The difference between those amounts is the interest.

Interest on bonds and notes except FRNs is paid semi-annually at a fixed rate. With TIPS, the principal is adjusted twice a year, based on changes in the Consumer Price Index (CPI), and interest is paid semi-annually on the inflation-adjusted principal.

BONDS

THE AUCTION SYSTEM

The US Treasury sells its bonds, notes, and bills through public auction in which individuals can participate by making noncompetitive bids. You can buy directly, by enrolling in a program known as TreasuryDirect, or through a broker or bank.

As an auction takes place, the Treasury accepts competitive bids, starting with the lowest rate that's bid and gradually accepting higher bids until the quota for that auction is filled. That rate becomes the **auction rate**. All the competitive bidders who bid rates lower than the cut-off bid have their orders filled at the auction rate, as do all noncompetitive bidders. However, institutions that bid the cut-off rate may not be able to invest as much as they would like if the quota is already filled.

Treasury bills are auctioned every week. The 2-, 3-, 5-, and 7-year notes and FRNs are auctioned once a month, the 10-year notes eight times a year, and 20- and 30-year bonds four times a year. The frequency of those auctions changes from time to time, depending on the government's need for cash. You can get current auction information by visiting the TreasuryDirect website (www.treasurydirect.gov).

Like other debt securities, Treasurys can be traded in the secondary market after issue, and their prices fluctuate to reflect changing demand. Details of those trades, in the order of maturity date, are reported regularly. In fact, the changing yield on 10-year notes and 30-year bonds are used as benchmarks for evaluating the current state of the securities markets and the economy as a whole.

BOND LADDERS

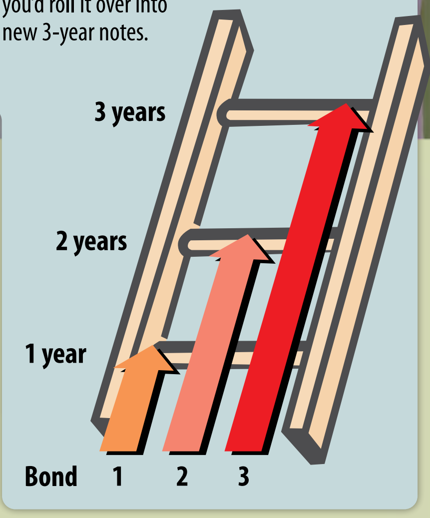
Individual investors may use a strategy called **laddering** when they invest in Treasury issues or other fixed-income products. The goals of laddering include:

- Providing regular return of principal that is available to reinvest or supplement income
- Avoiding the potential problem of having to reinvest the entire principal of a fixed-income portfolio at one time, especially if rates are low

When you ladder, you split the investment principal you've allocated to fixed income into equal amounts and invest each portion in a debt security that differs from the others you're buying by maturity date.

For example, you might put $5,000 into 52-week Treasury bills that mature in June, 2027, $5,000 into 2-year US notes that mature in June, 2028, and $5,000 into 3-year notes that mature in June, 2029. Then, each year as an investment matured, you'd roll it over into new 3-year notes.

Bond laddering helps you manage risk



Like Treasury bills, Treasury **STRIPS** are zero-coupon securities that are sold at a **deep discount**. They're available only through a financial institution or broker-dealer. You aren't paid interest in regular installments over the term. Instead, the interest accumulates, and you receive it in a lump sum at maturity. However, you owe taxes each year on the accruing interest. STRIPS are free from credit risk, but market prices can be volatile during the issue's term.

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Bond Variations

The fine print can have a big impact on the value of a bond.

Like the word **security**, which once meant the written record of an investment, the word **bond** once referred to the piece of paper that described the details of a loan transaction. Today *bond* describes a vast and varied market in debt securities.

Plain vanilla bonds pay a fixed rate and mature at a set time. Others, with lots of **bells and whistles**, may suit your investment needs but expose you to risks you hadn't anticipated. So it's essential to be on the lookout for potential red flags.

BONDS WITH STRINGS ATTACHED

Callable bonds don't always run their full term. The issuer may call the bond, which means paying off the debt before the maturity date. The process is called **redemption**. The first date a bond is vulnerable to call is stated at the time of issue. Callable bonds come with either a call schedule, which lists specific dates and prices at which a bond can be called, or a date beyond which the issuer could call the bond at any time.

Issuers may want to call a bond if interest rates drop. That way they can pay off their outstanding debt and float new bonds at the lower rate. (It's the same idea as refinancing a mortgage to get a lower interest rate with lower monthly payments.) Sometimes only part of an issue is redeemed, rather than all of it. In that case, the bonds to be called are chosen by lottery. Some bonds are issued with a **sinking fund**, which is a cash reserve set aside specifically to retire portions of the bond issue before maturity.

Callable bonds can be less attractive to investors than noncallable ones because an investor whose bond has been called is often faced with reinvesting the money at a lower, less-attractive rate. To reassure bondholders expecting long-term steady income, call provisions usually specify that a bond can't be redeemed before a certain number of years, such as five or ten.

Sometimes issuers offer to redeem bonds at a **premium**, or a price higher than par, to make the bonds more attractive. But this could result in a capital gain if the premium price is higher than the price an investor paid to buy.

BONDS WITH CONDITIONS

A **subordinated bond** is one that will be paid after other loan obligations of the issuer have been met. **Senior bonds** are those with stronger claims. Corporations sometimes sell senior and subordinated bonds in the same issue, offering higher interest and a shorter term on the subordinated ones to make them more attractive.

Floating-rate bonds promise periodic adjustments of the interest rate to persuade you that you aren't locked into what seems like an unattractively low rate.

Prerefunded bonds are corporate or municipal bonds, usually AAA rated, whose repayment is guaranteed by a second bond issue. The money the issuer raises with the second bond is usually invested in US Treasury securities, timed to mature at the first bond's initial call date. Prerefunded bonds typically offer a lower-than-average coupon rate and are called at the first opportunity.

Insured bonds are backed by bond insurance. If the issuer can no longer make timely interest payments, the insurer pays. But the reduced risk generally means the bonds are offered at a lower-than-average coupon rate.

Bonds with equity warrants are corporate bonds that give investors the right to buy the issuer's stock at a certain price on a specific date.

Put options give investors the right to redeem a bond before maturity at par value. In general, put bonds are issued at a lower-than-average coupon rate because they have what amounts to an escape clause that most bonds don't provide.

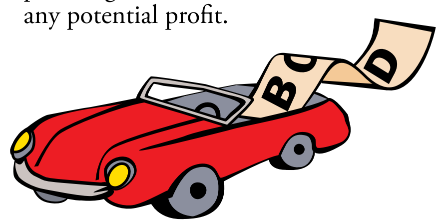
BONDS WITH OPPORTUNITIES

Convertible bonds give you the option to convert, or change, corporate bonds into company stock instead of redeeming the bonds for a cash repayment. The terms, set at issue, include the date the conversion can be made and how much stock each bond can be exchanged for. The conversion option lets the issuer offer a lower initial interest rate and makes the bond price less sensitive than conventional bonds to changes in the interest rate.

The dual appeal of convertibles, from an investor's perspective, is that they provide higher **yields** than are typical with common stock, and, at the same time, some of the opportunity for growth that stock offers. That's one reason they're sometimes described as **hybrid investments**.

There's some downside protection. If the stock price falls, the convertible will be affected. But because factors that negatively affect stocks sometimes positively affect bonds, the issue is likely to retain much of its value.

There are risks, though. Convertibles are usually subordinated debentures, which means they're at the end of the line if the issuer defaults. Most convertibles are also callable, and the issuer is likely to exercise that right if the stock price begins to rise. That would limit any potential profit.



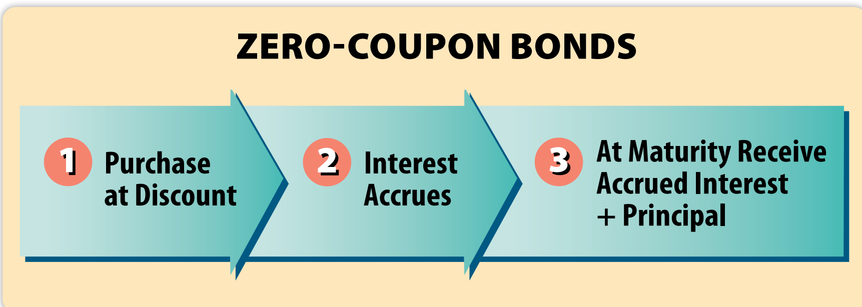
ZERO COUPON BONDS

Zero-coupon bonds are a popular variation on the bond theme for some investors. Since **coupon**, in bond terminology, means interest, a zero coupon by definition pays out no interest while the loan is maturing. Instead, the interest **accrues**, or builds up, and is paid in a lump sum at maturity.

You buy zero-coupon bonds at a **deep discount**, or prices far lower than par value. When the bond matures, the accrued interest and the original investment add up to the bond's par value.

Bond issuers like zeros because they provide an extended period to use the money they have raised without paying periodic interest. Investors like zeros because the discounted price means you can buy more bonds with the money you have to invest. You can also buy bonds of different maturities, timed to coincide with anticipated expenses, such as college tuition bills, for example. What's more, there's no reinvestment risk with zeros since you have no interest payments to reinvest. Amounts you've earned but haven't been paid compound exactly at the yield-to-maturity rate.

Zeros have two potential drawbacks. They are extremely volatile in the secondary market, so you risk losing money if you need to sell before maturity. And, unless you buy tax-exempt municipal zeros or invest through a tax-deferred account, you have to pay taxes every year on the interest you would have received had it, in fact, been paid.



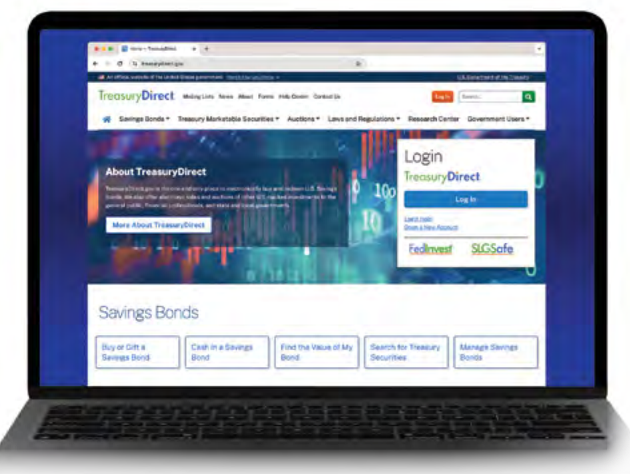
Buying and Selling Bonds

Investors can buy bonds from brokers, banks, or directly from certain issuers.

You can buy newly issued corporate, municipal, and agency bonds, or bonds trading in the secondary market through your broker or from certain banks. In the secondary market you buy bonds that are being sold at some point after issue by a previous investor. You can also buy US Treasury issues through these intermediaries or you can buy them directly in a regularly scheduled Treasury auction with no middleman and no commission.

HOW TRADING WORKS

Most already-issued bonds are traded **over-the-counter (OTC)**, a term that really means over the phone or online. Bond dealers across the country are connected via electronic display terminals that give them the latest information on prices. A broker buying a bond tries to find the dealer who is offering the best price and calls to negotiate a trade.



Brokerage firms also have inventories of bonds to sell to clients looking for bonds of particular maturities or yields. Often, investors make out better buying bonds their brokers already own—or **make a market in**—as opposed to bonds the brokers have to buy from another firm.

TRADING TREASURYS

The Bureau of the Fiscal Service handles transactions in new Treasury issues. To buy, you establish a **TreasuryDirect** account, which keeps electronic records of your transactions and pays interest directly into your bank account. You can find the forms you need on the TreasuryDirect website at www.treasurydirect.gov to enroll online.

You can sell your Treasury securities before maturity, but, if they're in a TreasuryDirect account, you must move them to a brokerage account. With small balances or relatively short times to maturity, this may not make financial sense.

WHO BUYS WHAT?

High minimum investment requirements can make it hard for individuals to invest in most bonds. Even though par value is usually $1,000, bonds are often sold in minimum lots of five or more and may require an investment of at least $10,000. US Treasurys are the exception, since you can purchase just one bill, note, or bond at a time if you wish.

As a result, institutional investors, such as banks or mutual funds, hold the majority of individual bonds, corporate bonds in particular. Many high net worth individual investors hold substantial numbers of munis.

An alternative is buying bonds through an **actively managed account**, or portfolio of individual bonds chosen and overseen by a professional investment manager. You're just one of hundreds of investors whose accounts are overseen by the same manager. But while all the accounts will include many of the same bonds, you can customize your individual account to some extent.

BOND FUNDS

Other investors may choose bond funds, rather than bonds. A bond fund makes it easier to diversify a fixed-income portfolio and allows you to reinvest your earnings to buy more shares. But funds don't promise return of principal at a set maturity date or pay a fixed interest rate.

In fact, in one sense, buying a bond fund is actually making an equity investment in debt securities, as you own shares of the fund that owns bonds.

The Treasury Bill Auction Process

MONDAY, SEPTEMBER 20

T-bills offered on Thursday for Monday sale

The US Treasury offers 13-, 26- and 52-week T-bills for auction every Monday.

Across the country, institutional investors (such as pension funds and mutual funds) who want to buy the major part of the issue ready their competitive bids. Their bids must arrive at the Treasury by 1:00 p.m. on Monday, the auction deadline. Bidders state the rate they are willing to accept on the bills.

At the same time, individual investors can submit non-competitive tenders, or offers, through TreasuryDirect. Investors decide how much they want to put into T-bills, and authorize a debit to cover that amount.

1 PM

1pm Deadline for all bids

The Treasury accepts bids, from the lowest to the highest rate, until the quota is filled.

1:10 – 1:15 Results announced

Within minutes, the Treasury announces the auction results, and bidders learn what the auction rate is and the price they will pay to buy the bills. All the competitive bidders who bid rates lower than the cutoff bid have their orders filled at the auction rate. However, any institution whose bid is at the cutoff, or auction rate, may not be able to invest as much as it had wanted if the quota has already been filled.

Individuals and small institutions that have submitted non-competitive bids get the auction rate that's been determined by the competitive auction. They can invest as much as they wish, up to $10 million in an individual purchase.

A noncompetitive bidder's transaction is completed when the amount due for the purchase is debited from the bank account linked to his or her TreasuryDirect account. At maturity, par value is credited to that account, or $100 for each bill. If the purchase price was $99 per bill, the $1 per bill difference is the interest.

At maturity, noncompetitive bidders can roll over their T-bill investment in their TreasuryDirect at the new auction rate, or they can opt for redemption at par value.

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BONDS

Securitization

Issuers assemble pools of individual loans to create new debt securities.

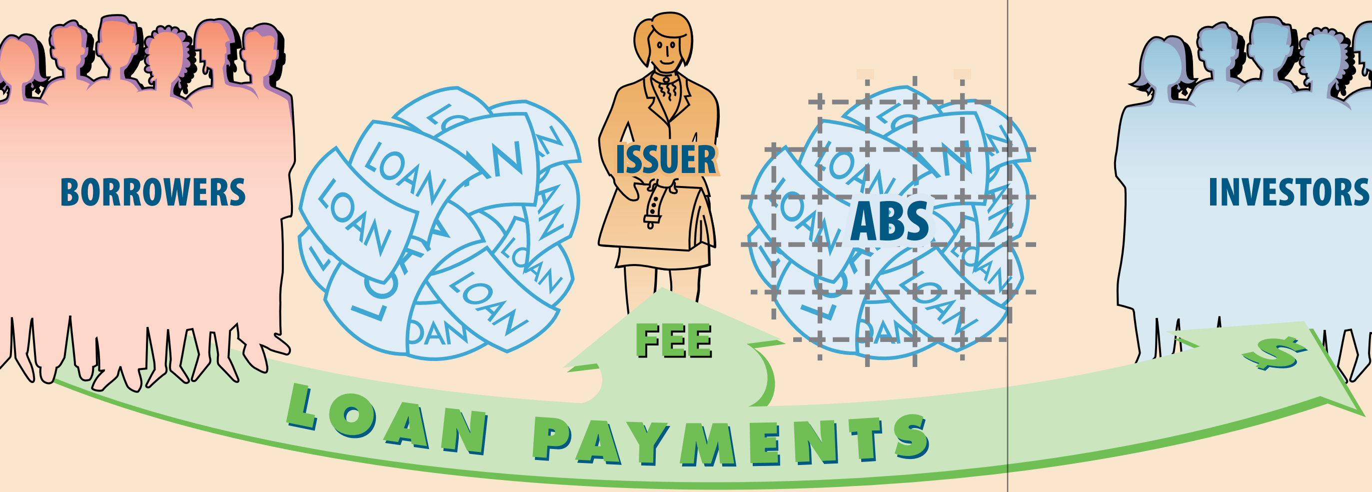
Securitization is the process of buying and bundling assets that produce a regular revenue stream—such as groups of mortgage loans, student loans, car loans, or credit card debt—to create **asset-backed securities (ABS)**. The bundlers, or issuers, sell ABS to investors who are looking for income-producing alternatives to traditional bonds. Selling the bonds allows the lenders to transfer the risk of holding outstanding debt.

Securitization is part of a recurring cycle that was developed to increase the amount of capital that's available to borrowers at the same time it provides financial benefits for lenders, issuers, and investors. Here's how it works.

- Lenders originate, or make, loans and sell them to issuers who pool them to create ABS. Selling the loans allows the lenders to transfer the risk of holding outstanding debt.
- Lenders use the money they receive from selling loans to make more loans that they can also sell.
- Issuers sell the ABS to investors and use that revenue to purchase new loans.

The individual borrowers whose loans are included in an ABS asset pool make their regular payments to the ABS **servicer**, who handles the recordkeeping, collection, and other administrative details for the issuer. After subtracting its fee, the servicer forwards the payments to the investors. That's why ABS are known as **pass-through securities**.

How Securitization Works



1 An issuer bundles a pool of loans or payment streams that typically share a number of key features, such as term length and type of interest rate, either fixed or variable.

2 The issuer sells interests in the ABS to investors and uses the money it raises to buy a new group of loans that it will securitize and sell.

3 Payments that the borrowers make to the servicer are passed through to investors after the servicer takes a fee (usually 0.5% to 1%).

CASH FLOWS…AND EBBS

The income stream, or **cash flow**, from ABS differs substantially from the cash flows of traditional bonds. Investors typically receive their pass-through payments monthly rather than semi-annually as they do with most bonds. In addition, each payment is a combination of interest and principal, just like the payment on the underlying loan. Instead of receiving a lump-sum return of principal when the ABS matures, investors collect it throughout the term.

However, borrowers usually have the right to pay off their loans early, something that homeowners in particular are likely to do, either because they move and sell their property while they still have a mortgage loan—a common occurrence—or they refinance because interest rates have dropped.

Prepayments initially increase cash flow and current yield. But you can't tell exactly how long any particular asset-backed product will pay out, or how much. This unique phenomenon is called **prepayment risk**.

MORTGAGE MONEY

Mortgage-backed securities (MBS) created from pools of mortgage loans are the most common ABS. They can be attractive to investors because they have longer terms than most other ABS, and they tend to pay a somewhat higher interest rate than conventional bonds with comparable terms.

Most MBS are issued by a federal government agency, such as Ginnie Mae, or by a government sponsored enterprise (GSE), such as Fannie Mae.

Private MBS issued by arrangers or packagers created by banks and other financial institutions were plentiful in the years leading up to the financial crisis of 2008 but have essentially disappeared. The exceptions are a small number of securities backed by jumbo loans, which the GSEs don't securitize because the loan amounts exceed their cap.

Before 2008, financial institutions also created multi-class mortgage-backed securities known as **collateralized debt obligations (CDO)** or **collateralized mortgage obligations (CMO)**. They were pools of MBS with different credit qualities structured into **tranches**, or slices, which matured at different times and paid different rates of interest to meet different investment objectives.

MARKET MELTDOWN

The process of buying residential mortgages, creating MBS, and packaging them into CDOs was described, before 2008, as a way to reduce credit risk through diversification. That view ignored the fact that the subprime loans that backed these products were actually highly correlated as well as default prone.

The large returns that investment firms were realizing on the CDOs led some of them to buy loans indiscriminately from lenders who, eager to meet the demand, relaxed their criteria for evaluating borrowers. In this environment, credit rating firms, who were generating profits by rating the issues, were slow to raise red flags. So were the regulators who misread the booming real estate market as healthy growth.

ASSESSING ABS CREDIT RISK

In the case of pass-through securities, credit risk is the potential that the borrowers whose loan repayments create the income streams that the issuers promise to deliver to investors will default.

MBS guaranteed by a federal agency, such as Ginnie Mae, have minimal credit risk. Those issued by GSEs, including Fannie Mae and Freddie Mac, while not explicitly guaranteed, were not allowed to default in the financial crisis. Investors continue to assume there's minimal credit risk exposure with these products.

On the other hand, one of the reasons that private sector MBS and CDOs have all but disappeared is that there is no government guarantee. Investors, who suffered major losses in the crisis, have little appetite for these products.

INTEREST RATE RISK

Because of prepayments, mortgage-backed securities fare worse than other bonds when interest rates change.

Normally, when rates drop, bond prices rise. But investors tend to refinance when rates drop, causing a spike in prepayments. Prepayments decrease an asset-backed issue's yield to maturity, making it less attractive to investors.

When rates rise, however, bond prices fall—and the prices of asset-backed bonds fall even more. That's because prepayments slow down when rates are high, lengthening the lifespans of MBS with lower-than-market yields.

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INDEXES & INDEX INVESTING

Tracking Securities Markets

An index provides a continuously updated record of financial market performance.

An index tracks the prices of a specifically selected group of securities to measure the performance of the financial market or market segment to which the securities belong.

A financial market can be defined in a variety of ways—by asset class, security size, risk level, geography, and a variety of other factors. For example, an index might track large-company US stocks, corporate bonds issued in developing markets, or global oil prices, to name just a few.

An index can be **broad**—tracking hundreds or sometimes thousands of securities—or **narrow**—tracking only a few—or somewhere in between.

But what each of an index's components must have is a publicly available market price. Without a price, there can be no calculation. And if the price isn't publicly available, there's no way to be sure that the index is objective and therefore a reliable indicator of performance.

TRACKING PERFORMANCE

As an index moves up or down to reflect gains or losses, the change is expressed both numerically and as a percentage. Percent change is generally considered a more revealing indication of what happened in the market during the time period being measured—seconds, hours, days, weeks, or longer.

Percent change lets you compare the performance of different market segments, such as large- and small-cap stocks, or of the same market sector in different regions, such as the United States and Europe.

FOLLOWING THE RULES

Every index has a **methodology**, or set of rules, which states the index objective, the market it will track, and the criteria that will determine which securities are eligible for inclusion.

Methodology, in fact, governs every facet of an index's creation and operation and underlies its reliability and credibility. Methodology is also the reason that two indexes tracking what seems to be the same market produce different results.

In a small number of indexes, including two of the best-known and most-widely used—the Standard & Poor's 500 Index (S&P 500) and the Dow Jones Industrial Average (DJIA)—final decisions about the composition of the index are made by an index committee choosing among qualifying securities. In other cases, index components are determined statistically, based on the index's methodology.

USING INDEXES

Individual and institutional investors use indexes in different ways:

- As **benchmarks** for evaluating the performance of a specific investment, an investment portfolio, or the effectiveness of active investment managers
- As the basis of **index products**, including mutual funds, exchange traded funds (ETFs), options contracts, futures contracts, and others whose returns are linked to the return of an underlying index
- As a way to evaluate, in real time, investment performance in markets at home and around the world
- As indicators of economic strength or vulnerability

Index data is also analyzed in great detail. It enables researchers to better understand how markets work, investment managers to make informed decisions, and economists to formulate or rebut economic policy.

SPREADING THE WORD

Indexes have a major impact in the financial world because they provide succinct answers to the question "How's the market doing?" For example, when you hear that the S&P gained 2% or the Nasdaq Composite dropped 150 points, you have a sense of what's going on, at least in the segments of the market those indexes track.

Indexes provide perspectives over longer periods as well, from weeks or months to decades, as the markets move in recurrent cycles of gains and losses.

Here's just one example of how an index provides a market snapshot: The impact of the financial crisis of 2008 reduced the level of the DJIA from 14,000 (in July 2007) to 6,547 (in March 2009), a more than 50% loss.

You can trace index performance for the DJIA back to May 1896, when it was published for the first time as an average of 12 major industrial companies and closed at 40.94. The S&P 500, in its current form, though not with the same components, was introduced in March 1957, though earlier versions had been calculated since 1923. It closed at 44.22 on its first trading day.

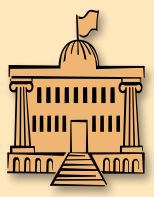
MARKET MELTDOWN – DJIA JULY 2007 – MARCH 2009

Each index has a **baseline value**, an arbitrary level the index company chooses as a starting point for its calculation. For example, the baseline of the S&P was set at 10 for the period 1941-1943, which is the value against which subsequent changes in the index have been measured. The fact that different indexes start from different baselines helps to explain their sometimes widely divergent levels even when they track the same market or market segment. Other factors contribute as well, including the index methodology.

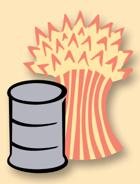
INDEX VARIETY

The number and variety of financial indexes is staggering—essentially beyond counting. They track markets in every region of the world, on every continent except Antarctica, and every type of financial investment you've ever heard of—and perhaps some you haven't.

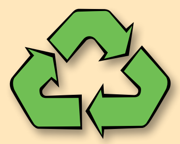
Equity indexes track stock markets and market segments in individual countries, in regional or other groupings, and globally. They have the longest history and are the best known.



Fixed-income indexes track corporate, municipal, and sovereign debt, as well as asset-backed securities, money markets, and hybrid investments including convertible bonds and preferred stock.



Commodity indexes track futures contracts on a wide variety of commodities in domestic or world markets.



Thematic indexes track groups of components selected because they exemplify a specific characteristic, such as environmental responsibility or religious precepts.

Strategy indexes are designed to provide a return that's better or more consistent than the return of the market from which the indexes' components are selected.

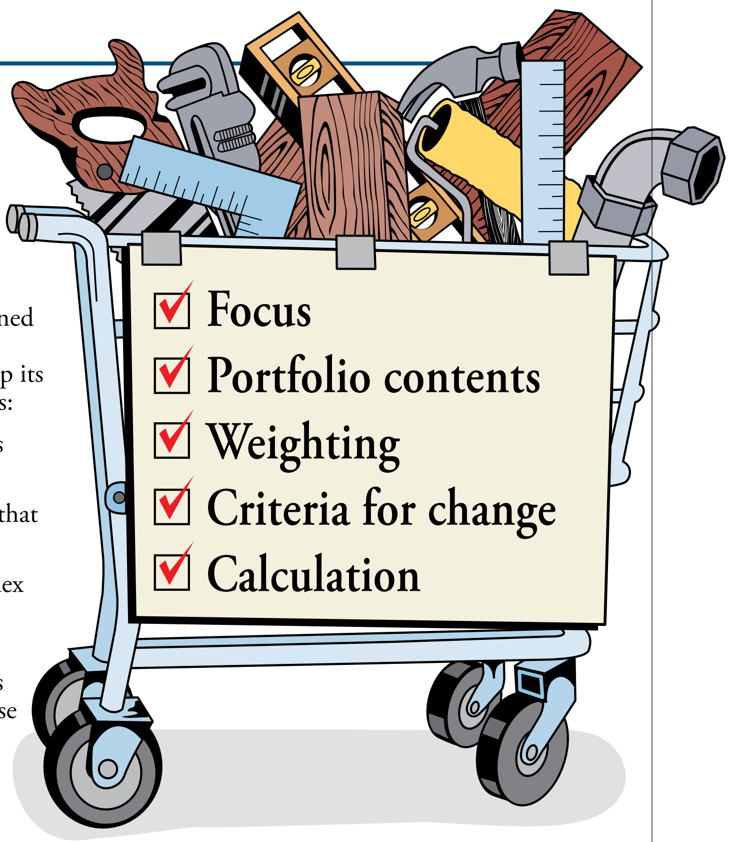
Constructing an Index

Crafting an index begins with making some critical decisions.

An index doesn't just happen. It's created by an index provider to meet one or more objectives, such as providing a benchmark, serving as the basis of a financial product, or both.

Having identified the index's purpose and determined that it can be calculated, the provider can begin to develop its methodology, which involves:

- Defining the index's focus and scope
- Identifying the securities that will form its portfolio
- Determining how the index will be weighted
- Setting the criteria for changing the components of the index and how those changes will be made
- Deciding how it will be calculated



WEIGHTING THE OUTCOME

Most stock indexes are **weighted**, which means that some stocks in the index have greater impact on the outcome of the calculation than others.

Capitalization-weighted indexes are designed to reflect the economic impact of companies with the highest **market capitalization**. Market cap is calculated by multiplying the number of shares by the stock's current market price. The majority of indexes are capitalization weighted, including the S&P 500 and the Nasdaq Composite Index.

Price-weighted indexes are more impacted by changes in the prices of higher-priced stocks than by changes in the value of lower-priced stocks. The DJIA is a price-weighted index as is Japan's Nikkei.

In **equal-weighted** indexes, on the other hand, each security has the same weight regardless of market cap. This means that the smaller companies in the index have as much influence on its value as the large companies.

A **fundamental-weighted index** includes securities notable for one or more fundamental measures, such as history of providing a high dividend yield. It gives the most weight to components that rank the highest among a group of securities that meet its criteria.

INDEX ANALYSIS

If you're investing in an index-based product, you need to know how the underlying index is weighted and what impact that weighting system is likely to have on performance.

Most equity indexes are market-cap weighted. These indexes are sometimes described as providing the most accurate reading of what the market is doing. That's because the largest companies with the most shareholders tend to have a greater impact on market return than smaller companies that are less widely held. However, there can be a disconnect between index results and the economy if the robust performance of a few large companies drives the index up while most companies are posting mediocre returns.

Equal-weighted indexes tend to provide stronger returns than market-cap indexes in periods when smaller-cap stocks outperform larger-caps ones, something that happens periodically. But these indexes provide weaker returns when the reverse is true.

A fundamental-weighted index may outperform a market-cap index if it tracks a group of stocks chosen because their returns are less impacted by volatility or other market forces than the more diverse overall market. Similarly, such an index may outpace a market-cap index if its components provide a higher total return. But a stronger performance is not guaranteed.

CHANGING THE LIST

Some indexes are modified when appropriate based on the index methodology. Others are updated regularly, such as on an annual schedule. Providing a mechanism for change enables an index to keep up with the market it tracks.

One of the best examples is the DJIA, which has evolved from 12 industrial companies to 30 companies that represent a range of sectors, including technology, financial services, and retail.

The flip side of choosing securities for inclusion in an index is identifying those that should be dropped.

The most obvious disappearing acts are by companies that have been merged or acquired out of existence. Also excluded are formerly public companies that have been taken private. Some companies may be deleted because they no longer meet the defining terms, such as minimum market capitalization. In some cases, being deleted from an index is in effect a promotion—when, for example, a company moves up to the S&P 500 from the S&P MidCap 400.

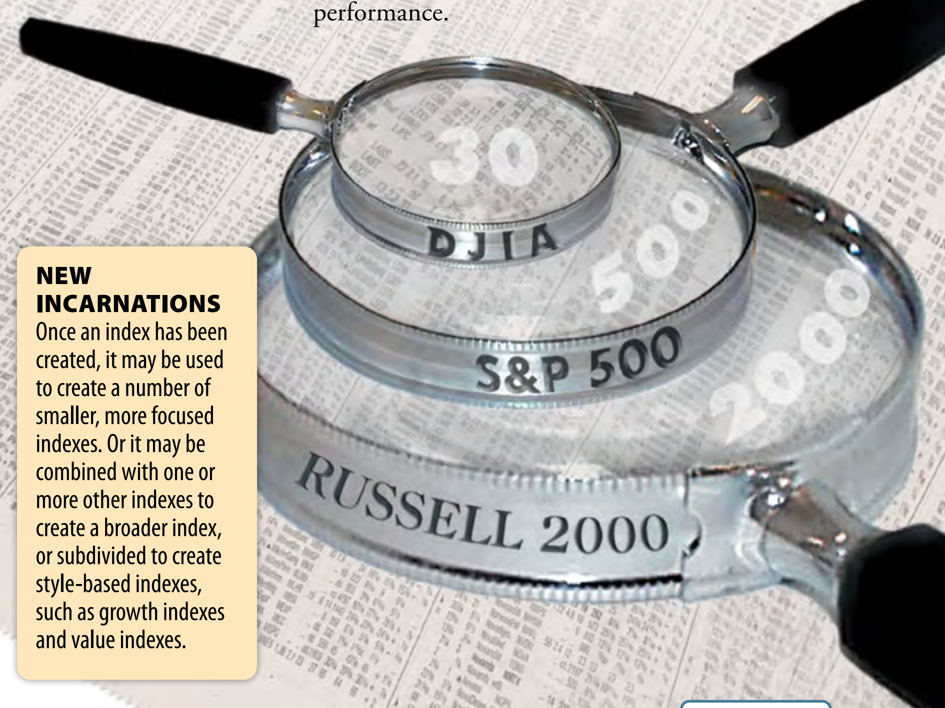
FINDING A FOCUS

There are limitless possibilities for what an index might track, and the companies that could be included in its roster. An example of this diversity is provided by three different indexes, each looking at the US stock market from a different perspective:

The S&P 500 tracks 500 US companies in 11 sectors representing about 80% of the large-cap market. It serves as the benchmark for that market and the US economy.

The Russell 2000 tracks about 2,000 small-cap US stocks, which represent about 10% of the capitalization of the overall stock market. It's widely used as the benchmark for small-cap performance.

The Dow Jones Industrial Average (DJIA) tracks 30 widely held US large-cap stocks that represent different sectors of the economy and reflect market performance.



NEW INCARNATIONS

Once an index has been created, it may be used to create a number of smaller, more focused indexes. Or it may be combined with one or more other indexes to create a broader index, or subdivided to create style-based indexes, such as growth indexes and value indexes.

Decoding an Index

There's more to an index than meets the eye.

Whether a market index is up or down at the end of the trading day may be all you want to know. But if you're curious about where that closing number comes from, you'll need to understand how changes in an index are calculated.

DOING THE MATH

Index values are calculated on an ongoing basis throughout every trading day. An index's methodology specifies the calculation formula, which varies from index to index, though market-capitalization equity indexes generally require similar data:

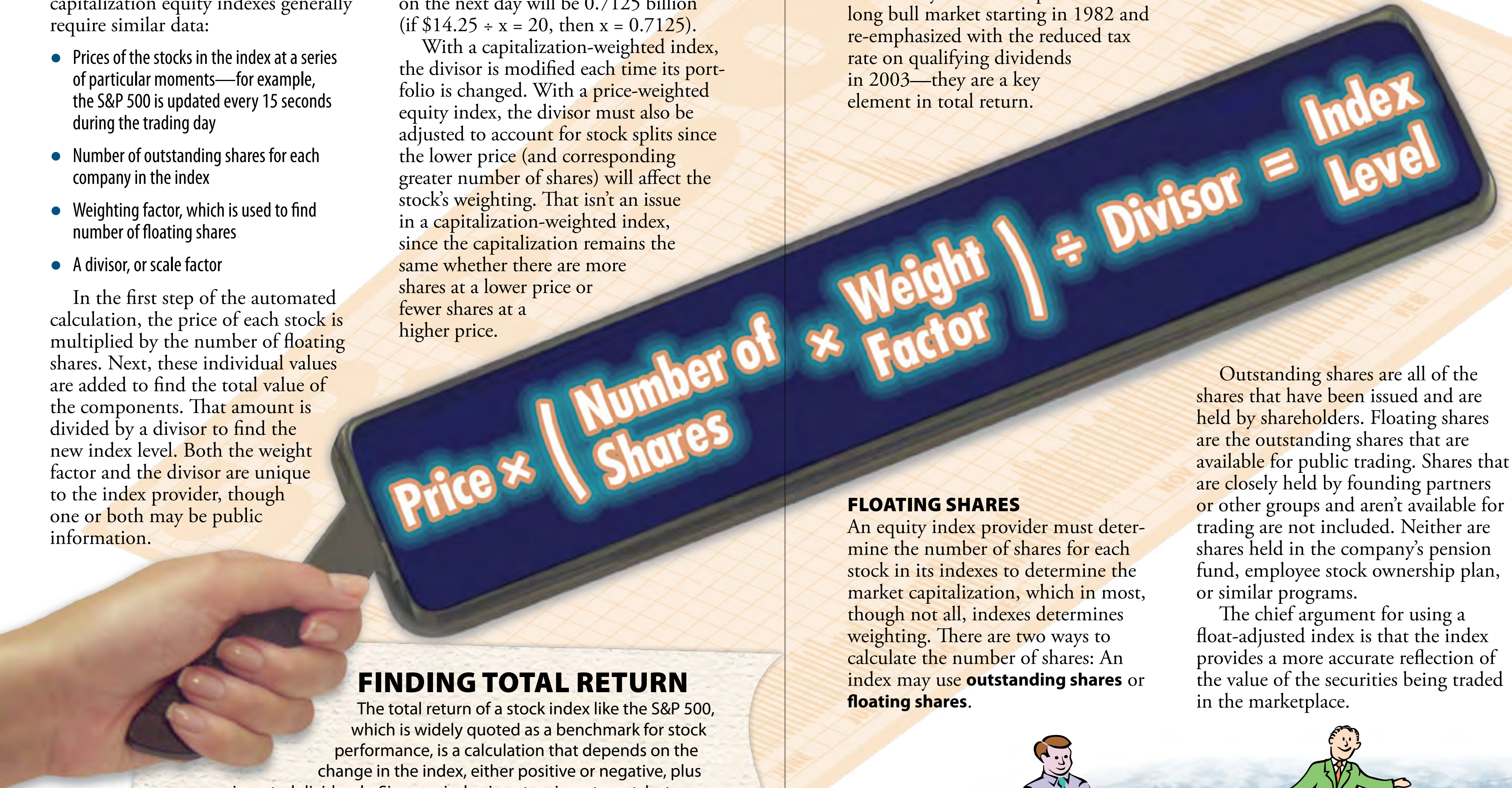
- Prices of the stocks in the index at a series of particular moments—for example, the S&P 500 is updated every 15 seconds during the trading day
- Number of outstanding shares for each company in the index
- Weighting factor, which is used to find number of floating shares
- A divisor, or scale factor

In the first step of the automated calculation, the price of each stock is multiplied by the number of floating shares. Next, these individual values are added to find the total value of the components. That amount is divided by a divisor to find the new index level. Both the weight factor and the divisor are unique to the index provider, though one or both may be public information.

A MATTER OF SCALE

An index **divisor** is set at the time the index is created and is modified over time to keep the index stable as changes are made to the index portfolio. For example, if the hypothetical market value at the end of one trading day is $14 billion and the index level is 20, the divisor was 0.7 billion (if $14 ÷ x = 20, then x = 0.7). If changes are made after the market closes so that the market value of the new portfolio is $14.25 billion, and the index level remains 20, the divisor on the next day will be 0.7125 billion (if $14.25 ÷ x = 20, then x = 0.7125).

With a capitalization-weighted index, the divisor is modified each time its portfolio is changed. With a price-weighted equity index, the divisor must also be adjusted to account for stock splits since the lower price (and corresponding greater number of shares) will affect the stock's weighting. That isn't an issue in a capitalization-weighted index, since the capitalization remains the same whether there are more shares at a lower price or fewer shares at a higher price.



FINDING TOTAL RETURN

The total return of a stock index like the S&P 500, which is widely quoted as a benchmark for stock performance, is a calculation that depends on the change in the index, either positive or negative, plus reinvested dividends. Since an index is not an investment, but a statistical computation, however, the reinvestment occurs only on paper—or more precisely, in a software program. Rather than reinvesting dividends in the stocks that pay them, the index provider reinvests all dividends in the index as a whole.

Total return on an index is calculated daily, though the results are more typically provided as monthly, annual, or annualized figures, expressed as a percentage.

BEYOND THE OBVIOUS

Market indexes provide much more than a daily report on changing prices. They capture the market's history, which enables you to compare the present with the past. While the past can't predict the future, it can provide a context for thinking about what is possible.

For example, you can mine relevant data from an index, including earnings growth, price/earnings and other ratios, relative strength, and total return.

Dividend **yield**, or the amount of the dividend divided by the stock price, is one measure that may have particular relevance for stock investors. Though the role of dividends as an indicator of business success tends to shift over time—they were de-emphasized in the long bull market starting in 1982 and re-emphasized with the reduced tax rate on qualifying dividends in 2003—they are a key element in total return.

ANOTHER APPROACH

Instead of using a divisor to find the percentage change in an index, an index provider can calculate the percentage change in each security's price and combine them to determine the index level. The result is the same, but the second method may be preferable if the index tracks securities denominated in different currencies.

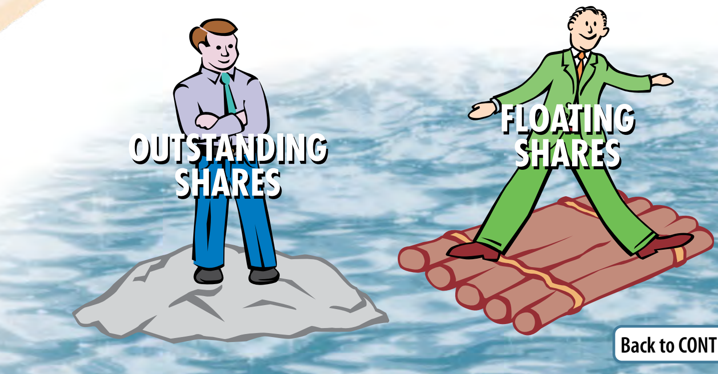
Comparing the dividend yield of a specific company with the average yield of its industry can be helpful in making investment decisions. An unusually high yield, for example, may be an important danger sign, either of an impending dividend cut or an imploding company.

FLOATING SHARES

An equity index provider must determine the number of shares for each stock in its indexes to determine the market capitalization, which in most, though not all, indexes determines weighting. There are two ways to calculate the number of shares: An index may use **outstanding shares** or **floating shares**.

Outstanding shares are all of the shares that have been issued and are held by shareholders. Floating shares are the outstanding shares that are available for public trading. Shares that are closely held by founding partners or other groups and aren't available for trading are not included. Neither are shares held in the company's pension fund, employee stock ownership plan, or similar programs.

The chief argument for using a float-adjusted index is that the index provides a more accurate reflection of the value of the securities being traded in the marketplace.



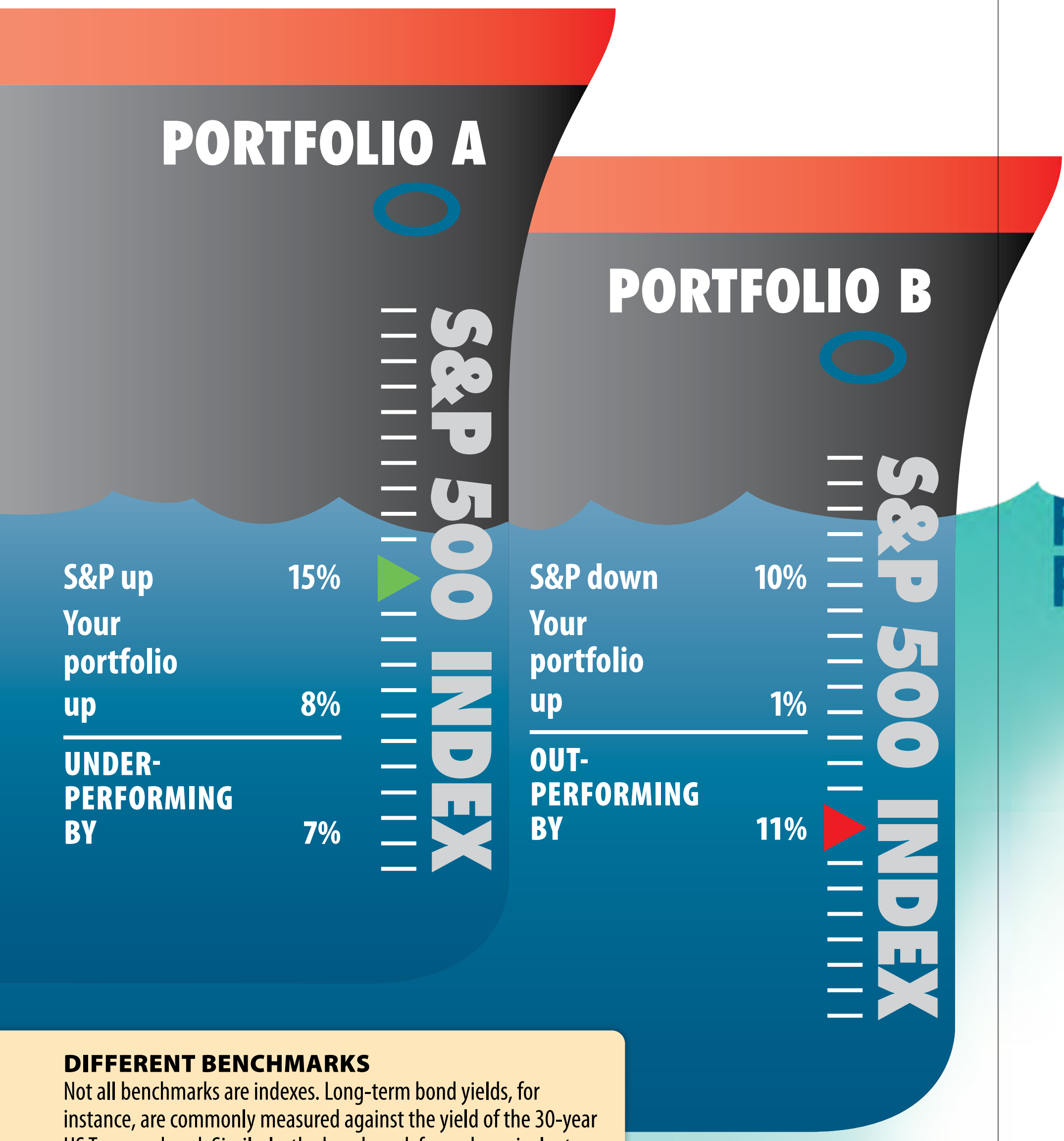
Indexes as Benchmarks

You can use indexes as yardsticks to measure the performance of an investment or portfolio.

Investors use indexes as **benchmarks**, or yardsticks of investment return. These benchmarks can help you evaluate the performance of the overall market, particular market sectors and industries, individual securities, and active investment management.

For example, you can measure the performance of a large-cap stock portfolio of US companies against the S&P 500, the DJIA, the MSCI Large-Cap 300, or the Russell 1000.

What's more, since the goal of an active investment manager, whether he or she is overseeing a portfolio of individual investments or an actively managed mutual fund, is to provide a stronger return than the relevant index, you can evaluate the manager's results against that same standard. You'll find that some managers outperform some of the time, but only a few of them are able to do so over extended periods.



DIFFERENT BENCHMARKS

Not all benchmarks are indexes. Long-term bond yields, for instance, are commonly measured against the yield of the 30-year US Treasury bond. Similarly, the benchmark for cash equivalent investments is the return on the 13-week US Treasury bill.

TRACKING A BENCHMARK

Since there's no absolute measure of investment performance, comparing your investments to benchmarks is really the only way to evaluate your results. For example, suppose your portfolio of large-cap stocks gained 8% in a particular year. That might seem fine. But if the S&P 500 gained 15%, that means your portfolio underperformed its benchmark by a wide margin.

Of course, you may want to give your large-cap portfolio a year or two to live up to your expectations. But if your investment mix underperforms its benchmark year after year, it may be time to rethink your strategy. On the other hand, if your portfolio of mid-sized company stocks held steady in a year that the S&P MidCap 400 lost 10%, you might decide that you've done well under the circumstances, even though your portfolio didn't realize any gains.

APPLES TO APPLES

One thing you want to avoid is measuring the performance of one **asset class** or **subclass** against the benchmark of another. For instance, let's say you are trying to evaluate the performance of your small-cap portfolio. In that case, an index that tracks small-company stocks, such as the S&P 600 or the Russell 2000, would be a much more accurate yardstick than a large-cap benchmark, such as the S&P 500.

From one year to the next, large-cap and small-cap stocks may report similar or different returns. For instance, in 2021, large-company stocks gained 26.89% while small-company stocks gained 25.95%. In 2020, on the other hand, large caps gained 16.26%, while small caps lost 10.93%. In other years, such as 2001 or 2007, the disparity was especially dramatic.

The same caution applies when you evaluate bond performance against a benchmark. For example, the annual return on long-term US Treasury bonds is likely to be very different from the return reported for high-yield corporate bonds or 12- to 22-year general obligation (GO) municipal bonds.

KEEPING A PERSPECTIVE

Just because an investment outperforms its benchmark in a particular year doesn't necessarily mean it's right for your portfolio. You still want to evaluate each investment in light of your risk tolerance, time horizon, and overall investment strategy. Similarly, an investment that misses its benchmark from time to time may still be a smart addition to your portfolio if it helps you diversify.

A TWO-WAY STREET

In addition to measuring performance, you can use benchmarks to evaluate the suitability of an asset class or subclass you're considering for your portfolio.

Let's say you want to diversify a stock portfolio that contains predominately large-cap stocks and you're planning to add a small-cap mutual fund or ETF. As part of your research, you can compare the performance of the individual small-cap funds you're investigating to the historical performance of this class overall as recorded by the S&P 600 or the Russell 2000. The benchmark will show where a particular fund fits in the universe of similar funds. (Keep in mind, however, that past performance is no guarantee of future results.)

You might also use indexes to compare the behavior of small-cap stocks as a group to that of large- or mid-caps. For example, you may want to take a look at relative volatility or the extent to which small- and large-cap performance was correlated in different market environments. While the numerical levels of the indexes will vary, the percentage change, up or down, will provide the information you're looking for.

Remember, too, that when you're evaluating a specific mutual fund, it's smart to compare its past performance to its target index over a number of years, rather than focusing on a single year in which the fund might have fared significantly better or worse than its benchmark.

INSTITUTIONAL BENCHMARKS

Just as individual investors use market indexes to evaluate the returns their investment advisers are providing, institutional investors—including pension funds, endowments, and mutual funds—use benchmarks to evaluate the professional managers they hire to oversee their portfolios. One big difference is that these institutional investors have a fiduciary duty to deliver returns that are in the best interest of their stakeholders. That makes a reliable benchmark an extremely valuable tool.

Index Investing

You can ride the ups and downs of the market with an index-based investment vehicle.

An index might seem to be an ideal investment to capture market performance. The catch is that you can't invest in an index. It's a statistical calculation, not a security. And there are no shares for sale.

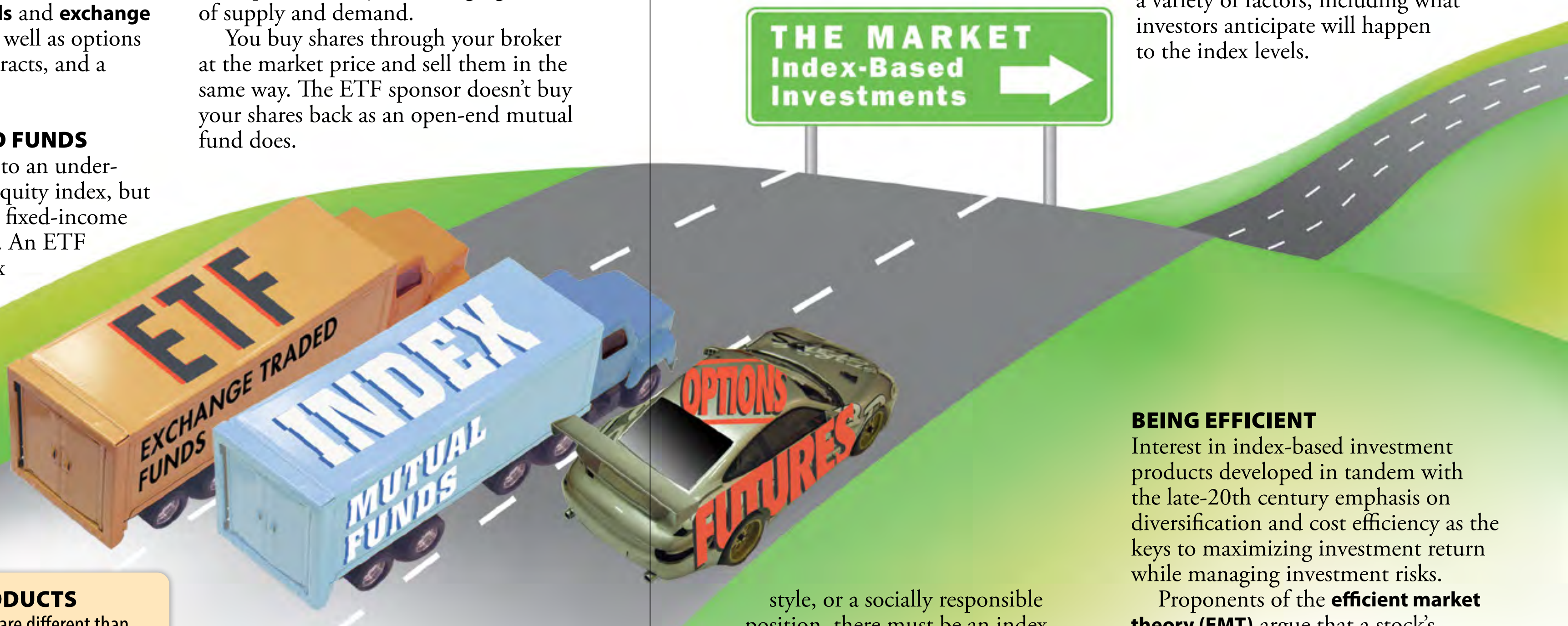
But you can invest in a wide range of investments linked to an index, including **mutual funds** and **exchange traded funds (ETFs)** as well as options contracts, futures contracts, and a variety of others.

EXCHANGE TRADED FUNDS

Most ETFs are linked to an underlying index, often an equity index, but also indexes tracking a fixed-income or commodity market. An ETF portfolio, like an index fund portfolio, changes only when the securities in its underlying index are updated.

Like an index mutual fund, an ETF strives to replicate the performance of its underlying index. ETFs resemble index funds in other ways too, but they trade as stocks do, on an exchange, where the share price is set by the changing forces of supply and demand.

You buy shares through your broker at the market price and sell them in the same way. The ETF sponsor doesn't buy your shares back as an open-end mutual fund does.



INVESTMENT PRODUCTS

Index-based investments are different than individual securities. You're likely to hear them called investment products, investment instruments, or investment vehicles. They're also described as passive investments since they aren't actively managed.

INDEX MUTUAL FUNDS

Index mutual funds are the oldest and most widely held index products. An index fund's portfolio is determined by the specific index to which the fund is linked. So the fund's portfolio changes only as the securities in the underlying index change. And the fund's objective is to replicate the return of the index.

Index mutual funds are **open-end funds**, which means the fund company issues as many shares as investors want to buy and buys back any shares investors want to sell. The sales and repurchase price is set once a day at the end-of-day **net asset value (NAV)** and all the day's buy and sell orders are transacted at that price.

Index funds aren't as numerous as actively managed funds. But they're increasingly being added to retirement savings plans, including target date funds and investor portfolios overseen by investment advisers.

MEETING THE DEMAND

The appeal of index-based investing has produced an interesting by-product. Not only has the number of investment possibilities increased, but so, too, has the number of indexes. The creation of new indexes is a direct response to increased demand from financial institutions that want to offer a greater number and wider variety of index-based products.

In order for a financial institution to offer an index fund or ETF that tracks a specific sector, a particular investment style, or a socially responsible position, there must be an index that tracks that sector, style, or position.

Index providers, including Standard & Poor's Dow Jones Indices, MSCI, FTSE, and others, create and maintain indexes, which they license to financial institutions, giving them the right to use those indexes as the basis for their investment products. And financial institutions are willing to pay for the licenses because index-based products are both an important source of revenue and a key to staying competitive in the marketplace.

While mutual funds, ETFs, options and futures contracts are the best-known index-based investments, indexes also underlie index-linked certificates of deposit as well as equity indexed annuities, guaranteed investment contracts, structured products, and SWAPs.

MODEL T FUND

In 1975, John Bogle, one of the pioneers of index investing, proposed a new category of mutual fund with what was, for the time, a radical investment objective: The fund wouldn't aim to beat the market as measured by the S&P 500, but would attempt to match it. That fund, the Vanguard 500 Index Fund Admiral Shares (VFIAX) is now the largest stock mutual fund in the United States.

CONTRACTUAL ISSUES

Index options contracts and futures contracts linked to underlying financial indexes such as the S&P 500, the Nasdaq 100, or short-term interest rate indexes let you:

- Hedge your portfolio against potential losses or the cost of future purchases
- Speculate on potential changes, up or down, in an index

What each contract is worth at any time before it expires is determined by a variety of factors, including what investors anticipate will happen to the index levels.

BEING EFFICIENT

Interest in index-based investment products developed in tandem with the late-20th century emphasis on diversification and cost efficiency as the keys to maximizing investment return while managing investment risks.

Proponents of the **efficient market theory (EMT)** argue that a stock's current price accurately reflects all the information an investor can possibly know about that stock. As a result, they maintain that the market itself is the most efficient investment you can make.

Their conclusion—which is vigorously contested by a variety of market participants, technical analysts in particular—is that because it's impossible to predict market performance, it's also impossible for an individual or institutional investor to outperform the market as measured by an index like the S&P 500.

What's not controversial, however, is that index-based investing provides greater diversification at more modest cost and with more convenience than individual investors are able to achieve by assembling portfolios of individual securities.

Index Mutual Funds

Index investing can be an economical way to diversify your portfolio.

Most index mutual funds are designed to provide the same return that you would have if you owned all the securities in a particular index, minus fees. While you could, for example, buy and hold all of the stocks included in the MSCI Broad Market Index in the same proportion as they're weighted in the index, it's infinitely easier—and significantly cheaper—to invest in a fund that tracks that index.

There are index funds linked to almost every known stock index for large, mid-cap, and small companies—as well as bond market indexes and international indexes. And there are a number of index funds based on indexes that track narrower market segments. In fact, you can create a broadly diversified portfolio that's made up entirely of index funds.

How a Fund Shakes Out

Each index fund's prospectus explains its approach to selecting investments, as well as providing its expense ratio, historical returns, risk profile, and other fund information.

Most index funds are **full replication** funds. That means they buy all of the securities in the funds they track. Others are **sample-based**. Providers of these funds may use complex mathematical models to identify securities from among those in the index or look for price inconsistencies on which they can capitalize.

An **enhanced index fund** chooses selectively from a particular index portfolio in order to produce a slightly higher return. The goal is to narrowly beat the index by anywhere from a fraction of a percent to two percentage points but not more, since a wider spread would classify the enhanced fund as an actively managed mutual fund rather than an index fund.

Enhanced index fund managers may achieve higher returns by identifying the undervalued stocks in the index, adjusting the holdings to include a larger proportion of securities in higher-performing sectors, or using other investment strategies, such as buying derivatives or using leverage. While enhanced index funds may expose you to the risk of greater losses than their plain-vanilla counterparts, they may also offer an opportunity for higher returns.

Quant funds are named for their quantitative investment style. They aim to beat the index funds they imitate by relying solely on statistical analysis to decide which securities will top the benchmarks. For example, instead of buying all the stocks in the S&P 500, a quant fund provider would buy selected stocks that its analyses indicate will turn a higher profit.

But no indexing approach guarantees a strong return or protects against losses in a falling market.

FEES TO AN END

The average asset-weighted **expense ratio** for an actively managed fund—which includes the management fees and operating expenses expressed as a percentage of the fund's net asset value (NAV)—is around 0.44%, or 44 basis points, for equity funds and 0.37%, or 37 basis points, for bond funds, according to the Investment Company Institute (ICI). The comparable figures for index funds are 0.05%, or 5 basis points, for equity funds and 0.05%, or 5 basis points, for bond funds.

This means the average actively managed equity fund must outperform the average equity index fund by 0.77% to deliver the same return. That's not impossible, but it isn't always easy either. And if a managed fund has a bad year, perhaps because the manager's style was out of favor, investors still pay the higher expense ratio.

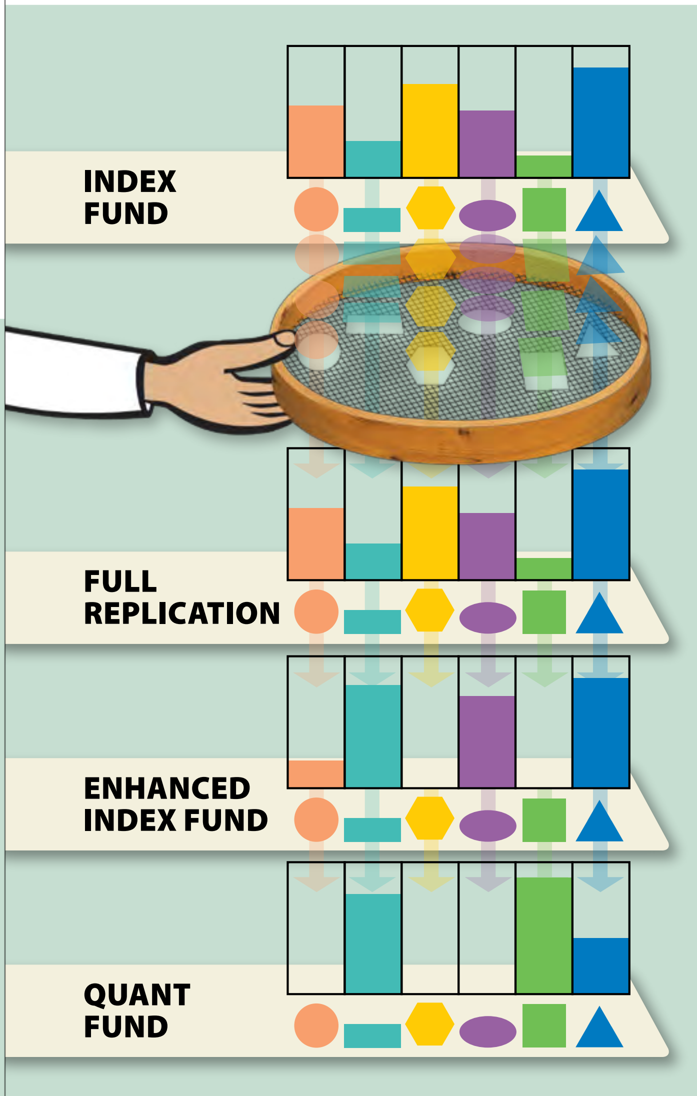
SHARES FOR RENT

To keep their expense ratios low, index fund managers may also use a variety of methods to offset the costs of running the fund—for example, by lending the fund's securities to investment firms for short sales. Those tactics are described in the fund prospectus.

INDEXES & INDEX INVESTING

THE APPEAL OF INDEX FUNDS

One reason for the popularity of index-based funds is that they tend to cost investors less than actively managed funds. That's because index-based fund portfolios are determined by the relevant indexes, and not by professional managers. In addition, the fund holdings are traded only when the index changes—sometimes only once a year. This reduces transaction costs.



Investors like the **transparency** that index funds provide. Transparency, in this context, means that the fund holdings, and the percentage of the fund's portfolio that each of the holdings comprises, is clear at all times.

Each index fund prospectus clarifies its risk/return potential, as all mutual funds must. This can help investors select funds suited to their goals and risk tolerance more confidently.

Many index funds also offer the advantage of risk reduction that comes with a widely diversified portfolio. Indexes do vary, so some are more diversified than others. Indexes that track a narrow segment of the market will obviously be less diversified than broad-based indexes.

It's important to keep in mind that index funds that replicate the same index may vary in performance if their expense ratios differ. The higher the ratio, the lower your return will be, even when funds are making the same investments. In addition, some fund companies levy a **load**, or sales charge, on their index funds, though most companies don't.

WHY THE INDEX MATTERS

When you're adding an index fund to your portfolio, you may not think about investigating the underlying index. That may be a mistake. Not all large-cap indexes are alike. Neither are all indexes tracking small-caps, corporate bonds, or any other asset class or subclass. Among other things:

- You'll want to know how the index provider defines the market it tracks or what it means when it describes a fund in thematic or strategic terms.
- You'll want to look at each index's roster of securities, since one index's mid-cap stock may be another index's large-cap.
- You'll want to look at the index's turnover rate, since frequent updating will mean that any fund linked to the index will also have to buy and sell frequently to remain aligned. That can increase your expenses and reduce your return.

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Exchange Traded Funds

ETFs are increasingly popular investments for individuals and institutions.

An **exchange traded fund (ETF)** is an equity investment that has some characteristics of an individual stock and some of a mutual fund. ETFs are listed on a stock exchange, and you buy and sell shares through a brokerage account as you do a stock. But what you own is access to the collective performance of a portfolio of securities—sometimes described as a basket—as you do when you buy shares in a mutual fund.

The vast majority of ETFs are index-based, which means that the ETF portfolio is determined by the components of the particular index to which the fund is linked. For example, the first commercial ETF, the SPDR—short for Standard & Poor's Depository Receipts and pronounced "spider"—holds all the stocks in the S&P 500.

These ETFs are fully transparent, which means you can find the current list of securities an ETF holds on the fund website at any time. In contrast, actively managed mutual funds update their list of holdings quarterly but aren't required to report any portfolio changes that occur within a quarter.

EVALUATING ETF APPEAL

In addition to making it easy to invest in a basket of securities with a single transaction, ETFs make it possible to allocate your portfolio across a variety of asset classes and diversify within those classes more economically than you would otherwise be able to do.

You can find ETFs for nearly every conceivable segment of the equity and fixed-income markets, plus funds that track real estate, commodities, currencies, and natural resources, among others.

That doesn't mean, however, that all ETFs are equally suitable for your portfolio, equally liquid, or equally diversified. Generally the most liquid and diversified funds are those that invest in the most sought after, broadest-based indexes.

The cost of buying ETFs varies as well. In many cases you pay a commission when you buy or sell, but a number of brokerage firms and the brokerage arms of ETF sponsors don't charge commissions on at least some of the ETFs they sell.

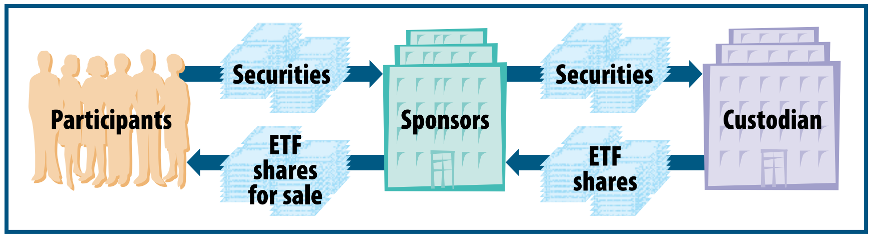
PERFORMANCE FACTORS

An ETF's performance is based primarily on what is happening with its underlying investments, or components of its index. But the underlying investments don't tell the whole story. The fund expenses and management practices, such as how quickly the ETF reinvests cash from dividends and capital gains, can mean an ETF's return varies from the return of the index it seeks to replicate.

This gap is called the **tracking error**. The smaller the negative tracking error—the amount by which an ETF's return trails that of its index—the happier investors and fund sponsors are. It's smart to compare the fees and expenses of ETFs tracking similar segments of the market to help ensure you make the most cost-efficient choice. You can get a snapshot of comparative costs by looking at each ETF's **expense ratio**.

You'll also want to investigate any other factors that may impact return. For example, an ETF that tracks an index whose components change frequently may have a higher tracking error because its trading costs—which aren't included in the expense ratio—are higher.

	Exchange traded funds	Index funds
Real-time quotes	Yes	No
Intraday trading	Yes	No
Commissions or sales charges	Sometimes	Sometimes
Shareholder services	No	Yes
End of day NAV = Trading price	No	Yes
Sold on an exchange	Yes	No
Buy on margin or sell short	Yes	No

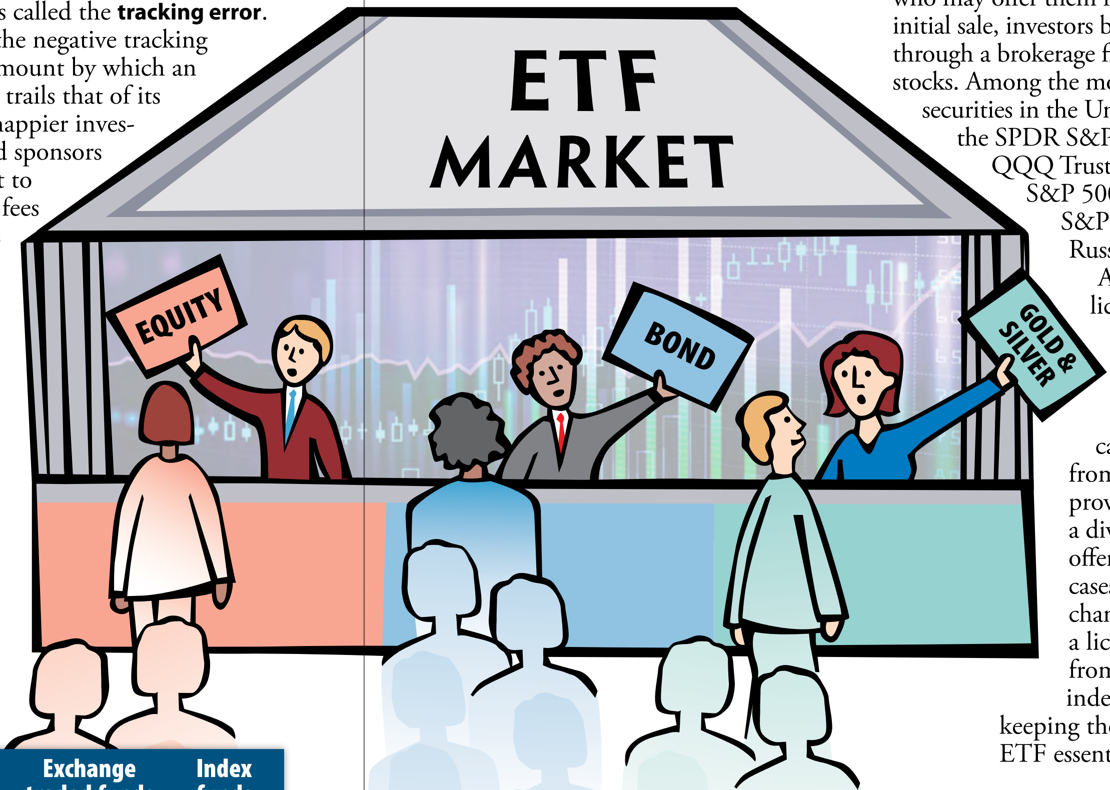


CREATING AN ETF

Before you can buy shares in an ETF, the fund must be created. The fund provider, usually a major money management firm, registers the offering with the SEC and invites authorized participants to accumulate and deposit baskets of securities that are included in a particular ETF, or sometimes a combination of cash and securities. The basket is called a **creation unit** and is equal in value to a fixed number of ETF shares, typically between 25,000 and 200,000.

The sponsor forwards the securities to a custodian, usually a bank, for safekeeping. The custodian, in turn, sends the ETF shares to the participants, who may offer them for sale. After the initial sale, investors buy and sell shares through a brokerage firm, just as they do stocks. Among the most actively traded securities in the United States are the SPDR S&P 500, the Invesco QQQ Trust, iShares Core S&P 500, Vanguard S&P 500, and iShares Russell 2000.

An ETF sponsor licenses the right to use a particular index to underlie each fund it offers, and typically selects indexes from a variety of providers to create a diverse roster of offerings. In some cases, the sponsor may change indexes when a license expires, say from one small-cap US index to another, while keeping the exposure of the ETF essentially the same.



DISTINCTIVE DIFFERENCES

Despite certain similarities to mutual funds, ETFs are different in a number of ways. Of course, in either case, you risk potential loss of value if securities prices decline or if you sell in a falling market.

- ETFs trade throughout the day at current market price, while mutual funds shares trade only once, at the end-of-day NAV
- ETFs don't have to buy and sell shares to accommodate shareholder purchases and redemptions, minimizing portfolio turnover and the potential tax consequences of capital gains or losses
- ETFs can be bought on margin or sold short, even on a downtick, which is useful in hedging or other risk management strategies

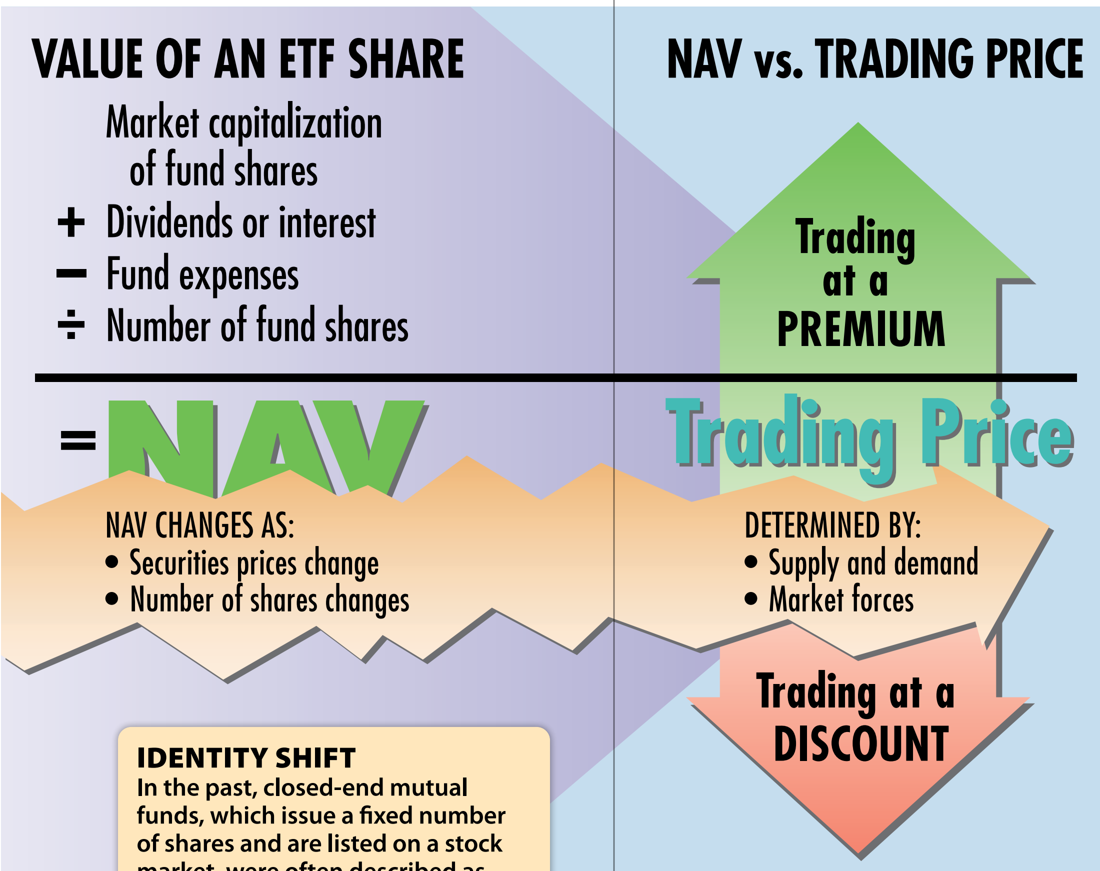
INDEXES & INDEX INVESTING

The Ins and Outs of ETFs

The more you know about ETFs, the more you may want to know.

Like mutual funds, each ETF has a **net asset value (NAV)** that reports what a single share is worth at a particular point in time.

The NAV is determined by the total market capitalization of the securities the ETF holds plus dividends or interest, minus fund expenses, divided by the number of fund shares. In other words, the NAV is not a fixed value, and moves up or down as the price of the underlying investments change and the number of outstanding shares increases or decreases.



PREMIUMS AND DISCOUNTS

You don't pay the NAV when you buy shares, and you don't receive that value when you sell as you do with index mutual funds and other no-load funds. Instead, an ETF trades at the market price, which is determined by supply and demand and other market forces, as the market prices of individual stocks are. If other investors are buying when you buy, creating greater demand, you may pay more than the NAV. And if you buy when the majority is selling, you may pay less than the NAV.

If the price of an ETF is higher than the NAV, you're buying or selling at a **premium**. And if the price is lower than the NAV, you're buying or selling at a **discount**. The amount of the premium or discount is usually very small, and the more popular the ETF is, the lower the spread between the market price and the NAV tends to be.

A unique feature of ETFs is that **authorized participants**, usually institutional investors or market makers, may buy large blocks of shares at the NAV with in-kind baskets of the fund's securities or redeem shares for a basket of securities. This helps ensure that ETF prices don't deviate significantly from their NAVs and provides a buffer against potentially large premiums and discounts often associated with closed-end mutual funds.

However, as the number of ETFs grows, the roster includes some that are very narrowly focused. Others are linked to nontraditional indexes, while still others actively managed.

You can't be assured that these newer funds will have the same **liquidity** as the most widely traded ETFs or that their NAVs and market prices will always be closely aligned.

IDENTITY SHIFT

In the past, closed-end mutual funds, which issue a fixed number of shares and are listed on a stock market, were often described as exchange traded funds. Unlike an index-based ETF, though, a closed-end fund typically includes a portfolio of assets that are not intended to resemble those in a particular index.

ASSET ALLOCATION MADE EASY

Since the holdings in an ETF's portfolio must be made public every day, and since those securities also appear in the index that the fund tracks, the asset class to which the ETF belongs is clear. The advantage to an investor is that ETFs may simplify the process of building a portfolio that corresponds to a specific asset allocation model.

For example, the SPDR trust owns shares of the 500 large-capitalization stocks in the S&P 500, making it a large-cap equity ETF. You can similarly find mid-cap and small-cap equity ETFs, long-term corporate bond ETFs, and ETFs invested in a specific, sometimes narrow, sector—say companies that manufacture semiconductors.

Actively managed mutual fund portfolios are likely to be less homogeneous. While mutual funds typically focus on a particular asset class, they may actually shift the makeup of the fund in some circumstances. For example, under certain market conditions, some funds may hold a substantial percentage of their assets in cash. Others may seek to improve their returns by buying securities in different asset classes to take advantage of what's happening in the markets.

While those actions are perfectly legal, they might leave you **underweighted** in the asset class you have selected, and **overweighted** in another. For example, if you purchase a small-cap mutual fund that holds 50% of its assets in cash, you have only half the exposure to small-cap stocks that you had anticipated. Of course, you can also buy individual securities in different asset classes as you allocate your portfolio. But that requires more research and many more transactions than researching and purchasing an ETF.

GETTING DIVERSIFIED

ETFs, like other funds, simplify portfolio diversification since you don't have to evaluate and buy individual securities in sufficient numbers to protect yourself against portfolio risk.

For example, if you own shares of the Invesco QQQ, which is made up of the 100 largest nonfinancial companies listed on the Nasdaq Stock Market, you might reasonably anticipate—though nothing is guaranteed—that even if some of the stocks falter as part of the normal market fluctuation, other stocks will gain.

And since ETFs trade throughout the day, an added advantage is the speed with which you can gain exposure to an underlying index and diversify your holdings. If, for example, your research indicates that there might be a surge in a certain sector's performance—particularly a sector in which you might be underweighted—you can make a tactical bet and buy an ETF based on that sector's index. But there are trading costs and possible tax consequences to consider.

AN ALTERNATIVE BETA

You can add some spice to your portfolio with one or more strategy ETFs. The index to which a strategy ETF is linked probably won't be market-cap weighted, and the objective won't be to replicate market performance. Instead, the goal will be to deliver what's known as an alternative beta. That means a return that's either better than or more consistent than overall market returns. You should be prepared, however, for the risk of greater loss.

ETFs: Strategies, Taxes, and Risk Management

ETFs can play many parts in your investment strategy.

Although buying and holding is a viable strategy for ETFs, as it is for individual securities and open-end mutual funds, the recent boom in ETF popularity can partly be explained by their flexibility as an investment vehicle. They can be shorted, bundled, hedged, and optioned.

PAIRS TRADING

Pairs trading is a strategy that exploits both the similarities and differences between ETFs and stocks. Here's how it works:

Suppose your research indicates that XYZ company has strong growth prospects but is in a sector that appears to be sluggish. One potential way to capitalize on the difference between the performance of XYZ stock and its entire sector is to buy the stock and short the sector ETF.

Shorting means borrowing shares of the ETF through your broker and selling them in the marketplace, expecting them to drop in price. If they do, you buy back the shares at the lower price, return them to your broker, and pocket the difference between what you sold them for and what you had to pay to rebuy them, minus interest and commissions.

Or, if the circumstances are reversed—the sector looks strong but XYZ company is struggling—you could do the exact opposite—namely, buy the ETF and short the stock. It's important to remember, however, that this strategy comes with obvious risks. If both the stock and the sector ETF produce results different from what you anticipated, your losses could be compounded.

DRYING OUT THE WASH

As part of a tax-planning strategy, you may sell investments that have lost value during the year and use that loss to offset taxable capital gains on other investments. But it's crucial to the strategy's success to avoid what's known as a **wash sale**. That happens when you sell an investment that has lost value, realize that loss to offset other gains, and buy what securities law describes as a substantially identical investment within 30 days before or 30 days after the sale.

To avoid a wash sale, you might sell an investment that has lost value to offset other gains, and then buy an ETF that is similar to the investment you sold, but not substantially identical to it—and thereby avoid hanging yourself out to dry. After 30 days, you may buy back your original investment and then decide whether to hold or sell the ETF.

OPTIONS FOR RISK MANAGEMENT

As ETFs have grown more popular, individual investors have grown more creative in using them to manage portfolio risk and hedge against potential losses in their portfolios. The most frequent tool is an options contract.

> **A VOLATILITY OPTION**
>
> You can invest in an ETF linked to the CBOE Volatility Index, or VIX, as a way to diversify your portfolio, hedge the risk of losses in an unsettled market, or profit by correctly anticipating the way the market will behave in the near-term. But unlike most ETFs, those linked to the VIX are never appropriate as long-term investments. It's best to think of them as short-term tools.

Two conservative hedging strategies for using ETF options are **covered calls** and **protective puts**. Say, for example, you own shares in an ETF and would like to protect your unrealized gains against a potential downswing in the market. By **writing**, or selling, a covered call, you can do just that. You collect a premium for the call and if the option holder exercises the contract, you sell your ETF shares at the strike price. Keep in mind, however, that in doing so you also limit your potential earnings if the ETF eventually increases in value to a price higher than the strike price of the call you wrote.

Another way to protect your ETF holdings against a steep drop in price is to purchase a protective put. That way, you have the right to sell your shares if the price falls below the strike price.

Buying a protective put means you'll be able to limit your loss if the price falls during the term of the contract, either by exercising your right to sell your ETF shares or by selling the contract itself. As a general rule, the more the ETF decreases in price, the more valuable the put may become. And if prices don't fall and your option expires unused, the typically small premium you pay may have provided some valuable peace of mind.

TAX EFFICIENCY OF ETFs

ETFs are relatively tax-efficient investments, especially when compared to actively managed mutual funds. One reason is that ETFs do not have to redeem shares for cash when you want to sell, as open-end mutual funds must do. That reduces turnover, limiting more costly short-term gains and eliminating what are known as **phantom gains**, which are fund earnings on which you may owe tax but which were accrued before you purchased your shares.

Of course, if you own an ETF in a taxable account, you may owe tax on any capital gains you realize if you sell your shares. You'll also owe tax on any investment income, though dividend income paid by qualifying stocks may be taxed at your lower long-term capital gains rate. You may also realize capital gains when the fund updates its portfolio to reflect changes in the index it tracks.

With both ETFs and mutual funds, you can decide when to sell your shares. For example, you may want to sell shares late in the year and use a potential capital loss to offset gains. Or you might decide to postpone a sale on which you'll realize gains until the next tax year.

Indexes Plus

Indexes take aim at a long list of moving targets.

Although many of the best-known indexes track the US stock, bond, and commodities markets, they're only part of the index landscape.

There are multiple indexes reporting the activity of the world's major markets, including the London FTSE, which tracks the London Stock Exchange, the Paris CAC 40, and Tokyo's Nikkei Stock Average, as well as markets in South and East Asia, South America, Africa, and Australia.

Smaller economies, some described as emerging and others as frontier markets, are often tracked regionally rather than individually.

Indexes also track the performance of various categories of mutual funds and a variety of other asset classes. Most of these indexes are designed as benchmarks, though some, such as certain hedge fund indexes, are the basis of financial products.

INDEXES AROUND THE GLOBE

Morgan Stanley Capital International, known as MSCI, has developed one of the world's most comprehensive indexing systems, tracking both developed and emerging securities markets in various geographic regions.

The MSCI-EAFE is probably the best known, and the one against which US activity, as tracked by the S&P 500 and the MSCI Large Cap index, is most frequently compared. EAFE covers stock markets in Europe (E), Australasia (A), and the Far East (FE). As with other major indexes, there are both index funds and ETFs linked to the EAFE.

The comprehensive S&P Global Equity Index Series tracks global stock market performance with the S&P Global 1200 and its subsets, an ADR Index, and a range of thematic indexes. There are S&P indexes for Europe, Asia, and the Americas as well as a range of Shariah indexes.

Standard & Poor's also provides emerging market indexes, some developed by the International Finance Corporation, a member of the World Bank Group. They provide benchmarks that investors can use to evaluate the performance of newer markets that are eager to attract international capital.

Dow Jones Indexes track both country and world markets, including the Dow Jones China 88, Russian GDR Index, and the Euro STOXX 50.

GLOBAL STANDARDS

In 1999, MSCI and Standard & Poor's jointly developed the Global Industry Classification Standard (GICS) to establish a global standard for categorizing companies into sectors and industries based on their primary business activity.

The goal is to ensure that investors, asset managers, and investment researchers can make meaningful comparisons among the results that local, regional, and global indexes report. The two companies update the standard every year to keep the categories timely.

GICS

MARKET RIPPLES

Among the lessons that indexes teach is how interconnected the world's markets actually are. What happens in London and Toyko while US stock markets are closed—as reported by the FTSE and the Nikkei—often has a significant impact on the prices of futures contracts traded before the opening bell on the New York Stock Exchange (NYSE).

While the markets don't march in lockstep, when the FTSE is down, prices for futures contracts on the S&P 500 and the DJIA are usually down as well. And if the FTSE is up, those futures prices are generally up. As the trading day develops, the expectation of gains or losses doesn't always materialize. But it happens often enough to influence investor behavior.

INDEXES & INDEX INVESTING

COMMODITIES INDEXES

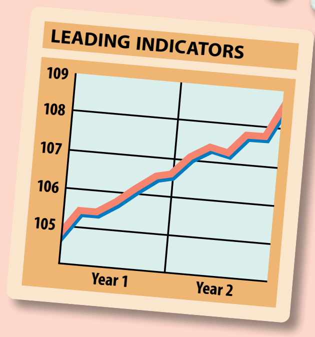
What happens in the commodities marketplace has both an immediate and a long-range impact on the economy. For example, when indexes tracking those markets are significantly up or down in comparison to the previous year, it may indicate that a period of volatility is likely.

The best-known commodities indexes, including the Thomson Reuters/Core Commodity CRB Index, the S&P Goldman Sachs Commodity Index (S&P GSCI), and the Dow Jones Commodity Index, each track somewhat different elements. For example, the CRB tracks 19 commodities—aluminum, cattle, cocoa, coffee, copper, corn, cotton, crude oil, gold, heating oil, hogs, natural gas, nickel, orange juice, silver, soybeans, sugar, unleaded gasoline, and wheat.

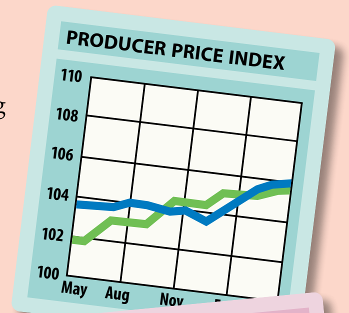
Taking the Economic Pulse

There are also a number of indexes that economists and lawmakers use to help them understand and anticipate changes in the economy.

- The **Index of Leading Economic Indicators** is the primary tool for forecasting changing patterns in the economy. Its ten components, which currently include the S&P 500, the average work week, and average initial claims for unemployment, are adjusted from time to time to help improve the accuracy of the index.



- The **Consumer Price Index (CPI)** is compiled monthly by the US Bureau of Labor Statistics (BLS) and is used to gauge inflation by measuring changes in the prices of basic goods and services. The CPI-W, though widely acknowledged to be less than a perfect measure, is used as a benchmark for making adjustments in Social Security payments. The CPI-U is used to keep wages and tax brackets in tune with the buying power of the dollar.



- The **Producer Price Index (PPI)** is also compiled monthly by the BLS and measures price changes from the perspective of the seller, not the buyer. Since manufacturers often pass on the higher prices of wholesale items to consumers, analysts use the PPI to anticipate changes in the CPI.

- The **Employment Cost Index (ECI)** is published quarterly by the BLS and measures the growth of employees' compensation, or the cost of labor, in private industry, as well as in state and local government. Many economists look to the ECI for inflationary warning signs. A greater than expected increase in the index is often seen as an indicator of rising inflation, since employees' wages tend to increase before consumer prices.

Mutual Funds: Putting It Together

A mutual fund buys investments with money it collects from selling shares in the fund.

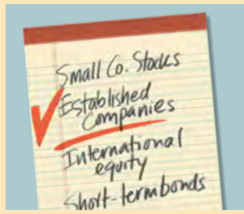
The idea of diversification is that it's smarter to own a variety of stocks and bonds than trying to meet your financial goals based on the successful performance of just a few. But diversifying can be a challenge because buying a portfolio of individual stocks and bonds can be expensive. And knowing what to buy—and when—takes time and concentration.

Mutual funds offer one solution: When you put money into a fund, it's pooled with money from other investors to create much greater buying power than you would have investing on your own. In an **actively managed** fund, professional managers decide what to buy and when to sell. An index, or passively managed, fund holds all or some of the securities in an index.

As a fund shareholder, you own the fund's **underlying investments** indirectly rather than outright, as you do when you buy stock. Since a fund may own dozens of different securities, its **return** isn't dependent on just a few holdings.

MUTUAL FUNDS

HOW A MUTUAL FUND IS CREATED



A mutual fund company decides on an investment concept

Then it issues a prospectus

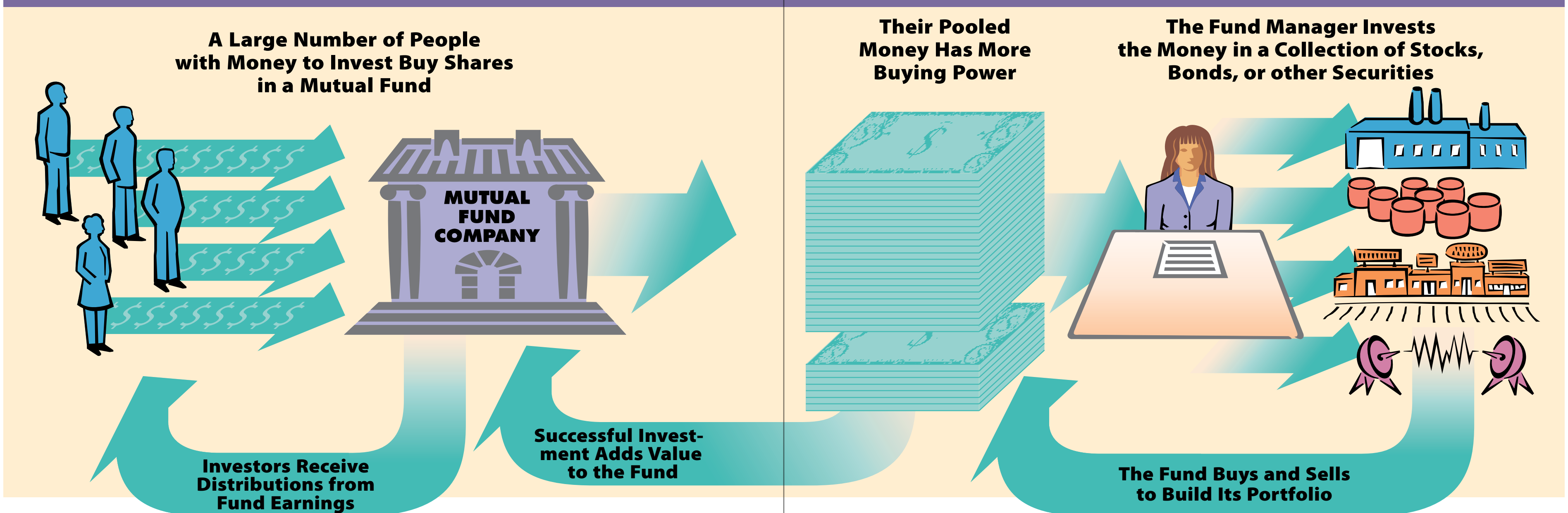
Finally, it sells shares

A FUND SNAPSHOT

Investment companies (also called mutual fund companies), brokerage firms, banks, and insurance companies offer mutual funds for sale to individuals and institutional investors, such as money managers or pension funds. Most fund sponsors offer a range of funds, but some specialize in bond funds or stock funds.

Each actively managed fund has an investment objective and a strategy for building its portfolio. The manager invests to produce a return, or gain, that's stronger than the return of the market from which the fund's investments are chosen and to outperform competing funds. Most index funds seek to replicate market returns.

How Mutual Funds Work



PAYING OUT THE PROFITS

A mutual fund may make money in two ways: by earning dividends or interest on its investments and by selling investments that have increased in price. The fund distributes, or pays out, these profits (minus fees and expenses) to its investors.

Income distributions are paid from the income the fund earns on its investments. **Capital gains distributions** are paid from the profits from selling investments. Different funds pay their distributions on different schedules—typically monthly or quarterly. Many funds offer investors the option of reinvesting their distributions to buy more shares.

If you hold the fund in a taxable account, you owe taxes on the distributions you receive, whether the money is reinvested or paid out in cash. But if a fund loses more than it makes in any year, it can use the loss to offset future gains. Until profits equal the accumulated losses, distributions aren't taxable, although the share price of the fund may increase to reflect the profits.

OPEN- AND CLOSED-END FUNDS

Most mutual funds are **open-end funds**. This means the fund sells as many shares as investors want. As money comes in, the fund grows. If investors want to sell, the fund buys their shares back. Sometimes open-end funds are closed to new investors when they grow too large to be managed effectively—though current shareholders can continue to buy shares. When a fund is closed in this way, the investment company may create a similar fund to capitalize on investor interest.

Closed-end funds more closely resemble stocks in the way they are traded. While these funds do invest in a variety of securities, they raise money only once and offer only a fixed number of shares that are traded on an exchange or over-the-counter. The market price of a closed-end fund fluctuates in response to investor demand as well as to changes in the value of its holdings.

The Mutual Fund Market

Mutual funds never invest at random. Each shops for products that fit its investment strategy.

There are three main categories of mutual funds:

- **Stock funds**, also called equity funds, invest primarily in stocks.
- **Bond funds** invest primarily in corporate or government bonds.
- **Money market funds** make short-term investments in an effort to keep their share value fixed at $1.

THE PART DIVERSITY PLAYS

Most funds diversify their holdings by buying a wide variety of investments that correspond to their category. A typical stock fund, for example, might own stock in 100 or more companies providing a range of different products and services. The appeal of diversification is that losses on some stocks may be offset—or even outweighed—by gains on others.

Some funds are extremely focused:

- **Precious metal funds** trade chiefly in mining stocks.
- **Sector funds** buy shares in a particular segment of the market, such as healthcare, technology, or utilities.
- **High-yield bond funds** seek high income from low-rated bonds.

The attraction of focused funds is that when they're doing well, the returns can be outstanding. The risk is that a change in investor demand, regulation, or the economy can intensify losses because the fund holdings aren't more diversified.

A TEAM APPROACH

A fund manager works with teams of **analysts** who evaluate fund holdings, assess the financial markets, and identify companies that may be appropriate additions to the fund portfolio.

A fund also employs **traders**, who stay tuned to the market and buy or sell specific securities when the price is within the range the manager has set, based on the analysts' research. The fund's back office manages these transactions, which may involve buying and selling millions of dollars of securities each day.

At the close of the trading day—4 p.m. in New York—the fund determines its price per share, and all the buy and sell orders submitted during the day are transacted at that price.

STOCK FUNDS

In one way, the name says it all. Stock funds invest in stocks. But stock funds vary, depending on the fund's investment objective, the universe of stocks from which it draws its portfolio, and its investment strategy or style.

Most stock funds concentrate on a particular area within the overall stock market. A fund might invest in large, dividend-paying companies or promising small-cap companies. It might focus on new **growth** companies or those described as **value** investments, where a company's stock price is lower than seems justified.

SPECIALIZED FUNDS

You may want to consider funds tailored to help you meet specific investment goals or simplify building a diversified portfolio.

Rather than choosing stock funds and bond funds to populate your portfolio, you may prefer a **balanced fund**. A balanced fund invests in both stocks and bonds, allocating a percentage to each—such as 60% to stocks and preferred stocks and 40% to bonds. You can find the specific proportions in the fund's prospectus. A balanced fund may provide a less volatile return than a fund investing in a single asset class.

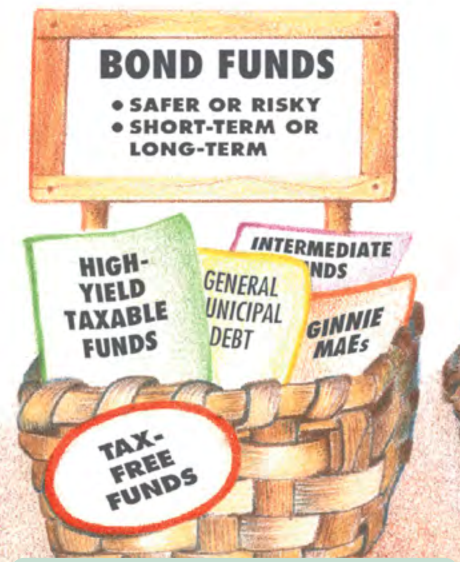
Environment, social, and goverance funds (ESG) attract investors whose strong convictions make them unwilling to put money into companies whose business practices are at odds with their beliefs. A fund might avoid companies with poor environmental records, with specific employment practices, or those selling certain products. In its prospectus, each fund explains the criteria, called **screens**, it uses to find acceptable investments.

If you're investing in mutual funds in a retirement savings plan, you may want to consider a **target date fund**, sometimes called a lifecycle fund. For example, if you plan to retire in 2035, you might choose XYZ Fund Retirement 2035. The XYZ fund company will invest primarily in stocks for a number of years, and then move more money into bonds and perhaps cash as 2035 gets closer, with the goal of achieving growth now to provide income later.

MUTUAL FUNDS

IT'S ALL IN THE FAMILY

Mutual fund companies usually offer a variety of funds—referred to as a family of funds—to their investors. Keeping your money in the family can make it easier to transfer money between funds, but like most families, some members do better than others.



BOND FUNDS

Like bonds, bond funds provide income. Unlike bonds, however, these funds have no maturity date, no fixed rate, and no guaranteed repayment of the amount you invest, in part because the fund's holdings have different terms.

On the plus side, you can reinvest your distributions to buy more shares. And you can buy shares in a bond fund for much less than you would need to buy a bond portfolio on your own—and get a diversified portfolio to boot. For example, you can often invest $2,500 or less to open a fund, and make additional purchases for smaller amounts.

Bond funds come in many varieties, with different investment goals and strategies. There are investment-grade **corporate bond funds** and riskier junk-bond funds often sold under the promising label of high yield. You can choose long- or short-term **US Treasury funds**, funds that combine issues with different maturities, and a variety of tax-free **municipal bond funds**, including some limited to a particular state.

MONEY MARKET FUNDS

Money market funds try to maintain their value at $1 a share, so they're often described as cash equivalent investments.

These funds may pay higher interest than bank accounts and can serve as useful holding accounts for money you're about to invest. However, unlike bank or credit union deposits, money market funds are not federally insured, and it's possible you could lose money.

Regulations require institutional prime money funds to report a floating net asset value (NAV) and added other protections to prevent runs on funds that are losing value.

Targeted Investments

Mutual funds aim at particular targets and try to hit them by making certain types of investments.

Every mutual fund—stock, bond, or money market—is established with a specific investment objective that fits into one of three basic goals:

- **Current income**
- **Future growth**
- **Some income and some growth**

But within those categories, there's enormous variety that results from the way an individual fund invests. For example, funds that fit into the growth category can be subdivided by geographic area, by their timetable for the growth they seek, and by the level of risk they take to achieve their objective. Any fund that describes itself as seeking aggressive growth generally is taking more than average risk.

A HIDDEN RISK

One risk you face as a mutual fund investor is the probability that a number of funds with different objectives may invest in the same companies, creating what's known as **portfolio overlap**. This risk isn't included in the risk assessment that funds must provide about themselves, such as risk to principal, interest rate risk, and currency risk. But it's an important one.

Overlap may occur because all actively managed mutual funds try to provide the best possible results and may deliberately buy investments outside their normal focus to improve their bottom line. If several of the funds you own all bulk up on the same star performer, you may have a much less diversified mutual fund portfolio than you intend—or even realize.

FUNDS TAKE AIM

These charts group funds into three categories by investment objective. They also illustrate the correlation between a fund's objective and the risks it may face.

INCOME FUNDS

Kind of fund	Investment objective	Potential risks	What the fund buys
Agency bond	Regular income plus return of principal	Value and return dependent on interest-rate changes	Securities issued by US government agencies
Corporate bond	Steady income, capital gains	Interest-rate changes and inflation, default	Highly rated corporate bonds, with various maturities
High-yield bond	Highest current income	High-risk bonds in danger of default	Low-rated and unrated corporate or municipal bonds
International money market	Income and currency gains	Changes in currency values and interest rates	CDs and short-term securities
Municipal bond	Tax-free income	Interest-rate changes and inflation, default	Municipal bonds with various maturities
Short-/intermediate-term debt	Income	Reinvestment risk if rates or demand changes	Different types of debt issues with varying maturities, depending on type of fund
US Treasury bond	Steady income, capital gains	Interest-rate changes and inflation	Long-term government bonds

GROWTH AND INCOME

Kind of fund	Investment objective	Potential risks	What the fund buys
Balanced	Income and growth	Less growth than stock funds in strong equity markets and reduced dividend payments	Part stocks and preferred stocks (often 60%) and part bonds (40%)
Equity income	Income and growth	Less growth than stock funds in strong equity markets and reduced dividend payments	Blue-chip stocks and utilities that pay high dividends
Growth and income	Growth plus some current income	Less growth than stock funds in strong equity markets and reduced dividend payments	Stocks that pay high dividends and provide some growth
Income	Primarily income	Interest-rate changes and reduced dividend payments	Primarily bonds, but some dividend-paying stocks

GROWTH FUNDS

Kind of fund	Investment objective	Potential risks	What the fund buys
Aggressive growth, also called capital appreciation	Long-term growth	Very volatile and speculative. Risk of above-average losses to get above-average gains	Stocks of new or under-valued companies expected to increase in value
Emerging markets	Growth	Can be volatile, putting principal at risk. Currency fluctuation, management, and political risks	Stocks in companies in developing countries
Global equity	Global growth	Gains and losses depend on currency fluctuation. Can be volatile, putting principal at risk	Stocks in various markets including the United States
Growth	Above-average growth	Can be volatile. Some risk to principal to get higher gains	Stocks in mid-sized or large companies whose earnings are expected to rise quickly
International equity	International growth	Potentially volatile, based on currency fluctuation and political instability	Stocks in non-US companies
Sector	Growth	Dependent on right market timing to produce results	Stocks in one particular sector, such as energy or transportation
Small-company growth	Long-term growth	Volatile and speculative. Risk of above-average losses to get higher gains	Stocks in small companies traded on the exchanges or over-the-counter (OTC)
Value funds	Growth, some income	Often out of step with overall market. May fail to rebound	Stocks in companies whose prices are lower than the firms seem to be worth

HEDGING AGAINST RISK

International fund managers may hedge their portfolios to protect the return on their funds. Hedging, in this context, means anticipating and offsetting possible future changes in the relative values of different currencies, specifically the dollar in relation to the currencies of countries where the fund invests. The most common tactic is to buy futures contracts that guarantee fixed exchange rates at specific points in the future.

Funds that hedge may put up to 50% of their total assets in currency contracts rather than stocks or bonds. But other funds don't hedge at all, figuring that exposure to other currencies is part of the reason for investing overseas.

Evaluating Mutual Funds

All mutual funds may be created equal, but some are more equal than others.

You may be looking for a mutual fund to help diversify your portfolio or meet a specific objective, such as long-term growth or current income. With several thousand funds to choose from, how do you narrow the choice?

EVALUATING A FUND

The important elements in any mutual fund evaluation include:

- **The cost of investing, based on the fund's expense ratio and turnover rate**
- **Its performance history**
- **Its risk profile**
- **Its management team**

The cost of investing in a fund has a predictable effect on the fund's performance. The higher the fund's **expense ratio**, which is the percentage of your account's value that you pay in annual fees, the lower your long-term return. That's because every dollar you pay in fees reduces both the present value of your account and the amount available for reinvestment.

Turnover rate is a measure of how frequently the fund buys and sells investments. Funds with a high turnover rate tend to have high transaction costs, which are paid out of the fund's income, and therefore reduce return. Frequent selling can also produce short-term capital gains, which may mean you'll have taxable investment income that you hadn't anticipated.

Past performance shows the fund's returns in previous years. While this measure doesn't guarantee future returns, it does reveal where the fund has stood in relation to comparable funds and appropriate benchmarks and whether its returns have been consistent or erratic. Performance is affected by what's in the fund's portfolio, which reflects the thinking and the skill of the fund management. Before you invest in a strong-performing fund, it pays to check if the managers responsible for that performance are still at the helm.

One measure of a fund's risk is its **volatility**, or the variation in its return—above and below—its average return. The amount of risk you're comfortable with will depend in large part on your time frame for holding the fund.

The longer you plan to stay invested, the more volatility you may be comfortable with. That's because you're more likely to have time to benefit from potential gains and recover from potential losses that result from fluctuating prices.

A DETAILED OVERVIEW

You can find much of the information you need to evaluate a fund all in one place: the **prospectus**. The SEC requires all mutual fund companies to publish this document for each fund and provide a copy to potential investors or along with the confirmation of an initial investment in a fund.

In addition to stating the fund's objective and explaining the way it invests, the prospectus explains the fund's fees, past performance, after-tax returns, and risk profile. It lists the portfolio holdings, identifies the fund manager, and, if there is a sales charge, explains the cost of choosing different classes of shares.

Funds also provide supplementary materials, such as the annual Statement of Additional Information (SAI), which details the fund's policies on leverage, brokerage commissions, and other data.

RATINGS & RANKINGS

The work of independent professional analysts is another important resource in evaluating funds. In addition to detailed, objective reviews of the funds they cover, independent research firms, such as Standard & Poor's, Morningstar, and Lipper, also rate or rank mutual funds. A **rating** is based on how well a fund meets a specific set of criteria. A **ranking** is the relative standing of a fund when compared to funds in the same category.

For example, Standard & Poor's ranks equity funds on their three-year **Sharpe Ratio**, which is the fund's return minus the return on 3-month Treasury bills, divided by the fund's standard deviation. **Standard deviation** is a measure of volatility, or the extent to which the fund's return varies above and below its average return.

In contrast, Morningstar, which like S&P uses a star system, rates funds based on risk-adjusted total return, combining performance and risk in one evaluation.

Lipper evaluates funds on the strength and consistency of their success in meeting their investment objectives and identifies the strongest as Lipper Leaders.

Of course, rankings and ratings don't tell the whole story. But if you understand the basis for the evaluations, they can provide a useful starting point.

These and other research firms provide some rating and ranking data on their websites and send more detailed reports to their subscribers. If you work with a broker or investment adviser, he or she may provide this research. You can also check to see if your public library carries any of these research reports.

PROCEED WITH CAUTION

You don't have to look very hard to find advice about which funds to buy, but you do have to take a hard look at the quality of the advice and the person providing it. Ask yourself what's being sold and who will profit.

TRANSPARENCY ISSUES

Most actively managed mutual funds trade frequently but publish a list of holdings quarterly. This means you really don't know, at any given time, what the fund owns—since changes could be made as soon as the new quarter begins. In contrast, the holdings of an index mutual fund or an index-based ETF are fully transparent at all times. Some investors consider this clarity a major advantage in constructing their portfolios.

Fund Objective and Style

If you know what you want to achieve, you can probably find a fund that shares that goal.

Every mutual fund has an investment objective, which it describes in its prospectus. The fund's name often reflects the objective—for example, a fund that seeks a balance of growth and income might call itself the ABC Growth and Income Fund.

Most fund objectives are designed to provide a particular type of return, sometimes within a specific time frame. As a result, the fund objective has a major impact on the types of securities that dominate the fund's portfolio.

Explicit fund names are also good indicators of how the fund invests. That's largely because SEC rules require that any fund whose name suggests a certain type of investment must commit at least 80% of its assets to those securities.

SIZE MATTERS

Some equity funds concentrate on stocks issued by companies of a specific size, based on their **market capitalization**, or **market cap**. Market cap is figured by multiplying the company's current price per share by the number of floating shares. Those are company shares available for trading.

Companies are generally divided into three sizes—large cap, mid cap, and small cap—and so are the funds that invest primarily in one of these groups.

Large caps are companies with capitalizations greater than $10 billion.*

Mid caps are companies valued between $2 billion and $10 billion.*

Small caps are companies valued at less than $2 billion.*

A fourth category, called **micro caps**, are even smaller companies.*

Some funds are multi caps, which means they invest in companies of different sizes.

Size typically affects the way an investment behaves as market conditions change. In general, though not in every case, the smaller the market cap, the greater the risk to your **principal**, or amount invested, and the greater the potential for a substantial return.

ALL IN THE TIMING

Bond funds, in contrast, tend to differentiate their investments based on issuer, rating, or term. Here, too, the name of the fund is generally a good indicator of the way it invests.

For example, a high-yield bond fund seeking the highest possible current income will concentrate on the lowest-rated bonds that meet its criteria. Similarly, a tax-free income fund will concentrate on municipal bonds, perhaps from a single state. And a fund whose objective is long-term income will buy high-rated corporate or Treasury issues, or both.

STYLE IN A BOX

A stylebox is visual shorthand for categorizing individual mutual funds by market cap and investment style. It's designed to help investors pinpoint a fund's basic characteristics, such as the large-cap value fund highlighted here, and pinpoint its risk/return profile. The nine-category stylebox was originally developed by Morningstar as an asset allocation tool.

* These dollar amounts are not fixed and are revised from time to time based on changing stock prices. They're used to help clarify the size classifications at a particular point in time.

INVESTING WITH STYLE

Each fund's manager follows an **investing style** to help the fund meet its objective.

One approach is to buy securities that are selling for less than the manager believes they're worth. That's called **value investing**, and the assumption is that because the securities are undervalued, the price will rebound.

A contrasting style, which applies more directly to equities than to debt, is **growth investing**. Growth managers focus on stocks they think will increase substantially in price and have the potential to provide greater returns than the market as a whole. But these stocks also carry greater risk because their prices tend to be volatile.

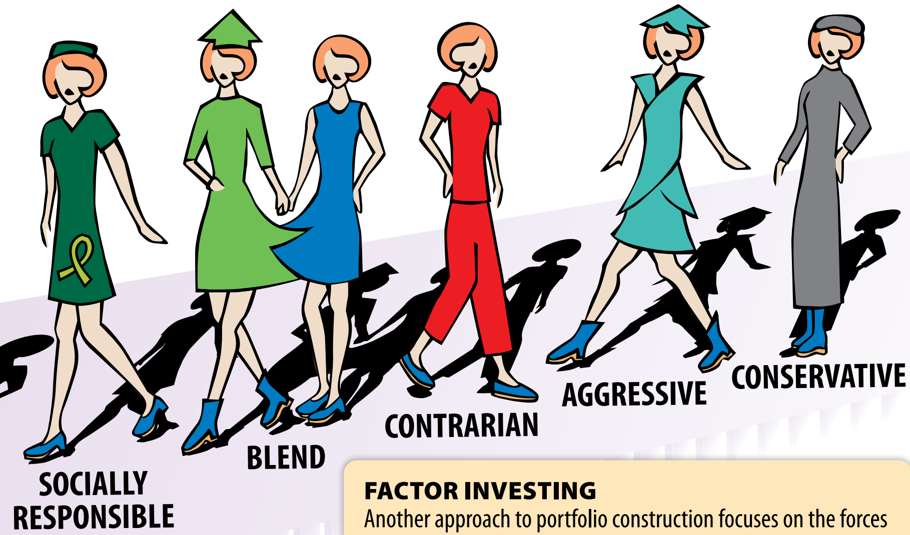
Blend investing, sometimes called **core investing**, is a combination of these approaches, where the fund manager tries to find the right balance of undervalued investments and those with strong growth potential.

ELEMENTS OF STYLE

A **conservative style** focuses on preserving principal by avoiding risk to principal. A **moderate style** tries to balance capital preservation with taking risks that may result in a greater return. An **aggressive style** takes bigger risks in pursuit of potentially even bigger returns.

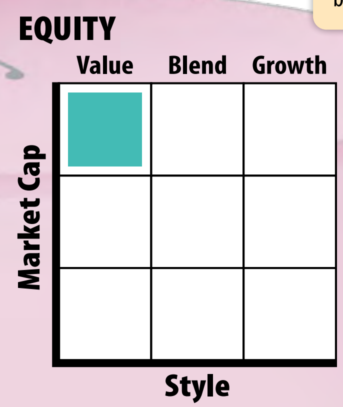
Contrarian investing, on the other hand, means buying securities that other managers are shunning.

Differences in style help explain why funds with the same investment objective may produce different results, both in the short term and over longer periods. Under some market conditions, for example, value stocks may provide much stronger returns than growth stocks do, while the reverse may be true under different conditions. As a result, managers following a particular style may have some strong years and some lean ones.



FACTOR INVESTING

Another approach to portfolio construction focuses on the forces that impact security performance, with the goal of providing stronger return, lower risk, or both. Funds linked to factor indexes, including those tracking low volatility and high yields, among others, rather than market cap, may be part of the style box of the future.



CATCH THE DRIFT?

You expect a fund to invest in a certain way based on its objective and style. But sometimes, to compensate for weak performance in its primary investment category, a fund's managers may decide to alter the investment mix to improve return. That **style drift** could create an imbalance in your portfolio, exposing you unwittingly to greater or less risk than you prefer.

Fund Performance

The bottom line on mutual fund performance is measured by return and yield over several time periods.

Whether a mutual fund aims for current income, long-term growth, or a combination of the two, you'll want to track its performance to judge whether or not it is profitable. You can evaluate a fund by:

- Following changes in share price, or **net asset value (NAV)**
- Figuring **yield**
- Calculating **percent return**

You can compare a fund's performance to similar funds offered by different companies, or you can evaluate the fund in relation to other ways the money could have been invested—individual stocks or bonds, for example.

Because return and yield are figured differently for each type of investment, there isn't a simple formula for comparing funds to individual securities.

NAV CHANGE

$$\frac{\text{Value of fund}}{\text{Number of shares}} = \text{NAV}$$

for example

$$\frac{\$52{,}500{,}000}{3{,}500{,}000} = \$15$$

A fund's **NAV** is the dollar value of one share of the fund's stock. It's figured by dividing the current value of the fund, minus fees and expenses, by the number of its outstanding shares. A fund's NAV increases when the value of its holdings increases. For example, if a share of a stock fund costs $15 today and was $9 a year ago, it means the value of its holdings increased, its expenses decreased, the number of fund shares decreased, or a combination of these factors caused the change.

YIELD

$$\frac{\text{Distribution per share}}{\text{Price per share}} = \text{Yield (\%)}$$

for example

$$\frac{\$.58}{\$10.00} = \$5.8\%$$

Yield measures the amount of income a fund provides as a percentage of its NAV. A long-term bond fund with a NAV of $10 paying a 58 cent income distribution per share provides a 5.8% yield.

You can compare the yield on a mutual fund with the current yield on comparable investments to decide which is providing a stronger return. Bond fund performance, for example, is often tracked in relation to individual bonds or bond indexes.

PERCENT RETURN

$$\frac{\text{Total return}}{\text{Cost of initial investment}} = \text{Percent return (\%)}$$

for example

$$\frac{\$832}{\$8{,}000} = \$10.4\%$$

A fund's **total return** is its increase or decrease in value including reinvested distributions. Total return is typically reported as a percentage, or **percent return**, which is calculated by dividing the dollar value of the total return by the initial investment.

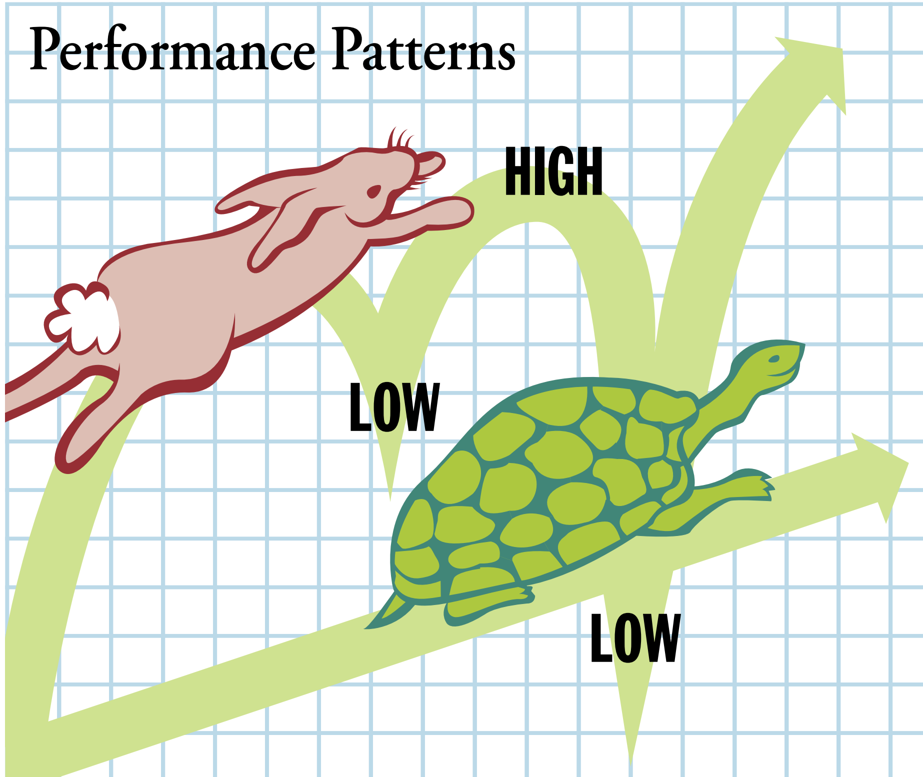
For example, an $8,000 investment with a one-year total return of $832 ($700 increase in value plus $132 in reinvested distributions) has an annual percentage return of 10.4%.

TRACKING YOUR RETURN

The most accurate measure of a mutual fund's performance is its **total return**, or change in value plus reinvested distributions. Total return is reported for several time periods, typically for as long as the fund has operated.

When the figure is for periods longer than a year, the number is **annualized**, or converted to an annual figure. It's calculated as a geometric mean, which is more accurate for numbers multiplied in a sequence than a simple average return is. Annualized figures reflect the impact of gains and losses over the period that's being tracked. But they don't report whether the return represents a fairly consistent performance from year to year or a seesaw of ups and downs.

Among the key factors that influence total return are the direction of the overall market in which the fund invests, the performance of the fund's portfolio, and the fund's fees and expenses.



THE IMPACT OF TIME

Mutual funds are best suited for long-term investing. That means you should ignore the short-term peaks and valleys and be unconcerned about finding the top-performing funds of the year. For one thing, the individual fund or fund category that provides the strongest return in one year is unlikely to be in that position the following year.

Working with your adviser or on your own, you can identify a number of funds in various categories that have provided returns consistent with the appropriate benchmark year after year, though these funds may never make it to the top—or the bottom—of the performance charts.

Holding a fund for an extended period also allows you to amortize the cost of a front-end load if you've paid it at purchase. In the short term, paying this load reduces your return since the amount of the sales charge is subtracted before your principal is invested. But if you stay in the fund, the effect of the sales charge may disappear over time. If you trade funds frequently, paying repeated sales charges can consume a big share of your potential earnings.

Another argument for maintaining a long-term perspective with a diversified portfolio of funds is that you decrease the risk of missing the periods of growth that often follow depressed or falling markets. It's also true that selling a fund when its NAV has dropped means locking in any losses to that point, though you might decide that is a better choice than taking the chance of having an even greater loss.

International Funds

You can add international flavors to your mutual fund investment menu.

By investing in more than one market, you're in a better position to benefit from economies that are growing while others may be stalled or losing value. One way to diversify your portfolio more broadly is to buy shares in mutual funds that either focus on multinational companies that do business worldwide or invest in companies based in other countries. While they're often referred to generically as international funds, there are actually four specific categories of funds: **international, global, regional**, and **country**.

INTERNATIONAL FUNDS
Also known as **overseas funds**, international funds invest exclusively in securities markets outside the United States. By investing throughout the world, the broadest of these funds balance risk and return by owning securities not only in mature, slower-growing economies but also in the more volatile economies of developing nations.

Other international funds have a narrower focus, concentrating their portfolios in either mature or developing economies, in specific sectors, or on various themes, such as sustainability or infrastructure.

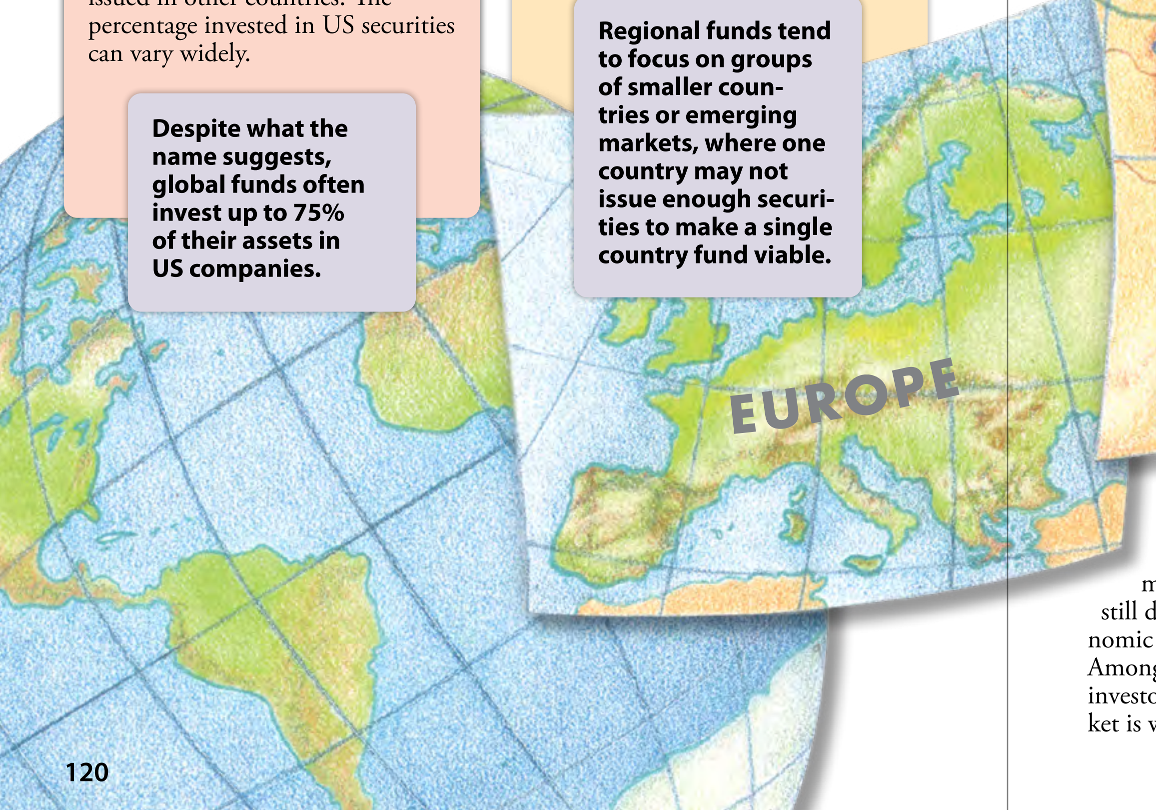
GLOBAL FUNDS
Global funds, also called **world funds**, include US stocks or bonds in their portfolios as well as those issued in other countries. The percentage invested in US securities can vary widely.

Despite what the name suggests, global funds often invest up to 75% of their assets in US companies.

REGIONAL FUNDS
Regional funds focus on a particular geographic area, such as the Pacific Rim, Latin America, Africa, or the Middle East. These funds seek to capitalize on the growing interest in international investing and provide access to markets that may be expanding at a faster pace than developed markets. They temper some of the risk by investing in diverse though related economies.

Some funds have extended the traditional meaning of *regional* by grouping countries that share characteristics other than geography, such as the emerging economies in various parts of the world.

Regional funds tend to focus on groups of smaller countries or emerging markets, where one country may not issue enough securities to make a single country fund viable.



THE RISK OVERSEAS
When you invest in international markets, your return is affected not only by how well the investments perform but also by the changing value of the US dollar in relation to the currency is which the investment is denominated, or sold.

If you buy a mutual fund that invests in European stocks issued in euros, the underlying investments will gain or lose value but the dollar will also gain or lose value in relation to the euro. There's always a risk that the investment returns will be disappointing. But there's at least an equal risk that changes in exchange rates will reduce or erase positive investment returns.

For example, if a mutual fund denominated in euros provides a 10% return for the year, but the euro loses 10% of its worth against the dollar, your gain is 0%. That's because the gain in investment value is offset by the loss in currency value. But there's also an upside. If the investment has a 10% return and the euro appreciates 10% against the dollar, your return would be slightly more than 10% when the gain in euros is converted to dollars.

In other words, international investments are the most profitable when the dollar is weak or losing value.

Many of the other risks of investing abroad are similar to the systemic and nonsystemic risks of investing at home. One difference, especially in emerging markets, is the risk of political instability.

COUNTRY FUNDS
Country funds allow you to concentrate your investments in a single overseas country—even countries whose markets are closed to individual investors who aren't citizens. When a fund does well, other funds tend to be set up for the same country. However, many single-country funds are **closed-end funds** that are traded on a stock market once they have been established.

By buying stocks and bonds in a single country, you can reap the benefits of a healthy, well-established economy, or profit from the rapid economic growth as emerging markets start to industrialize or expand their export markets. The risk of investing in a single country, however, is that a downturn in the economy can create a drag on fund performance.

Closed-end funds that buy big blocks of shares in a country's industries can influence share prices and sometimes corporate policy—just as institutional investors may when they buy US stocks.

OLD OR NEW?
While markets around the world are increasingly linked electronically, the performance of an individual market is still determined primarily by the economic and political situation at home. Among the factors that influence an investor's experience in a particular market is whether it's mature or emerging.

A **mature market** is an industrialized country with established securities markets, substantial market volume, an efficient clearing and settlement system, and an official and effective oversight agency. An **emerging market** has a relatively new securities market, an evolving emphasis on stability and oversight, and a limited but growing list of traded securities.

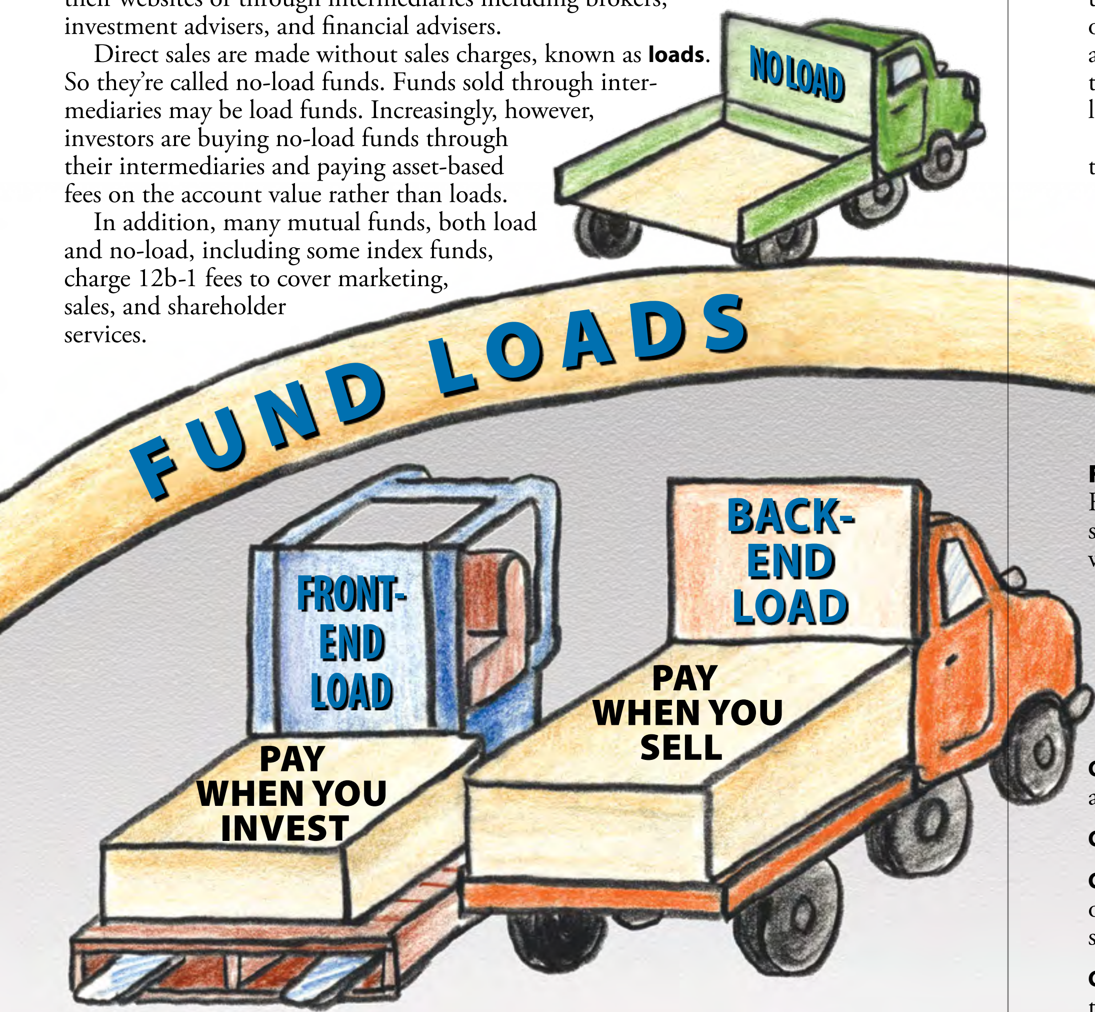
Fund Sales Charges

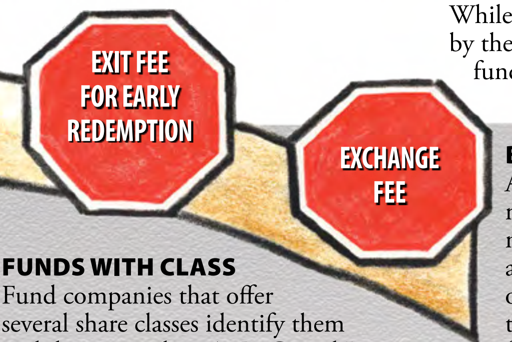
Mutual fund sales charges aren't necessarily a burden, but they are a load.

Mutual fund providers may sell their shares directly to investors on their websites or through intermediaries including brokers, investment advisers, and financial advisers.

Direct sales are made without sales charges, known as **loads**. So they're called no-load funds. Funds sold through intermediaries may be load funds. Increasingly, however, investors are buying no-load funds through their intermediaries and paying asset-based fees on the account value rather than loads.

In addition, many mutual funds, both load and no-load, including some index funds, charge 12b-1 fees to cover marketing, sales, and shareholder services.





FRONT AND CENTER

Sales charges can be assessed at different times. When you buy a mutual fund with a **front-end load**, the fee is figured as a percentage of the amount you're investing, often in the 4% to 5% range. Since the fee is subtracted up front, you actually purchase fewer shares than if no sales charge were levied. For example, if you're investing $5,000 in a fund that has a 4% front-end load, you'll actually be purchasing $4,800 worth of shares and paying a $200 sales charge.

Some brokers and investment advisers reduce the sales charge or don't charge it at all, especially if they receive **asset-based fees** determined by the values of the client portfolios they manage.

BACK IT UP

You pay a **back-end load** on the other end of the transaction—when you sell shares. Unlike front-end loads, which are figured as a percentage of your purchase amount, back-end fees may be calculated in different ways, including as a percentage of the fund's NAV. Also called a **contingent deferred sales charge (CDSC)**, the back-end load diminishes over time, usually by about one percentage point each year you own the shares.

Back-end loads are less common than they once were because, in many cases, their fee structure makes them more costly to buy and own than front-end loads.

KNOW WHEN TO HOLD THEM

Mutual fund companies try to encourage you to invest for the long term, using a variety of fees and charges as carrots—or sticks. One reason is to keep as much money as possible in the fund. Another is to limit transaction costs and the possibility of having to sell underlying investments at a loss if lots of investors want to redeem their shares at the same time. Major sell-offs affect the fund's NAV and reduce returns for long-term investors.

One fee designed to make short-term trading and market timing less profitable is the **early redemption**, or exit, fee, which you're charged if you sell your shares within a certain time frame set by the fund company. That period may range from five days to a year or more, depending on the fund. The fee you pay is subtracted from the proceeds of your sale.

Some funds also levy **exchange fees**, which they charge investors to move money from one fund to another. This fee is also designed to encourage investors to invest for the long term and discourage them from redeeming shares, thereby limiting the fund's potential need to sell off underlying investments. While these costs may not be enough, by themselves, to rule out selecting a fund, they are worth considering.

FUNDS WITH CLASS

Fund companies that offer several share classes identify them with letters, such as A, B, C, and I, or sometimes with titles unique to the sponsoring company. Each fund class has the same holdings, manager, and investment objective. But because of the differing fees and expenses, the returns for each class differ.

Class A shares have a front-end load and asset-based fees.

Class B shares have back-end loads.

Class C usually have neither a front- or back-end load, higher fees, and sometimes a redemption fee.

Class I shares—where I is for institutional—are less expensive but require a large investment, often $1 million or more. They may be available to individual investors through their intermediaries.

Class T shares have lower front-end fees than Class A shares, require larger investments, and charge the same load across fund categories.

You can log on to www.finra.org/fundanalyzer to compare the costs of different share classes of the same fund.

BREAKPOINTS

A **breakpoint** is the amount of money you need to invest in a mutual fund in order to qualify for a reduced front-end sales charge or no sales charge at all. Though that amount varies from fund to fund, a typical example is a half a percent (0.5%) reduction once you reach $25,000, another half percent at $50,000, and so on.

You may reach a breakpoint and qualify for a reduced fee with a one-time purchase. Or, if you, and in some cases you and members of your household, hold investments in the same fund or the same fund family, those cumulative assets may count toward the required breakpoint total.

Rights of accumulation allow you to qualify for a breakpoint discount by combining past and new investments in a fund. And a **letter of intent** allows you to reach a breakpoint by stating that you plan to reach the threshold with investments that you'll make in the future.

Funds aren't required to offer breakpoints, but if they do, they're obligated to make sure you get the reduction you qualify for. The reduced rates and the investment amounts at which they're available are provided in the prospectus.

INVESTIGATING A FUND

Investors who are researching mutual funds may want to find answers to these questions:

1. What's the fund sponsor's reputation for leadership, clarity of communication, transparency, and business continuity?
2. What is the tenure and experience of the fund managers?
3. What's the fund's style?
4. What's the fund's expense ratio?
5. Has the fund provided consistently strong returns relative to its peers?

Mutual Fund Fees

When you're investing in mutual funds, fees are a fact of life.

Mutual fund fees fall into two categories: **shareholder fees** and **operating expenses**. You pay shareholder fees if you buy load funds, redeem shares within a restricted period, or allow your account balance to fall below the required minimum. But you pay operating expenses whenever you own fund shares. These are asset-based fees that are typically calculated daily and subtracted from the fund's net assets before investment gains or losses are credited to your account. Anything you pay in fees isn't reinvested. So the higher the fees, the more potential earnings you lose out on.

FEES DO MATTER

The fees that mutual funds charge reduce your return. For example, suppose you invested $55,000 in a fund and left it untouched for 10 years. The scenarios to the right show how different loads and expense ratios affect the cost of investing and your bottom line.

You can use the SEC Mutual Fund Cost Calculator at www.sec.gov to estimate the fees on different funds.

Load	Return	Expense ratio	Worth after 10 years	COST OF INVESTING (Fees	+ Lost potential earnings)	= Total cost
SCENARIO 1						
4.5% front load	10%	0.85%	$125,089	$9,960	$7,067	$17,567
SCENARIO 2						
4.5% front load	10%	1.25%	$120,033	$13,253	$9,269	$22,522
SCENARIO 3						
No load	10%	0.85%	$130,984	$7,837	$3,834	$11,672
SCENARIO 4						
No load	10%	1.25%	$125,794	$11,268	$5,576	$16,862

OPERATING EXPENSES

Operating expenses cover the cost of running the fund and generally include:

- Investment management fees, which often account for the lion's share of the total
- Administrative fees
- 12b-1, or marketing and distribution, fees

These fees are usually quoted as an **expense ratio**, or a percentage of the fund's net assets, and range from less than 0.1% to 2.75% or higher in some cases. The fees vary from one fund company to the next, and from one fund to another within the same fund family.

Not surprisingly, actively managed funds tend to have higher management fees than passively managed index funds. And the more time and resources that are required to make investment decisions and execute transactions, the higher the fees are likely to be. This helps to explain why actively managed international or global funds tend to be the most costly.

Competitive pressure has brought some fund fees down, especially at several of the largest no-load companies. And other funds have been required to reduce or clarify their fees as part of legal settlements or SEC disclosure rules.

WHAT YOU PAY FOR

A fund uses management fees to compensate its manager, who's responsible for choosing securities for the fund's portfolio—and whose expertise often attracts investors to the fund.

When the fee is calculated as a percentage of the fund's assets under management, the manager is rewarded for increasing the value of the fund. In some funds, there may be a bonus for beating the fund's benchmark index. Additional performance payments may be made as well, depending on how the fund fares.

In other cases, fees paid to investment managers may be reduced, on a percentage basis, as the assets under management increase. That wouldn't necessarily reduce the dollar amount of the manager's compensation, because the base would be larger. But it could save individual investors money.

12B-1 FEES

Named for a provision of the Investment Company Act of 1940 that authorizes them, 12b-1 fees pay for a fund's marketing and distribution expenses and certain shareholder services.

According to FINRA rules, 12b-1 fees may be up to 1% of a load fund's total assets, with no more than 0.75% going toward marketing and distribution. Some funds use these fees to pay broker fees rather than charging a front-end load. Both load and no-load funds can use 12b-1 fees for shareholder services, capped at 0.25% of assets.

These fees tend to be controversial and may be revised. Advocates argue that marketing adds value to the fund by attracting new investors. Opponents believe that these fees, which may have been relevant when the mutual fund industry was new, are no longer justified.

PUTTING FEES IN PROSPECTUS

The best place to start when you're investigating fund fees is with the fund prospectus. Each fund must disclose and describe both its shareholder fees and operating expenses.

The fee table that's usually in the first few pages of the prospectus must list all the charges that you'll pay, either directly or indirectly. The one cost that's not reported is brokerage fees for **transaction expenses**, or the amount the fund pays to buy and sell shares, though those costs also affect the fund's—and your—total return.

Comparing the expense ratios of funds with similar investment objectives is an essential step in selecting a fund. But remember, while fees have a definite impact on your return over time, choosing funds solely on the basis of fees is no smarter than choosing investments exclusively on the basis of their tax consequences.

LEGAL LIMITS

FINRA dictates maximum fees for mutual funds:

- Sales loads: 8.5%
- Load fund 12b-1 fees: 1% (0.75% for marketing and 0.25% for shareholder services)
- No-load fund 12b-1 fees: Must be less than 0.25% for shareholder services

The only limit the SEC sets is a 2% maximum redemption fee charge.

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A World of Options

Options are opportunities to make buy and sell decisions—if the market takes the right turns.

An option is a contract on a specific financial product called the **underlying instrument**, or sometimes the underlying. You buy or sell options on an options exchange. If you buy, you're the **holder**, or owner. If you sell, you're the **writer**.

As a holder, you have the right to **exercise** your option, which means you can buy or sell the underlying, such as a stock or an index, at the exercise price any time before the contract expires.

You may choose to exercise if doing so will provide a profit or limit a loss. You may decide to sell the option before **expiration** if that makes financial sense. Or, you may let the contract expire.

As a writer, you have an obligation to buy or sell the underlying instrument if the contract holder exercises and you're designated to respond through a process known as **assignment**. You have no control over whether or not an option will be exercised. But you do have the right, at any time before the contract expires, to get out of your obligation by buying an offsetting contract.

PUTS AND CALLS

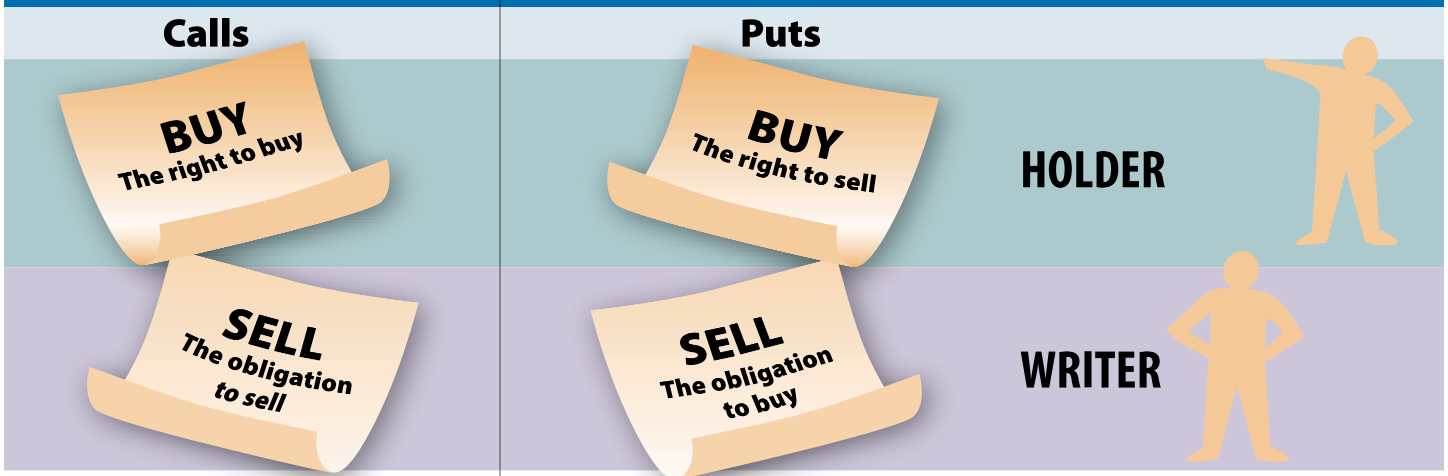
Options contracts are either **calls** or **puts**, and you can buy or sell either type. You choose your approach based on what you think will happen to the underlying instrument within the contract's term.

- When you **buy a call**, you have the right to buy the underlying instrument at the exercise price.
- When you **buy a put**, you have the right to sell the underlying instrument at that price.

GETTING STARTED

Before you begin trading options, you should read *Characteristics and Risks of Standardized Options*, which you can download at www.theocc.com, the website of the Options Clearing Corporation. Click on the Explore icon on the home page, then on Documents & Archive, and then on Publications.

TYPES OF OPTIONS CONTRACTS



- If you **sell a call**, you must be prepared to sell the underlying instrument at the exercise price.
- If you **sell a put**, you must be prepared to buy the underlying instrument at the exercise price.

OPTIONS PRICES

Options have two types of prices: the **premium** and the **strike price**.

The premium is the market price of the options contract. It's what you pay to buy and what you receive if you sell. The premium isn't fixed and moves constantly over the contract term in response to investor demand and the changing market price of the underlying instrument.

If you hold an option, you have a limited and predetermined risk since the most you can lose is the premium you paid. But if you sell an option, the premium is your maximum potential return, and you could have a loss if the contract is exercised.

The strike price, also called the **exercise price**, is what you pay if you exercise a call and what you receive if you exercise a put. The strike price is set by the options exchange listing the contract and remains the same until the option expires or the contract is adjusted because of a change in the status of the underlying, such as a stock split or merger.

IT TAKES TWO

Options contracts are securities, as stocks or bonds are, but also **derivative products** because their market value derives from, or is determined in large part by, the value of the underlying instrument, such as a stock or stock index. There are two parties, called **counterparties**, involved in a derivatives transaction and they take opposite positions on the contract.

The strike price, sometimes shortened to the strike, is related to, though not identical to, the market price of the underlying. It is set at one, two-and-a-half, five, or ten points above or below the underlying's market price on the date the option is listed.

USING OPTIONS

You can buy and sell options contracts on individual stocks—known as **equity options**—on stock indexes, on interest rates, and on a number of other products.

When you buy a stock option, you're paying for the opportunity to benefit from changes in the stock's price without having to buy the stock. To use a hypothetical example, if you think that Alpha stock, which is currently trading at $50 a share, is going to increase in value in the next few months, you might buy 100 shares. That would cost you $5,000 plus sales charges.

An alternative would be to buy one call option on Alpha stock with a strike price of $60. If the premium were $2 a share, the contract would cost you $200 since each contract is typically for 100 shares.

If the stock price goes up to $62, you could exercise your option and buy 100 shares for $6,000. If you wanted, you could keep the shares since you bought at below market price. Or, if you weren't interested in keeping the stock, you could sell your option as the stock's price rose, perhaps for $500 or more, depending on the increase in the premium, realizing a profit.

Of course, if you'd bought the stock outright when it was $50 a share, you could sell when the stock price reached $62, realizing a $1,200 profit before sales charges. But the percentage gain from buying and then selling the option would have been 150% of your cost while the percentage gain from buying and selling the stock would have been 24%.

When you buy options, you're not only positioning yourself to take advantage of gains. You're also protecting yourself against potential losses.

If the stock price dropped to $45 a share, all you would have lost had you purchased the call is the $200 premium. If you had purchased and then sold the stock to guard against further price decline, you would have lost $500.

THE OCC

The Options Clearing Corporation (OCC) becomes the actual buyer and seller of all listed options contracts, which means that every matched trade is guaranteed by the OCC, eliminating any **counterparty risk**. The OCC ensures that all matched transactions are settled on the day following the trade, that all premiums are collected and paid, and that exercise notices are assigned according to established procedures.

The Value of Options

What an option is worth depends on tangible and intangible factors.

There is typically an active secondary market in options before their expiration date. Options holders seek to sell to make a profit or limit a loss, and options writers want to buy to offset their positions. For example, someone who had sold a call on a particular stock option at a particular exercise price might want to buy a call on the same stock option with the same expiration date and at the same exercise price if an exercise seems likely. That offsetting purchase takes the investor out of the marketplace, eliminating the obligation to make good on an exercise.

OFFSETTING ACTIONS

Sell call ABC at price x + Buy call ABC at price x = No obligation

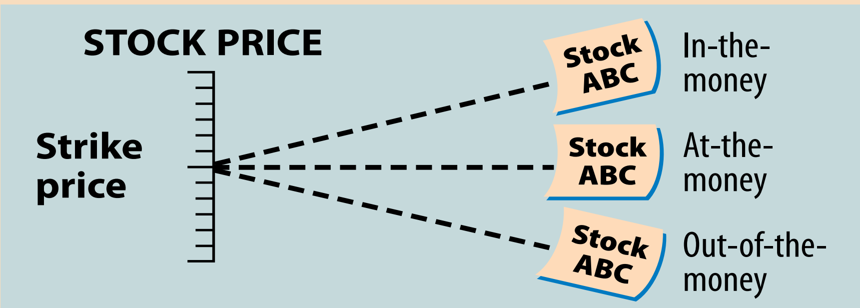
How Options Trade

The strike price of an option and the likelihood it will be exercised are closely tied to the current market price of the underlying instrument. In fact, the relationship between them is so central to the way options trade that it's described in a special vocabulary.

An **at-the-money** option means that the market price and the strike price are the same.

An **in-the-money** option means the market price is higher than the strike price of a call option and lower than the strike price of a put option.

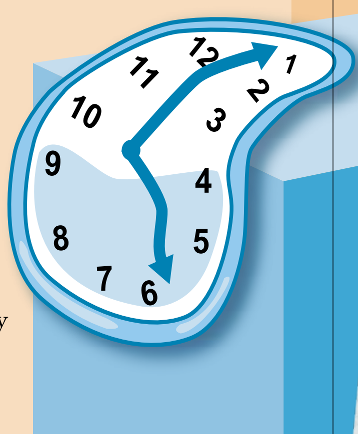
With an **out-of-the-money** option, the opposite is true: The market price is lower than the strike price of a call and higher than the strike price of a put. That makes it unlikely that the option will be exercised, especially if it's due to expire shortly.



WASTING ASSETS

Options are **wasting assets**, which means that after a certain point in time they have no value. Stocks, which you can hold indefinitely, always offer the potential for growth in value. Options, in contrast, have no value after their expiration date. This means a conservative buy and hold strategy that might be advantageous for stock investing doesn't work the same way with options investing.

As expiration nears, you have to monitor your positions closely to determine whether an option has moved in-the-money or out-of-the-money and what action you should take. Otherwise you risk missing an opportunity to realize a profit or limit a loss.



OTHER WAYS TO INVEST

Intrinsic Value

An option's **intrinsic value** is what it would be worth at any given moment if you exercised it. For example, if you hold a call on stock XYZ with a strike of $25, and XYZ is currently trading at $30, your call is in-the-money by $5, and therefore its intrinsic value is $5 per share, or $500 for the 100-share contract. If the stock were trading at $20, on the other hand, the option has an intrinsic value of $0, since it is out-of-the-money.

Even if a call has a $5 intrinsic value because it's in-the-money by $5, the premium isn't necessarily $500, since the cost of an option also takes into account its **time value**, or the potential that the option will continue to make gains before expiration. If the premium for your XYZ call is $700, or $7 per share, that means the time value that traders give your option is $2 per share. By the same token, an option with an intrinsic value of $0 might also be trading for $2 a share, its time value. There's no fixed value for a given amount of time before expiration—it depends on how investors value the particular option.

As expiration nears, the time value of most options decreases, since the potential for price changes decreases. Near expiration, most options trade at or around their intrinsic value.

Finding values	For example
Share market price	$30
– Exercise price	– $25
Intrinsic value	**$30**
Premium	$7
– Intrinsic value	– $5
Time value	**$2**

TERM LIMITS

Every options contract is defined by its terms, which are standardized and set by the options exchange where the option is listed.

An **options class** is the entire group of calls or puts available on a given underlying instrument. An **options series** includes only those options in a class that have the same expiration month and strike price, which are the only terms within a class that vary.

So all calls for stock XYZ would be in the same class, but the XYZ calls that expire in April—April XYZ calls—with a strike price of 50 would be considered a series.

Contract size: The size of the contract is how much of the underlying product will change hands if the option is exercised. For most equity options, the contract size is 100 shares.

Expiration month: Every option expires in a given month, set in the contract terms. You can buy an option expiring in a range from one month to three years.

Options that expire in a given month typically expire on the third Friday of the month. Brokerage firms may allow transactions on the Friday of expiration or set an earlier cut-off.

Strike price: The strike price is the amount per share that the seller will receive and the buyer will pay for the shares that change hands, regardless of the market price for those shares at exercise.

Delivery: There are two kinds of delivery. **Physical-delivery** options mean the actual underlying instrument changes hands. **Cash-settled** options require cash be paid in fulfillment of the contract. The amount of cash depends on the difference between the strike price and the value of the underlying instrument, and is determined using a formula that's defined in the contract.

Expiration style: American-style options may be exercised at any point before expiration. European-style options can be exercised only at expiration, not before.

While standard options all expire within a year, it's possible to trade equity options that expire up to three years in the future. Those options are called Long-Term Equity Anticipation Securities, or LEAPS. They trade just as regular options do.

The listing exchange chooses the securities on which to offer LEAPS, based in large part on investor interest.

Options Trading

You need to know exactly what you want to achieve before you begin a trade.

Trading options can be more complicated than trading stock. That's because, while you initiate a stock trade with an order either to buy or to sell, an options order might be **buy to open**, **buy to close**, **sell to open**, or **sell to close**.

Basically, when you make an initial investment in an options contract, you are opening a position by either buying or selling the contract. At any point before the option expires, you can close your position. If you're holding a call option, and you can sell it for more than you paid to buy, you might close to realize a profit. You might also close to limit a potential loss if the option seems destined to remain out-of-the-money.

If you open a position by selling a contract, you might decide to close that position if you think that the option will be exercised, since you could then be required to make good on your obligation to buy or sell. In this case, since you sold to open, you'd buy to close.

EXECUTING A TRADE

When you make an options trade, you go through a brokerage firm, just as you do when you trade stocks. Whether you give the order over the phone or online, you'll have to provide detailed information about the option you're trading, including:

- The name or symbol of the option
- Whether you're opening or closing a position
- Whether you're buying or selling
- Whether you want a put or call
- The strike price
- The expiration month
- Whether you're paying cash or using a margin account
- Whether you want a limit order or market price

You'll have a chance to review your order and it's crucial that you double-check all the details. Once you've agreed to the trade, you'll receive confirmation that your order has been placed, which means it has been added to the line of orders waiting to be filled.

Every time you make a trade, you'll also pay a commission. The amount varies depending on the brokerage firm, but it's important to consider the costs of trading when planning your options strategies.

MAKING THE LIST

Each exchange decides on the options it's going to list, or make available for trading. The most widely traded options may be listed on all the exchanges, while others might be listed on only a few, or just one.

There are some basic standards that all the exchanges adhere to in selecting the companies on which they'll list equity options. Usually, eligibility for listing requires a minimum number of outstanding shares and a minimum market price for the stock. If a company on which options are listed fails to maintain the minimum requirements, an exchange may decide to drop the listing.

All listed options are **fungible**, which means the contract terms are identical from exchange to exchange. That allows you to buy an option on one exchange and sell it on another to take advantage of the best available price. In most cases, though, your brokerage firm determines where the transaction will take place.

FOLLOWING THE RULES

Listed options are traded on self-regulating exchanges (SROs) that are in turn regulated by the Securities and Exchange Commission (SEC)—the federal agency that governs the securities industry. For example, the SEC approves the standards that exchanges must use to list options, though each exchange can make its own selections for listing.

NOT ALWAYS YOUR OPTION

Even if you have an account with a brokerage firm and you're actively trading stocks, you'll need to be approved before you can trade options. The rules are meant to prevent you from making options trades that might be beyond your ability to cover or that might expose you to an inappropriate level of risk.

The brokerage firm will ask you for information about your investing experience and assets, and will require you to read a document about the risks of options trading. You may also be asked about your knowledge of options strategies. Based on your answers, the firm will approve you for a specific level of trading, which determines the strategies you may use. Different transactions also have different margin requirements. Those that expose you to greater risk require a higher margin.

THREE WAYS TO BUY OPTIONS*

Investor buys ten call options (1,000 shares) on stock X; Price: $55/share; Strike price: 60; Premium: $750			
1 HOLD TO MATURITY	**IF STOCK PRICE RISES TO 65** Exercise options at strike price of 60 and then sell the stock in marketplace	$5,000 from sale – $750 premium	**$4,250 PROFIT**
	IF STOCK PRICE RISES TO 58 Let options expire	lose your premium	**$750 LOSS**
2 TRADE BEFORE OPTION EXPIRES	**IF STOCK PRICE RISES TO 62** Sell the contract for profit before expiration	$2,000 from sale – $750 premium	**$1,250 PROFIT**
	IF STOCK PRICE RISES TO 60 Sell the contract before expiration	$500 from sale – $750 premium	**$250 LOSS**
3 LET THE OPTION EXPIRE	**IF STOCK PRICE DROPS TO 45** There are no takers for an option with a 60 strike price	lose your premium	**$750 LOSS**

TWO WAYS TO SELL OPTIONS*

Investor owns 1,000 shares of stock X; Price: $55/share	1 WRITE TEN COVERED CALLS; Strike price: 60; Collect premium: $750	**IF STOCK PRICE RISES TO 57** No takers—options expire	keep the premium	**$750 PROFIT**
		IF STOCK PRICE RISES TO 59 Buy 10 calls to cancel obligation and prevent losing the stock	$750 premium collected – $1,750 premium on offsetting calls	**$1,000 LOSS**
Investor owns no shares of stock X	2 WRITE TEN UNCOVERED CALLS; Strike price: 60; Collect premium: $750	**IF STOCK PRICE RISES TO 57** No takers—options expire	keep the premium	**$750 PROFIT**
		IF STOCK PRICE RISES TO 65 Options are exercised. You must buy 1,000 shares of the stock at $65 to sell at $60	$750 premium – $5,000 loss on transaction	**$4,250 LOSS**

*These hypothetical examples are for illustration only. They do not represent results of actual transactions and do not factor in trading expenses.

Options Strategies

Putting options to work for you is all about finding the right strategy for your needs.

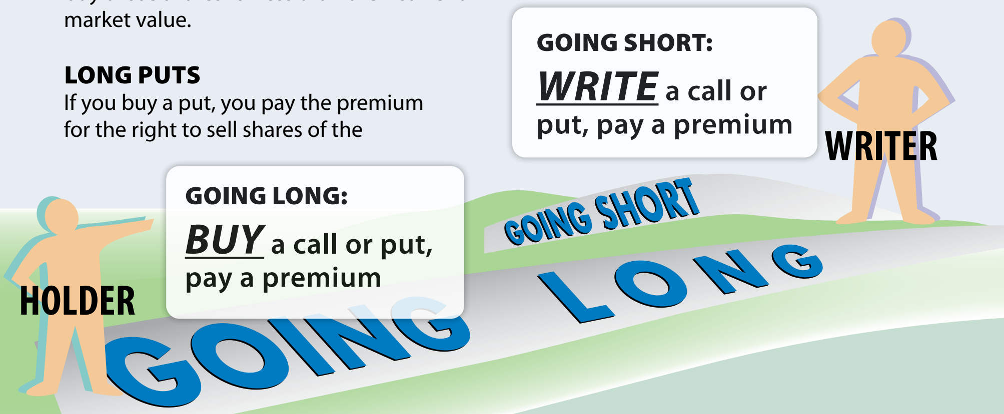
Some of the most straightforward options strategies rely on buying, or **going long**. In contrast, writing, or selling, options is known as **going short**. If you hold an option, you're also known as the long. If you sell an option, you're the short.

LONG CALLS

If you buy a call on a stock option, you pay the premium for the right to buy shares of the underlying stock at a certain price before the expiration date. Generally, a long call means that you anticipate the underlying stock price will rise above the strike price of the call. If it does, you can either sell your option for more than you paid to buy it, or you can exercise the option to buy those shares for less than their current market value.

LONG PUTS

If you buy a put, you pay the premium for the right to sell shares of the underlying stock at a certain price before the expiration date. A long put usually means that you anticipate the underlying stock price will fall below the strike price of the option. If it does, you can either sell your option for more than you paid for it, or, if you hold shares of the underlying stock, sell them at the strike price for more than they're currently worth.



SHORT CALLS

Short options strategies are sometimes more risky than long calls and puts. If you write a call, it means you're selling someone else the right to buy—and you're agreeing to sell—shares of the underlying stock at the strike price before the expiration date. Choosing this strategy usually means that you anticipate the price of the stock will remain neutral or fall. As long as the stock price stays below the strike price of your short call, the option is out-of-the-money and you keep the premium.

If the stock price rises, however, you might choose to buy an offsetting call at a loss to prevent greater losses when the holder exercises the option. Alternatively, if you wrote a **covered call**, which means you already own the shares of underlying stock, you could surrender those shares to fulfill your obligation to sell. But you'd be receiving less for them than their market value.

If you wrote an **uncovered call**, which means you didn't own the shares, you'd have to buy them at market price first and then sell them for less—at the exercise price—to meet your obligation.

SHORT PUTS

If you write a put, you're granting someone the right to sell—and you're agreeing to buy—shares of the underlying stock at the strike price at any time before expiration. A short put generally means you expect the market price of the stock to rise so that the put will expire worthless and you'll get to keep the premium.

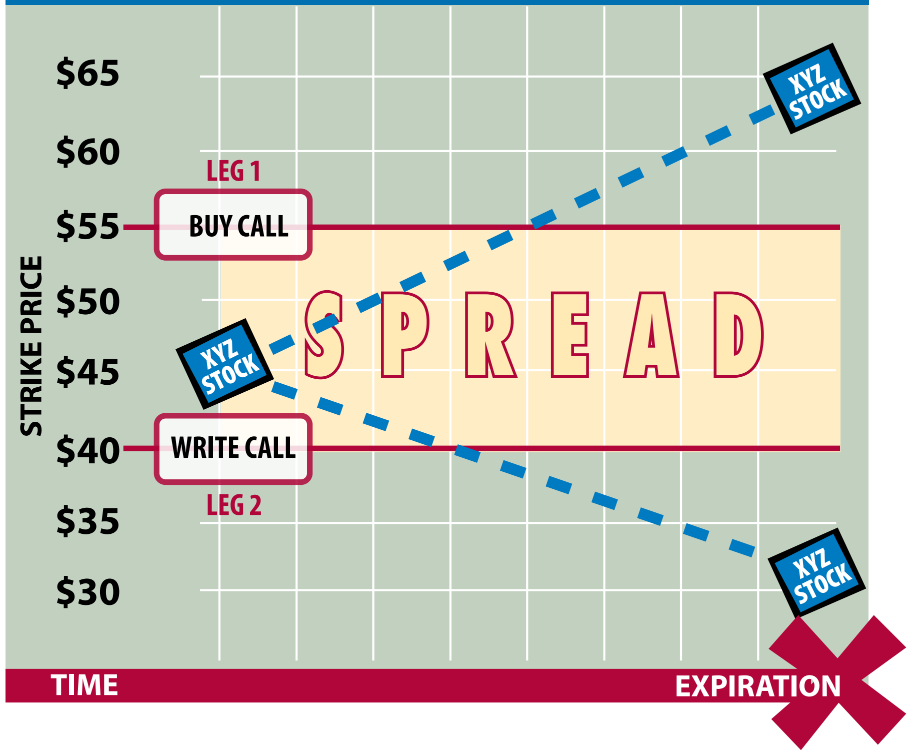
If the reverse happens, and the market price falls below the strike price of the put, you might close out your position by buying an offsetting put. Otherwise, the option will almost certainly be exercised and you'll have to buy the option holder's shares for more than their market value.

You might also write a **cash-secured put**. That means when you write the option, you either make a deposit in a money market account or buy US Treasury bills so you know you'll have the cash available should you need to complete the purchase. Otherwise, you might be taking on more risk than you can afford.

THE LONG AND SHORT OF IT

Buying a put is often compared to shorting stock, since both are strategies that take advantage of falling market prices. One benefit of buying a put rather than selling short is that you face a much smaller risk with a long put, since the most you can lose on the transaction is the premium you pay. When selling short, your potential losses are unlimited if the price of the stock goes up instead of down.

EXAMPLE OF A VERTICAL SPREAD



SPREADING THE RISK

Spread strategies allow you to hedge against the kinds of losses you might face by simply going long or going short. The flip side is that using a spread limits your potential return.

Spread strategies require opening two options positions at the same time on the same underlying stock, usually by purchasing one and writing the other. Each option in the spread is referred to as a **leg**. In the most common version, known as a **vertical spread**, the two **legs** have different strike prices.

For example, you might use a spread to earn income on stock you own in XYZ company. Rather than writing only a covered call, which would mean running the risk that you'd lose your shares of XYZ if the option were exercised, you could also buy a call at a slightly higher strike price than the one you wrote.

NAME YOUR SPREAD

There are a variety of spread strategies that may be appropriate at different times. In addition to calendar spreads, which involve different expiration dates, you might try horizontal spreads, butterflies, collars, straddles, and strangles.

If the price of XYZ stays below both strike prices, your profit is the premium you received for the short call, minus the premium you had to pay for the long call.

But if the price of XYZ rises above both strike prices, you can close out both positions, and use the profit from selling your in-the-money long position to offset the cost of your in-the-money short position.

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Index Options

You can get broad exposure to the stock market with index options.

Just as the underlying instrument of an equity option is a particular stock, or ETF, the underlying instrument of an **index option** is a specific index, such as the S&P 500 or the Nasdaq 100. Fluctuations in the value of the index and time until expiration affect the premium for an index option just as those factors affect the premium of an equity option.

TRACKING MARKET MOVES

Index options are attractive to investors because they offer the same ability to hedge or speculate as equity options. Rather than anticipating the movement of an individual stock, index options let you adopt strategies based on the movement of the market as a whole, a particular sector, or a factor, such as volatility.

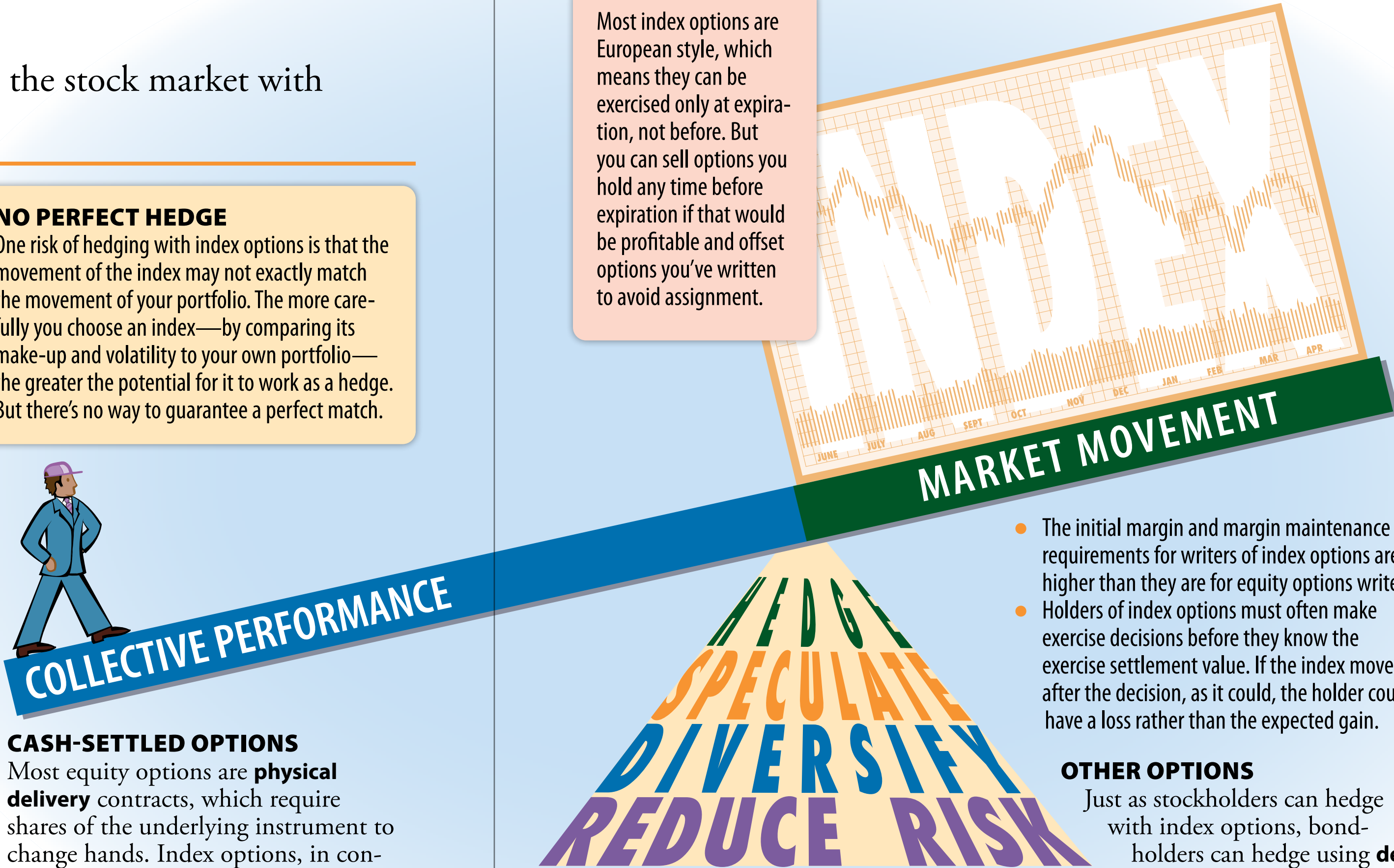
For example, if you anticipate that the stock market will rise, you can buy calls on the S&P 500 rather than calls on the individual stocks in the index, which would require a far greater number of transactions, a lot more money, and more time monitoring your positions.

Index options also reduce the risk that one particular company's stock won't perform as you expected. Instead, the value of your option will be determined by the collective performance of a large number of companies. For example, if you anticipate that the natural gas sector is poised for a move, buying a natural gas index option would allow you to profit—assuming your assumption is correct—without having to select one particular natural gas company.

And because indexes are so diversified, index options can be a simple way to hedge a diversified portfolio. If you buy a put on a broad stock index, your put will rise in value as the stocks in your portfolio lose value. If the stock market makes gains, your put will be out-of-the-money, but what you paid in premiums may be offset by increases in the value of your portfolio. You might decide to roll out, and repurchase the put with a later expiration date, to continue the hedge.

NO PERFECT HEDGE

One risk of hedging with index options is that the movement of the index may not exactly match the movement of your portfolio. The more carefully you choose an index—by comparing its make-up and volatility to your own portfolio—the greater the potential for it to work as a hedge. But there's no way to guarantee a perfect match.



Most index options are European style, which means they can be exercised only at expiration, not before. But you can sell options you hold any time before expiration if that would be profitable and offset options you've written to avoid assignment.

CASH-SETTLED OPTIONS

Most equity options are **physical delivery** contracts, which require shares of the underlying instrument to change hands. Index options, in contrast, are **cash settled**, which means a holder who exercises a contract receives a certain amount of money. The cash settlement value is the difference between the value of the index at closing, called the **exercise settlement value**, and the strike price of the option, times the multiplier chosen by the market listing the option.

With a call option, the cash settlement value is the amount by which the exercise settlement value exceeds the exercise price, times the multiplier. The opposite is true with a put option, where the cash settlement value is the amount by which the exercise price exceeds the exercise settlement value, times the multiplier.

For example, if Index XYZ closes at 1,050, you hold a call with a strike price of 1,000, and the multiplier is 100, your cash settlement is $5,000.

Exercise settlement value	1,050
Strike price	– $1,000
	50
Multiplier	x 100
Your cash settlement	**$5,000**

In most contracts, the exercise settlement value is determined by the prices of the index's components at the end of trading on exercise day or the previous day if there's no trading on exercise day. But in some contracts, it is based on opening prices on exercise day or the prior day.

MAKING INFORMED DECISIONS

While investing in index options resembles investing in equity options in some major ways—as an option holder all you can lose is the premium you pay—there are differences you need to be aware of before adding index options to your portfolio.

For example, you'll want to understand the **methodology**, or rules, of the underlying index, including the way the index value is calculated. Some indexes, such as those tracking implied volatility or dividend payments, may be valuable tools, but they work very differently than a plain vanilla index tracking a broad market. In addition:

- Hedging potential settlement obligations is more difficult for writers of index options than it is for writers of equity options.
- The initial margin and margin maintenance requirements for writers of index options are higher than they are for equity options writers.
- Holders of index options must often make exercise decisions before they know the exercise settlement value. If the index moves after the decision, as it could, the holder could have a loss rather than the expected gain.

OTHER OPTIONS

Just as stockholders can hedge with index options, bondholders can hedge using **debt options**, which are essentially options on US Treasury issues, in most cases. You might use these options to offset a drop in rates between the date you purchase the option and the date the bond matures. If the money from the maturing bond has to be reinvested at a lower rate, the profit from trading the option may make up for some of the loss.

Institutional investors with large overseas holdings sometimes hedge their portfolios by purchasing **currency options** on the currencies in which their money is invested. Since the investment's value depends on the relationship between the currencies, using options can help to equalize sudden shifts in value.

In addition, you can buy **options on futures contracts**, where the underlying instruments are agricultural commodities—such as grain, livestock, other raw materials—or index options.

There are also a number of exotic options. One example is **binary options**, in which one of two possible outcomes will occur: You'll be correct in the position you take and receive a cash settlement when the option is automatically settled at expiration, or you won't be and get nothing.

Futures: Setting Expectations

Futures are complex and volatile, but also useful investments.

FUTURES ARE OBLIGATIONS TO BUY OR SELL a specific commodity—such as corn, gold, or Treasury bonds—on a specific day for a preset price.

DERIVATIVE INVESTMENTS

Futures belong to the group of financial products known as **derivatives** because their prices reflect, or are derived from, the value of the commodity underlying the futures contract. Commodities can be consumable, such as soybeans and wheat, or financial, such as an index or a particular stock.

Futures developed from **forward contracts**, which were originally used by commodity producers—corn farmers, for example—to lock in the price they were to be paid for corn when it was harvested some months later. With the contract in hand, the farmer was protected if corn prices dropped.

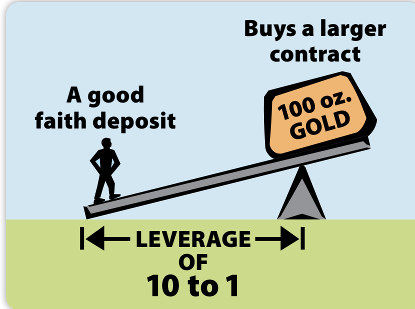
Futures contracts formalized the forward-contract process, imposing standard contract terms for **grade**, or quality, **quantity**, and **delivery month**. With the imposition of standard terms, it became possible to trade futures contracts on an organized exchange, creating a futures marketplace.

Buying or selling a futures contract does not transfer ownership. Rather, the contract spells out the terms of the deal, including the rights and obligations of the buyer and seller, the underlying product—also called the **underlying instrument** or just the underlying—to be purchased or sold, the quantity, and the timing.

LEVERAGE AND RISK

Leverage, in financial terms, means using a small amount of money to control an investment of much greater value.

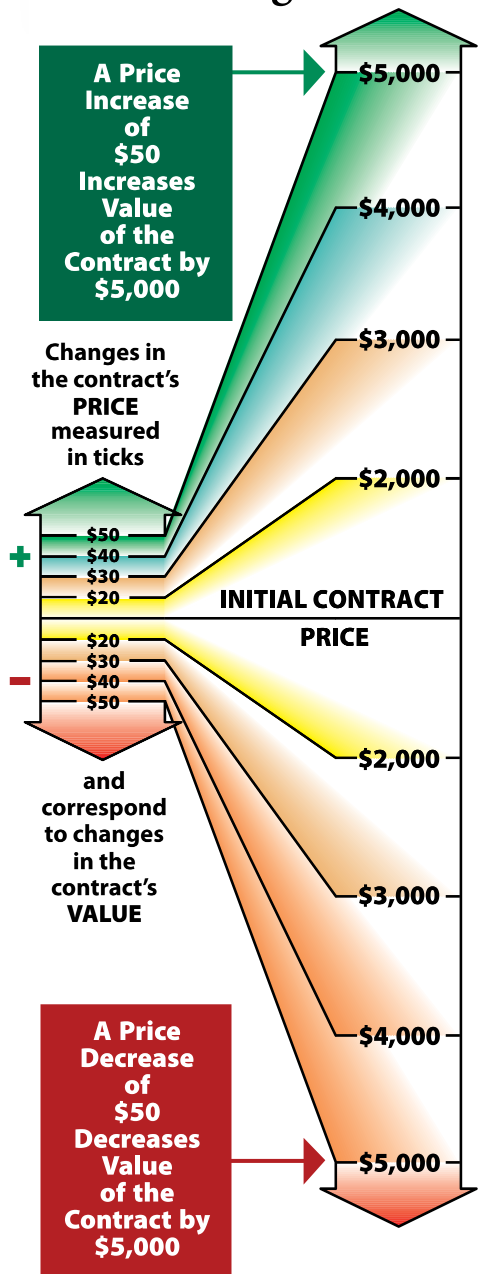
Futures contracts are highly leveraged instruments. Under most circumstances, you can buy or sell a futures contract with a **good faith deposit** called an **initial margin**, which is a percentage of the underlying item's value, often 10% but 20% for a security future. For example, if you buy a gold contract worth $190,000 when the futures contract represents 100 ounces of gold and the gold futures price is $1,900 an ounce, the required good faith deposit might be $19,000. That gives you 10-to-1 leverage since you control the $190,000 investment with your $19,000 deposit.



As another example of how leverage affects the value of a futures contract, consider a situation in which the price of the commodity underlying a contract increased $30, $40, or $50 per unit within a short period. If the price went up $50 per unit and the contract covered 100 units, the value of the contract would jump $5,000. Of course, the opposite could also happen. If the price per contract unit dropped $50, the value of the contract would drop $5,000.

So while leverage means that the initial amount required to buy a futures contract, known as **opening a futures position**, is relatively small, changes in the market price of the contract are magnified in relation to your initial deposit.

How Leverage Works



EXCHANGE TRADING

Typically, futures contracts are traded only on the exchange that lists them rather than on multiple exchanges as securities are. The listing exchange develops a contract's terms and conditions, provides speedy clearing and settlement of trades, and ensures that obligations to buy or sell are met.

Similar or even identical contracts may trade on more than one exchange, but normally one contract on a particular commodity dominates the competition in trading volume and liquidity. In other cases, an exchange may have the exclusive right to list contracts on a particular commodity.

Futures contracts expire on a specific day each month and are dropped from trading. US contracts expire on the third Saturday of the expiration month and can be liquidated or offset on or before the third Friday.

Futures Contracts

The dynamic movement of futures prices requires constant attention and steady nerves.

To trade futures, you open an account with a futures brokerage firm known as a **futures commission merchant (FCM)**, who will execute your trades. You may deal directly with the FCM or go through an introducing broker (IB) or commodity trading adviser (CTA).

When you're ready to trade, you give an order to buy or sell one or more contracts, either to **open a position** or to **offset a position** you hold. You pay a commission, called a **round-turn**, but only when you offset a position or the underlying is delivered at expiration.

The upfront cost of opening a position is the **initial margin**, or good faith deposit. This is a performance bond—a minimum of 10% of the cost of the contract, though sometimes more at the exchange's discretion—that's available to meet your obligation if the value of your contract falls.

CHANGING PRICES

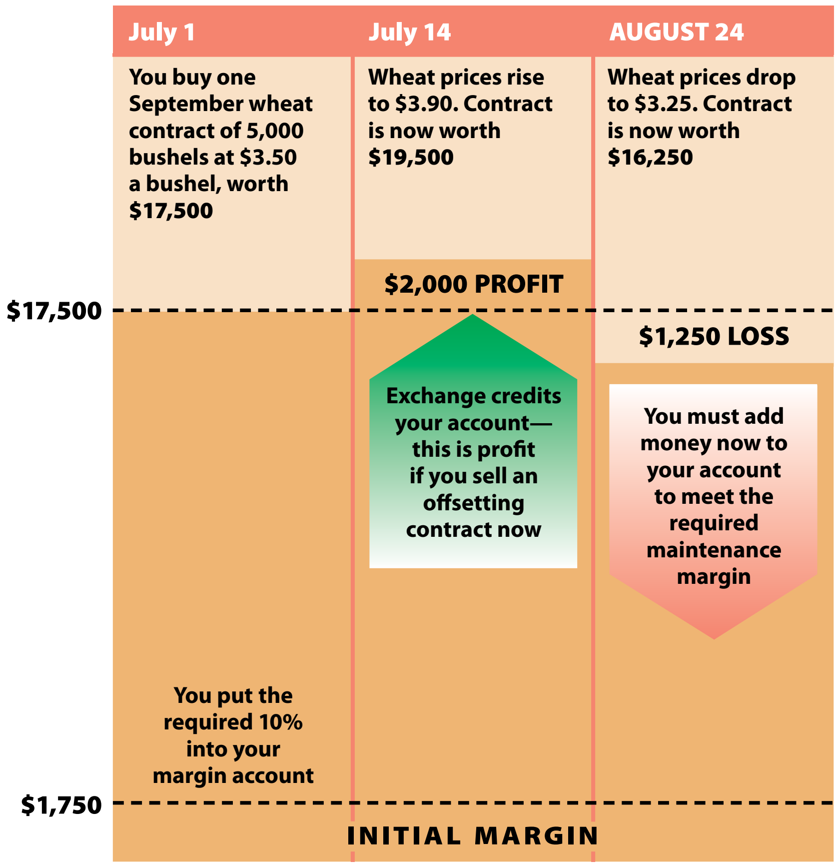
The market value of a futures contract changes constantly during the trading day and throughout its term. The changes are caused by fluctuations in the price of an offsetting contract, which in turn is caused by changes in the cash price of the underlying commodity, among other factors. If the value of a contract you hold goes up, you have a profit, and if it goes down you have a loss.

At the end of each trading day, the exchange's **clearinghouse**, an agency that's responsible for clearing and settling its trades, moves money either into or out of its members' accounts, based on the shifting value of their contracts. The process is called **marking to market**.

After you've opened a position, you must maintain the required margin level, called the **maintenance margin**, of your account at all times, adding money, if required, to cover the loss if the value of your contract drops. Maintenance margin requirements are also set by the exchange and may differ from initial margin requirements.

Margin helps control the risk to which traders are exposed. If market prices start to move rapidly and the market **volatility** increases, margin rates can be increased. This helps to ensure that traders don't expose themselves to risks that exceed the capital in their account. Higher margin requirements can also slow trading, as traders are able to take fewer positions with the same amount of money.

Profit and Loss on an Open Futures Contract



OTHER WAYS TO INVEST

THE LANGUAGE OF FUTURES

Futures trading involves contracts that cancel, or offset, each other: For every buy there's a sell and vice versa. The language of futures trading reflects this phenomenon.

To Enter the Market	Which Means	To Offset Your Position	Which Means
GO LONG	ENTER A FUTURES CONTRACT TO BUY	GO SHORT	ENTER A FUTURES CONTRACT TO SELL
GO SHORT	ENTER A FUTURES CONTRACT TO SELL	GO LONG	ENTER A FUTURES CONTRACT TO BUY

A TWO-PARTY SYSTEM

There are two parties to every futures transaction—the **buyer**, who is called the long, and the **seller**, who is called the short. If you want to enter the futures market, you can **go long** or **go short**. When an order is filled, the contract typically goes into a pool at the exchange's clearinghouse with all the other filled orders. And if you want to leave the futures market, cancelling your obligation under the contract, you offset your position with an equal number of the same futures contract on the opposite side of the market.

For example, if you have purchased, or have a long position in, three September US Treasury note futures and want to leave the market, you would sell, or take a short position in, three September US Treasury note futures. This purchase ends your obligation to deliver.

To offset a futures contract, you don't have to find the investor who was on the other side of your original futures contract and hope that person also wants to offset his or her position. That's because once a futures position has been cleared by a futures clearing firm, the firm becomes the buyer for every seller and the seller for every buyer. This means that when you give the order to offset your existing futures position, the clearing firm will see to it that your old futures position is cancelled by your new, offsetting trade.

DELIVERY ISSUES

If you don't offset your futures position, you must make or take delivery of the item underlying the contract at expiration. The person with the short position is required to make delivery, and the person with the long position is required to take delivery. The contract specifies where, when, and how delivery may take place.

Physical delivery is the exception rather than the rule. The overwhelming majority—market data suggests more than 98%—of futures contracts are terminated before expiration.

Some futures contracts, called **cash-settled contracts**, don't permit physical delivery. Rather, they are settled—if they're not offset—with a cash payment determined by the price change in the last two trading days before expiration.

HOW TRADING WORKS

Futures are traded on regulated exchanges, also called **designated contract markets (DCMs)**. The number of exchanges varies over time, both through consolidation and the launch of new venues.

Historically, futures traders arrived at **price discovery**, or what the buyer would pay and the seller would accept, through an often frenetic auction system on an exchange floor known as **open outcry**.

This live trading system persists on some exchanges but has been replaced on most by fully automated trading programs that match buyers and sellers electronically. On exchanges where both systems still exist, e-trading hours may overlap with floor trading hours but may also operate around the clock, with short daily breaks and a weekend interruption.

OTHER WAYS TO INVEST

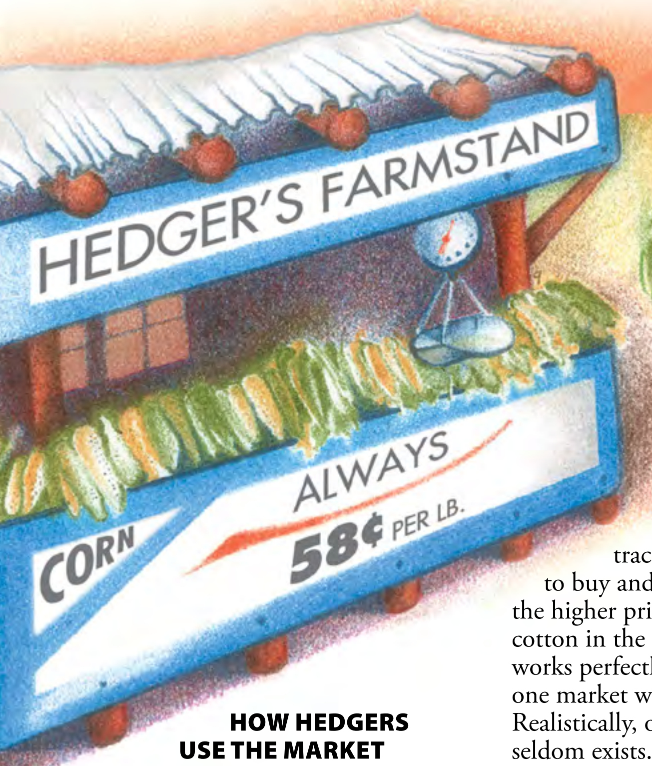
Hedgers and Speculators

Risk avoiders and risk takers can both benefit from their interaction in the futures markets.

Two different types of investors operate in futures markets.

Hedgers are producers or purchasers of commodities. They use futures contracts as tools to help manage the financial risks of their business operations. In general, producers like wheat farmers sell contracts while users like baking companies buy contracts.

Speculators, on the other hand, trade futures strictly to make money. They choose contracts based on what they expect to happen. The positions they take have the potential to move prices up or down, sometimes significantly, especially if there is a sudden flurry of buying and selling that may be sparked by rumor, inside information, or other factors.



HOW HEDGERS USE THE MARKET

Hedgers are interested in protecting themselves against price changes that will undercut their profit. For example, a textile company may want to hedge against rising cotton prices as a result of disease or bad weather. In August, the company buys 100 December cotton futures, representing five million pounds of cotton at 58 cents a pound.

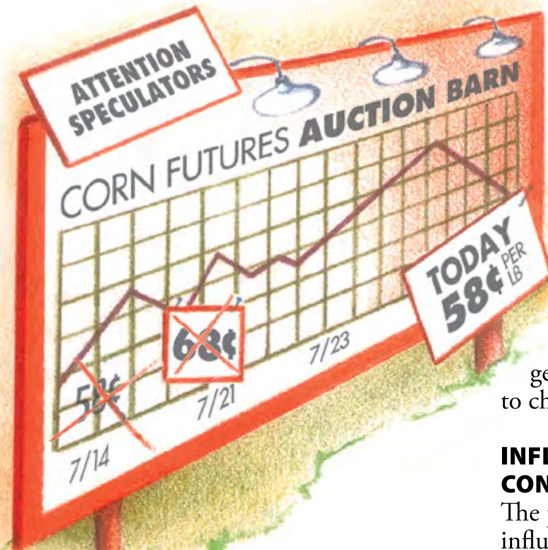
During the fall, the cotton crop is damaged and the prices shoot up. The December contract now trades at 68 cents. But the textile maker has hedged against exactly this situation. In December it can take delivery of cotton at 58 cents a pound, 10 cents less than the market price, and save $500,000 (10 cents x 5 million pounds).

Or, more likely, the company will sell the futures contracts for more than it paid to buy and use the profit to offset the higher price it will have to pay for cotton in the cash market. If the hedge works perfectly, hedgers make up in one market what they lose in the other. Realistically, of course, the perfect hedge seldom exists.

HOW SPECULATORS USE THE MARKET

Speculators hope to make money in the futures market by betting on price moves. A speculator may load up on orange juice futures in November, for instance, betting that if a freeze damages the Florida orange crop, the price of orange juice and the futures contracts based on it will soar.

If the speculators are right, and the winter is tough, the contracts on orange juice will be worth more than they paid. The speculators can then sell their contracts at a profit. If they're wrong, and there's a bumper crop, the bottom will fall out of the market, and the speculators will be squeezed dry by falling prices.



SPECULATORS ARE INDISPENSABLE

Speculators are crucial to the success of the futures market because they complete a symbiotic relationship between those wishing to avoid risk and those willing to take it.

Since hedgers, in planning ahead, want to avoid risk in what are often undeniably risky businesses, others have to be willing to accept it. Unless some speculators are willing to bet that orange juice prices will rise while others bet that prices will fall, an orange juice producer could not protect against dramatically increased costs in the event of a freeze, and orange farmers couldn't earn enough money in a good year to pay their production costs.

Speculators also provide liquidity. If only those who produced or used the commodities were trading, there would not be enough activity to keep the market going. Buy and sell orders would be paired slowly, erasing the protection that hedgers get when the market responds quickly to changes in the cash market.

INFLUENCES ON FUTURES CONTRACT PRICES

The price of a futures contract is influenced by natural and political events, but it's also affected by the economic news that the government releases, the length of time the contract has to run, and by what speculators are doing and saying.

Virtually every day of every month, the government releases economic data, sells Treasury bills, or creates new policies that influence the price of futures contracts for both natural and financial commodities. News on new home sales, for example, directly influences the price of lumber futures, as hedgers and speculators try to link the probable rise or fall in the demand for lumber to what will happen in the construction industry.

If a producer holds a commodity for future delivery, the contract will reflect storage, insurance, and other carrying costs to cover daily expenses until delivery. Generally, the further away the delivery date, the higher the contract price.

For example, in August, contract prices for December corn futures will be higher than those for September corn futures. This relationship is known as **contango**.

In an inverted market, where there's a limited short-term supply of a particular commodity, hoarding may increase the price of the near-term contracts while reducing the prices for farther-out contracts. This is called **backwardation**.

Investing in futures is different from investing in stocks, bonds, and mutual funds because futures markets are **zero sum markets**. That means for every dollar somebody makes (before commissions), somebody else loses a dollar. Put bluntly, that means that any gain is at somebody else's expense.

Financial Commodities

Stocks, bonds, and currencies are the commodities of the financial world.

You may not think of currencies, stock indexes, and interest rates as commodities, but they are. Money is as much the raw material of domestic and international trade as wheat is the raw material of bread.

Just as farmers, mining companies, and jewelry manufacturers can be dramatically affected by changes in the price of corn, copper, and gold, so changes in currency values, the direction of the stock market, or interest rates can have enormous impact on investors.

Like other commodities, financial futures contracts trade on specific exchanges, where they are often among the most actively traded products.

Financial Futures in Action

THE HEDGERS		
Mutual fund with a portfolio of stocks similar to S&P 500 components when near-term price declines expected	**Hedges by taking a short position** to protect stock portfolio against falling stock prices	**If index rises**, gains on portfolio may offset the loss of closing out the contract **If index drops**, losses on portfolio may be offset by profit from closing out the contract
Pension fund that plans to buy portfolio of stocks similar to S&P 500 components next month	**Hedges by taking a long position** to protect against rising prices until money is available to purchase stocks	**If index rises**, increased cost of buying stocks is offset by gains on long contract **If index drops**, buying costs are less but fund has losses on the contract
THE SPECULATORS		
Speculators who anticipate where S&P 500 will be in the future	**Buy S&P futures** when they think the index will rise **Sell S&P futures** when they think the index will fall	**If the index rises**, there's a gain on futures position, and if it falls, there's a loss **If the index falls**, there's a gain on futures position, and if it rises, there's a loss

EXPECTING THE UNEXPECTED

There are **hedgers** in the financial futures market as there are in other futures markets. Pension and mutual fund managers, securities firms, and international companies, to name a few, rely on financial commodities to run their businesses or meet their obligations to clients. So they use financial futures to protect themselves against unexpected losses or to reduce the cost of purchases.

For example, a US company that sells its product in England and is paid in British pounds must convert the pounds to dollars before recording the payment on its books. If the price of the product is fixed and the value of the pound falls against the dollar, the US company is, in effect, paid less for its product, since the pounds will convert into fewer dollars.

To hedge against this possibility, the company may sell pound futures. If the value drops, the company can use the profit from the futures transaction to offset the losses on the invoice payment.

KEEPING MARKETS LIQUID

As in other futures markets, **speculators** keep the markets active by constant trading. Speculators buy or sell futures contracts depending on which way they think the market is going. World politics, trading patterns, and the economy are the unpredictable factors in these markets. Rumor, too, plays a major role.

Financial speculators are no more interested in taking delivery of $100,000 in Treasury bonds than grain speculators are in 5,000 bushels of wheat. What they're interested in is making money. So, at what seems to be a good time, they liquidate a contract they own and take their profits. Or they may act to cut their losses.

WHAT'S THERE TO DELIVER?

The key difference between financial futures and other futures contracts is that most of the financial products are intangible, with no physical or accountable existence. This means there is nothing to deliver if the contract is not offset. In the rare circumstance when that occurs, the contracts are settled in cash.

Instead of dollars per gallon of heating oil or cents per bushel of corn, the value of an index contract is calculated by multiplying a fixed dollar amount by the current value of the index.

For example, a contract on the E-mini Standard & Poor's MidCap 400 is determined by multiplying $100 times the index, and on the Dow Jones Industrial Average (DJIA) by multiplying $10 times the index. So if the S&P MidCap 400 was 2,440 at expiration, a futures contract on the index would be worth $244,000. Similarly, if the DJIA was at 34,999, a contract on it would be worth $349,990.

An interest rate futures contract is also cash settled. Its value is figured as a dollar amount times points of 100% to correspond to the way that bonds are priced. For example, to find the value of a five-year Treasury note, you multiply $100,000 times the closing price. If the note closed at 1.04, the value would be $104,000.

SECURITY FUTURES

You can buy or sell contracts on **single stocks futures (SSF)** and narrow security indexes. Like other futures contracts, these highly leveraged products may provide strong profits but expose you to the risk of major losses if your expectation is wrong.

A single stock contract generally represents 100 shares, which you must deliver at expiration if you're short the contract or purchase if you're long unless you neutralize this obligation with an offsetting trade. However, offsetting may be expensive or difficult to execute as expiration nears.

THE PRICE FEEDBACK LOOP

Investor confidence is one of the factors affecting the price of financial instruments. So traders who buy and sell these products track futures prices—widely considered an expression of investor sentiment—for clues about where actual prices will move. In turn, futures traders track actual prices for clues about futures prices.

A good example is the pre-opening price of the DJIA as a predictor of how stocks will move when the markets open.

You don't want to confuse stock futures with stock options, though they may seem similar. A major difference is that while the most you can lose as an options buyer is the premium you paid, with a single stock future your losses are potentially limitless.

OVER-THE-COUNTER

Institutional investors, such as corporations, financial institutions, and public agencies, use over-the-counter (OTC) contracts as tools to manage financial risk by hedging their long-term commitments to buy, sell, or lend—especially when the deal involves multiple currencies. They work directly with dealer banks to handle the transactions, which are typically negotiated by specialized traders.

Because of their complexity and the extent to which they may be leveraged, OTC derivatives can pose potentially large risks. The deals usually don't require collateral, and there's no exchange or clearinghouse to guarantee that the parties will make good on their commitments. And because these derivatives are tailored to specific requirements, they're often highly illiquid.

QUADRUPLE WITCHING

Once every quarter—in the third week of March, June, September, and December—stock options, stock index options, stock index futures, and single stock futures all expire at the same time. The phenomenon, which can trigger intense Friday trading to resolve all open positions before the deadline, is known as quadruple witching day.

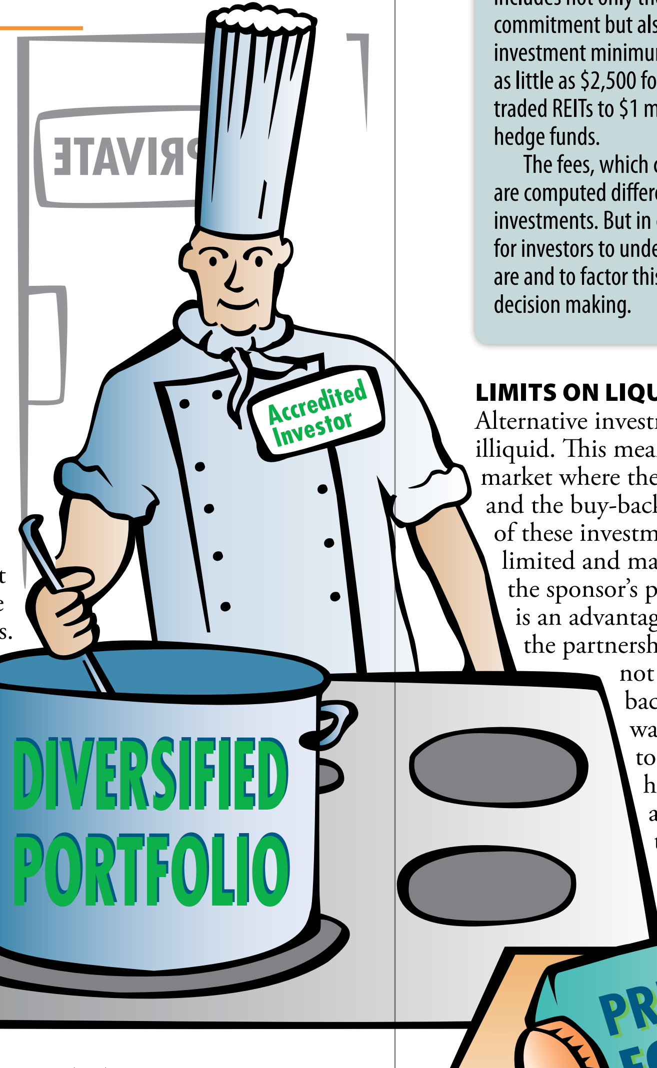
Alternative Investments

Variety can spice up the investment stew.

The investments described generically as *alternative* differ from stocks, bonds, and other traditional products in a number of ways. Most striking is that, in almost all cases, they're offered directly to investors rather than being publicly traded. In most cases, too, investors must meet income or net worth standards to be eligible to invest. That is not true with listed securities or conventional investment products such as mutual funds that aren't exchange traded.

Alternatives also differ from each other.

- They can be organized as corporations, limited partnerships (LPs), investment companies, or limited liability companies (LLCs).
- Some are registered, as traditional securities are, with the Securities and Exchange Commission (SEC), the Commodities Futures Trading Commission (CFTC), or, in the case of some hedge funds, with both. Others are registered in the states where they're sold. Still others are exempt from registration under SEC rules. All, though, are governed by federal and state anti-fraud regulations.
- While investment objectives and strategies vary, the managers of most alternative investments seek to provide a stronger return, a more stable return, or more regular income than traditional investments. This means, in at least some cases, more potential risk and less liquidity.



INVESTMENT STANDARDS

The SEC restricts eligibility for many alternative investments by imposing financial standards an investor must satisfy and, in many cases, that a broker-dealer or financial adviser must verify before the sale.

To invest in a hedge fund or private equity partnership, you must be **accredited** using the SEC standard. This means having a net worth of at least $1 million not counting the value of your primary residence, or an annual income, in the most recent two years, of $200,000 if you're single or $300,000 if you're married.

To participate in some private placements, you must be deemed **sophisticated**, which means among other things having sufficient knowledge and experience to evaluate the merits and risks of the potential investment. The SEC has expanded the definition of accredited to allow people with certain credentials, such as those with a Series 7, 65, or 82 license and those considered knowledgeable employees to invest without meeting the financial requirements.

To invest in a non-traded real estate investment trust (REIT) under state rules, you may be required to have a minimum income of $70,000 plus a minimum net worth of $70,000 or a minimum net worth of $250,000, or you may be limited to investing a specific percentage of your net worth. NASAA has proposed increases in the dollar amounts, linked to inflation.

JOIN THE CROWD

To make it easier for small businesses and start-ups to raise investment capital, Congress, in the JOBS Act, created an exemption to allow crowdfunding, or the online sale of securities to retail investors. SEC rules cap the amount that can be raised, the offering term, and the percentage of income an investor can commit.

COUNTING THE COST

The price tag on alternative investing includes not only the required minimum commitment but also substantial fees. The investment minimums vary widely, from as little as $2,500 for some private non-traded REITs to $1 million or more for some hedge funds.

The fees, which can be substantial, are computed differently for various investments. But in every case, it's essential for investors to understand what the costs are and to factor this expense into their decision making.

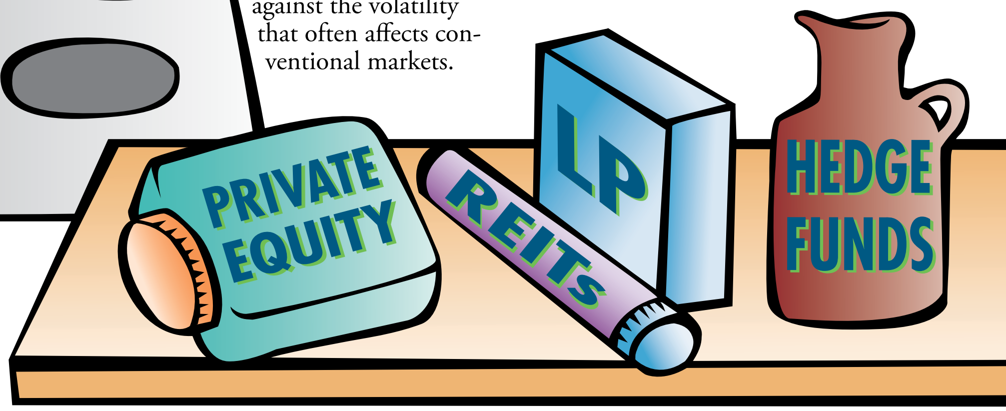
TYPICAL INVESTMENT FEES	
Hedge funds	1% to 2% annual asset-based fees plus 18% to 20% of fund profits and ongoing management fees and sales loads
Private equity funds	1.5% to 2% annual asset-based fees plus 18% to 20% of fund profits and ongoing management fees and sales loads
Nontraded REITs and other direct investments	Up to 16% up front, amortized over the investment term plus ongoing management fees and other costs

LIMITS ON LIQUIDITY

Alternative investments are often highly illiquid. This means there's no secondary market where they can be traded easily, and the buy-back programs that some of these investments offer are often limited and may result in a loss. From the sponsor's perspective, illiquidity is an advantage since it means that the partnership or corporation does not ordinarily have to buy back shares that investors want to sell. For investors, this illiquidity may help provide a buffer against the volatility that often affects conventional markets.

One reason that alternative investments require a longer-term commitment is that their managers may employ strategies that take an extended period to produce results. The term of the investment, also described as a **lock-up period**, isn't the same for all the products but does apply to most of them. In hedge funds, for example, it's often one year but could be less. In private equity it may be unlimited.

As a potential investor, you should always take into account the specific provisions that apply to a particular investment that you may be considering.



PLAYING BY THE RULES

The broker-dealers and advisers who are paid for providing investment advice may suggest alternative products for their clients' portfolios. The products, whose returns are typically not correlated with the returns on traditional investments, may add significant diversification to a portfolio and reduce its overall risk profile. Some may provide more income than traditional interest-paying securities, especially in a low interest rate environment.

Such recommendations, though, must be made judiciously, not because there's anything inherently wrong with nontraded public or privately offered investments. Rather, these professionals are subject to increasingly stringent regulation at both the federal and state levels that requires them not only to evaluate the merits and risks of any investment they offer to their clients but also determine whether it is suitable for a particular investor (in the case of a broker-dealer) or in the investor's best interest (in the case of a registered investment adviser, who has a fiduciary responsibility).

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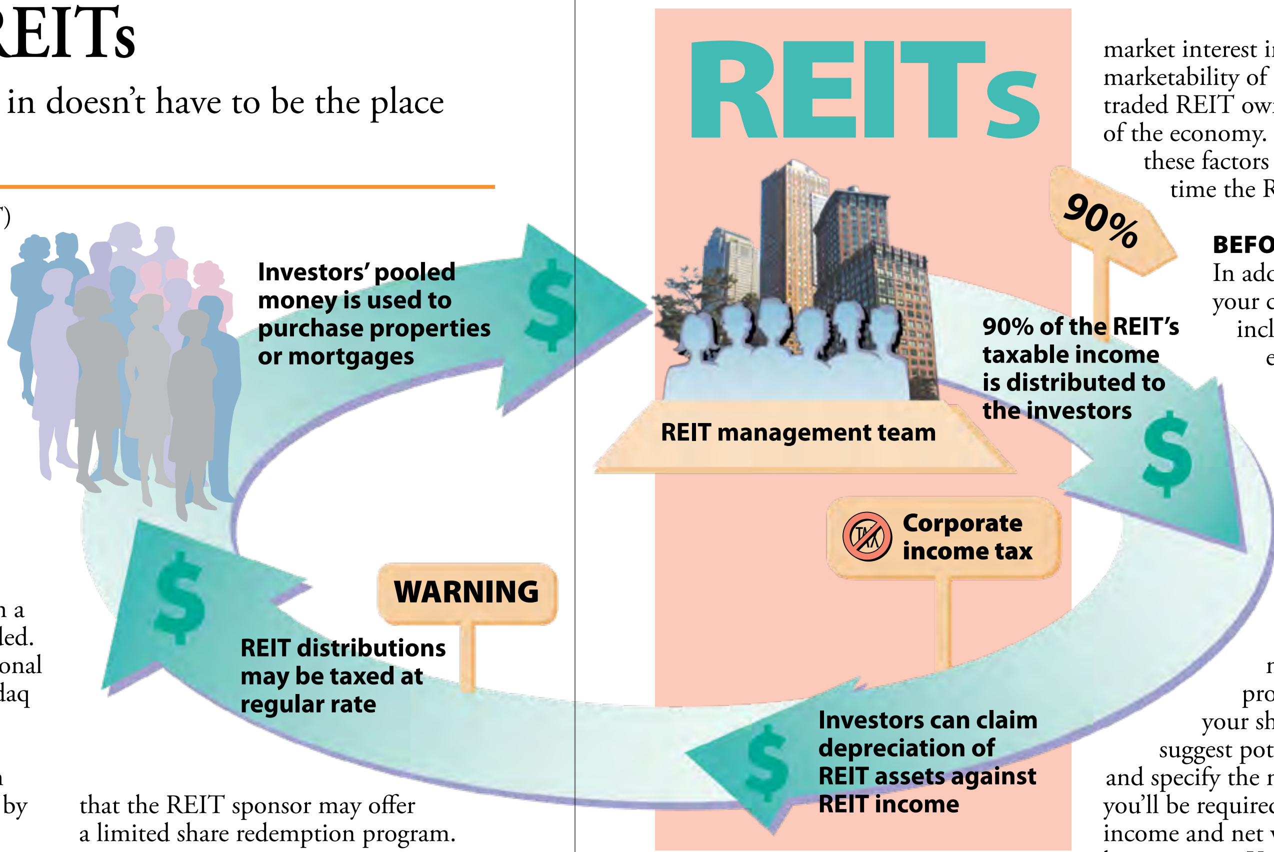
Investing in REITs

The real estate you invest in doesn't have to be the place you call home.

A real estate investment trust (REIT) is a corporation that has been set up to invest in real estate. A REIT uses capital raised from a group of investors to buy buildings or, less often, mortgages on buildings. Most REITs specialize in a particular type of real estate, such as hotels, shopping centers, office buildings, or medical facilities, and may concentrate their purchases in a specific geographic area.



TWO CATEGORIES OF REITs

There are two ways you can invest in a REIT. Some REITs are publicly traded. After an IPO they're listed on a national exchange like the NYSE or the Nasdaq or on a quotation service like the OTC Bulletin Board. You invest in these REITs the same way you do in any other publicly traded company, by purchasing shares through a broker-dealer. You sell in the same way.

Nontraded REITs are also public corporations that are registered with the SEC just as publicly traded REITs are. But these REITs don't have an IPO and aren't listed on an exchange. Nontraded REIT offerings are made by prospectus, which explains where it intends to invest, the types of properties it will buy, and how it will finance its investments.

You buy nontraded REITs through a broker-dealer or financial adviser. He or she is responsible for determining that the REIT is a suitable investment and also that it's a suitable addition to your portfolio.

One feature of nontraded REITs is that there is no formal secondary market where you can liquidate your shares or resell your interest. Since a REIT's investment term is typically between 8 and 12 years, and may be longer, you need to be able to commit the capital you invest for that period. The only possible remedy for this illiquidity is that the REIT sponsor may offer a limited share redemption program.

REIT RISK SCALE

LOWER		HIGHER
Low-income housing	Industrial and commercial properties	Single-family housing

REIT RETURNS

A REIT's management team is responsible for running a profitable business, which means generating a steady stream of revenue. Under special IRS rules, a REIT, whether traded or nontraded, must distribute at least 90% of its taxable income to investors every year as distributions, which means that income it provides may be higher than most other corporations provide. The downside is that the tax you owe on this REIT income is figured at the same rate you pay on your ordinary income, not at the lower rate that applies to qualified dividends.

Equity REITs that invest directly in buildings generate this income from rents, which are, in turn, paid to investors as a monthly or quarterly distribution. Distributions may increase as rents increase, which means the investment can act as a hedge against inflation. There are risks, however. Rents, and therefore distributions, may drop in a market downturn if rental space remains empty. Distributions may be disappointing as well if the properties the REIT owns aren't attractive to potential tenants or if the market for a particular type of property is saturated. Mortgage REIT investors are likewise vulnerable to changes in interest rates and the potential for defaults.

FINDING AN EXIT

Income from distributions is only part of the return picture however. Your total return on a REIT is a combination of income and whether or not you realize a capital gain on the principal you invest. With traded REITs, any gain or loss is determined by the difference between the price at which you buy shares and the price at which you sell. Prices fluctuate all the time, as they do with most traditional investments. So you choose the time to sell your holdings and take your profit or loss.

With a nontraded REIT, realizing a capital gain depends on the liquidation event that occurs at the end of the multi-year investment term.

The REIT management team typically has three alternatives for liquidation: converting the REIT to publicly traded status in an IPO, participating in a merger with or acquisition by another nontraded REIT, or selling off the properties the REIT holds individually or in small lots.

The exit strategy the management team prefers, which is normally the one that would produce the greatest gain, may or may not be feasible at the time they are ready to liquidate. Among the factors that come into play are current market interest in traded REITs, the marketability of the properties the nontraded REIT owns, and the general state of the economy. The risk is that none of these factors can be predicted at the time the REIT is initially sold.

BEFORE YOU INVEST

In addition to performing your customary due diligence, including looking at the experience and track record of the management team, the REIT's business plan, and sources of outside capital, you will want to review the prospectus before investing.

The document will clarify the investment term, explain the provisions for redeeming your shares if any exist, suggest potential exit strategies, and specify the minimum purchase you'll be required to make and the income and net worth thresholds you'll have to meet. You may also want the opinion of a neutral third-party analyst.

Some of your evaluation will be facilitated by new FINRA rules governing the responsibilities of a nontraded REIT sponsor. Specifically, the sponsor must report the per-share value of a REIT to provide a more accurate ongoing sense of the investment's actual value. Among other things, this means accounting for the impact of commissions and fees on your initial investment. The sponsor must also disclose when distributions include return of capital, which reduces the per-share value of your holding. In addition, if redemptions are allowed, it must be made clear that the share redemption price may be less than the per-share estimated value provided in your account statement.

A POSSIBLE PLUS

Nontraded REIT returns are not correlated with equity market returns or the returns on similarly invested traded REITs. That's true in large part because the managers aren't under the same pressure to produce short-term results or vulnerable to shifts in supply and demand. On the upside, this means these alternative investments can provide a hedge against marketplace volatility.

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OTHER WAYS TO INVEST

Managed Futures

Commodity pool operators invest in global futures markets to manage risk and capitalize on opportunity.

Adding managed futures to an investment portfolio of traditional assets, such as stocks and bonds, helps to reduce volatility while potentially improving return. These ups and downs in commodity prices are driven by very different forces from the forces that impact equity and bond prices. In other words, there's little or no correlation between this alternative asset class and the traditional asset classes.

DEFINING MANAGED FUTURES

Managed futures offer investors the opportunity to speculate in commodity futures markets around the globe through a vehicle established and managed by a **commodity pool operator (CPO)**. That vehicle may be known as a futures fund, a commodity fund, or a commodity pool.

The CPO, which may be structured as a limited partnership, a fund, or a fund of funds, hires **commodity trading advisers (CTAs)** to produce profits by buying and selling futures contracts using the money raised from its investors. The CTAs act on a discretionary basis, which means the investors give them power-of-attorney to trade without having to secure approval of individual transactions. That allows them to make the instantaneous decisions that are often essential in futures markets.

As a CPO selects CTAs—and there are typically several—it evaluates both a trader's strategy in choosing when and what to buy and sell and his or her performance history. Combining successful traders who take different approaches, plus the fact that the CTAs can trade in more than 150 global markets, means the pool's holdings at any given time are likely to be highly diversified. Since futures contracts can be highly volatile investments, this variety is a key component in the CPO's long-term performance potential.

TRADING STRATEGIES

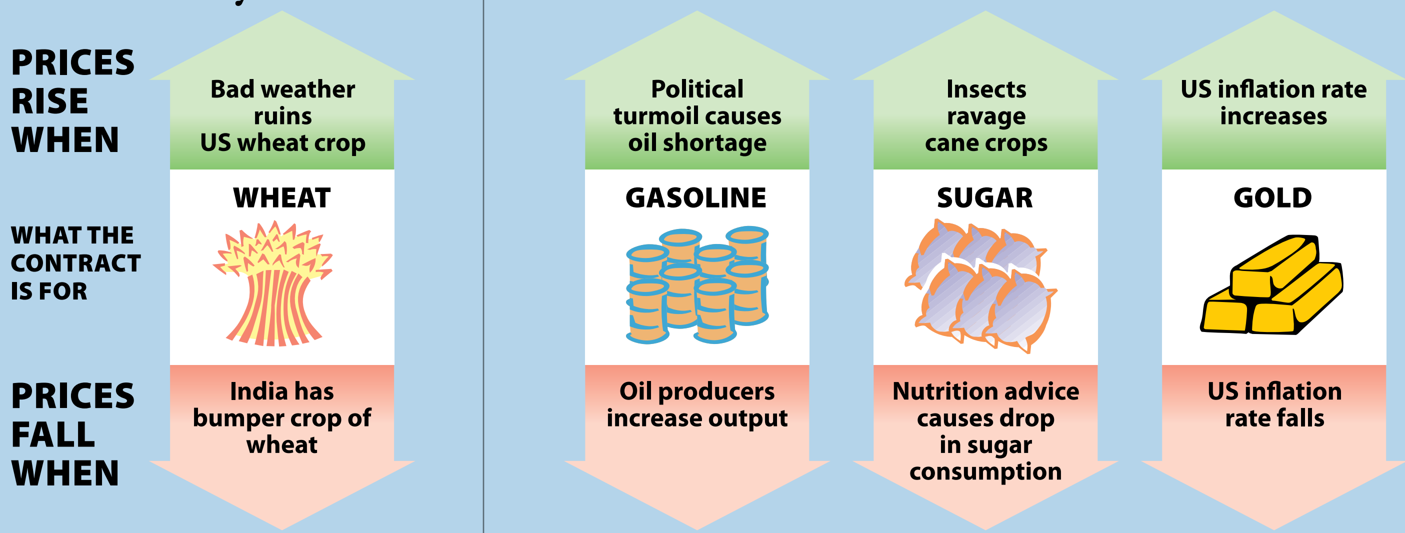
Most CTAs, known as trend followers, make buy and sell decisions based on technical indicators. This approach analyzes historical trends to determine the appropriate time to buy and sell to take advantage of an anticipated price movement up or down. These traders typically use automated trading systems that give buy—or go long—and sell—or go short—signals determined by an objective set of rules set by the CPO. With such a system, the trader's instincts and emotions aren't part of the picture.

A smaller number of traders use fundamental analysis to evaluate investments within a particular market sector or sectors by assessing their inherent value and profit potential. Some of these CTAs use automated trading systems as well, though some have more discretion in taking long and short positions.

Market neutral traders, on the other hand, focus on the profit that can be made on the spread, or difference between prices, in different markets or on different contracts in the same market. Some market neutral traders use options on futures contracts as well as futures contracts themselves to realize a profit.

What Can Affect a Commodity's Price

While the same forces of supply and demand affect the shopper in the supermarket or the driver at the gas pumps, the futures market doesn't deal in five pounds of sugar or ten gallons of gas. Efficiency demands that commodities be sold in large quantities.



HEDGERS AND SPECULATORS

Hedgers produce or use commodities and buy or sell futures contracts to protect their costs or ensure their profits. Speculators, on the other hand, are willing to take the risk of losing money for the opportunity to profit from fluctuations in contract prices. They're essential for futures markets because they add liquidity, which keeps the markets functioning.

FEES AND EXPENSES

Like many alternative investments, the fee structure of a managed futures fund includes both a management fee and a performance fee. And, as with other alternatives, the overall fees an investor pays are higher than those for making and holding an equity investment. There are also transaction fees.

The management fee is generally a specific percentage—such as 2%—of the assets being managed. The performance fee—up to 20%—is based on the pool's net trading profits and is usually paid only if the profits hit a predefined target.

The fees a CPO charges and the way they are collected and distributed are explained in its formal disclosure documents. You and your adviser should evaluate those costs as part of deciding whether to invest.

WHY INVEST?

The first and perhaps the best reason to add managed futures to your investment portfolio is their capacity to help manage risk by reducing volatility. But that's not the only reason.

Investing in managed futures has the potential to strengthen portfolio performance whether markets are rising or falling because CTAs trading for a commodity pool have the flexibility to buy or sell futures contracts on regulated financials and commodities markets across geographical and product boundaries. And because they are not correlated to traditional asset classes, managed futures potentially provide a positive return when stocks or bonds are slumping.

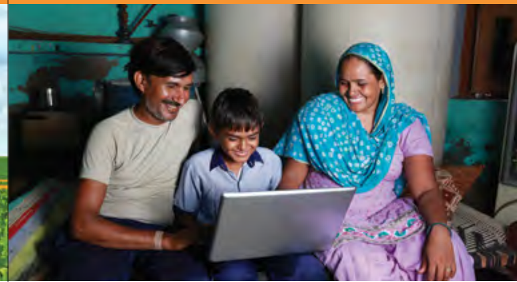
Investing in many markets also provides protection against natural or political events that may undermine returns in a certain country or region. Those events might include drought or excess rain that destroys grain crops or cross-border tensions that affect oil or gold prices.

EVALUATING RISKS

There are risks to investing in managed futures. In a particularly volatile environment, you could lose the entire amount you invested. The fact that commodity pools are typically highly leveraged also increases the risk of losses, just as it increases the potential for gains. And high fees can take a toll on positive returns.

In addition, an investment in any limited partnership is more illiquid than an investment in the traditional asset classes because there is no organized secondary market for these products.

Though managed futures sponsors provide some liquidity, redemption options are limited, you must generally file a redemption notice in advance, and you may receive less than the amount you invested.



Impact Investing

You can choose investments that are consistent with your personal beliefs.

As you invest to meet your financial goals, you may also want to choose investments that reflect your personal values or are designed to generate positive social, environmental, or economic change at the local, national, or international level.

There are a number of ways to invest that combine doing what you believe is right or responsible and realizing a positive return. You might:

- Identify individual securities whose issuers run their businesses in ways that you respect, including B Corporations that have been established to create a social, environmental, or community-based benefit as the result of their business operations.
- Seek impact investment opportunities through private equity funds that seek to generate a responsible, sustainable impact through projects in which they invest.
- Buy shares in a mutual fund or exchange traded fund (ETF) that has established criteria that investments must meet to be eligible for inclusion in the fund, or ask about a managed account with an environmental, social, or corporate governance (ESG) focus.

CHOOSING ESG FUNDS

You can also participate in sustainable responsible investing by choosing mutual funds, ETFs, or managed accounts that build their portfolios with stocks or bonds whose issuers meet the specific ESG criteria laid out in their prospectus.

Mutual funds, for example, typically construct a series of filters that they use to screen out companies that make certain types of products or follow certain policies. The index an ETF tracks may similarly have been constructed by eliminating certain companies from a larger market index or by selecting firms that meet the standards established by the index methodology, such as sustainability.

There is substantial choice among values-based funds and ETFs, so it's not difficult to select investments that you know you'll be comfortable with. In addition, the challenging task of choosing the underlying investments has been done for you. And investment return, which in many cases equals or surpasses the return on non-ESG funds, is reported on a regular basis and can be evaluated against recognized benchmarks.

MEASURING RESULTS

When you make impact investments, you're looking not only to measure financial return, but also the progress that's being made in effecting change and the role your investment is playing. In fact, the challenge of measuring actual impact is widely understood to be one of the major hurdles to increasing investor interest in this type of investing. But there are several organizations that are working to improve the ways that impact can be measured.

The Global Impact Investing Network (GIIN), a nonprofit organization that champions impact investing, is a helpful resource for reports that provide insight into assessing the effectiveness of specific investments, as well as those investments' financial performance and risk. More information is available at www.thegiin.org.

MAKING IMPACT INVESTMENTS

Impact investors are committed to solving or mitigating social and environmental problems, ranging from climate change to illiteracy and nonsustainable agricultural practices to inadequate healthcare, while realizing a long-term return.

An impact investment may be focused on developing sources of renewable energy, funding innovative financing for small businesses, or backing entrepreneurs collaborating with community organizations to develop sustainable resource management or clean technology. Or the resources may be directed at a host of other needs including inclusive financial services, microfinance, and health and wellness.

Most impact investments, which tend to require substantial capital, are private debt investments. However, funds of funds that aggregate capital from a number of investors to meet minimum investment requirements and a number of retail funds from well-known companies make it possible for more people to participate.

You'll want to be cautious, however, of some well-publicized programs that make impact investing easily accessible. Be sure to check all such opportunities carefully to be sure they meet your ethical and financial standards, and consult your adviser before investing.

FINDING RESPONSIBLE COMPANIES

As you look for companies in which to make a values-based investment, you may want to differentiate between the financially solid companies that are acceptable to you and those that are not.

A traditional approach is to screen out, or eliminate from consideration, those companies whose products or corporate policies are unacceptable to you or conflict with your personal values.

A contrasting approach is to concentrate on successful companies whose products and policies are, at the very least, acceptable and may be seen as a benefit to society. Some investors put technology firms, firms that take public positions on social and environmental issues, and certain service providers in this category.

A third approach is to seek out companies, such as B Corporations, that actively work to make the world, or at least some part of it, a better place, environmentally, socially, or by some other measure. For example, a company might set up a facility in an economically marginal community to provide local jobs, produce fair trade products, or offer legal services to renewable energy start-ups.

The B Corporation business model is focused on what's known as a double bottom line. In other words, success is based on both financial profits and achieving a stated objective.

B Corporations may apply for voluntary certification from a nonprofit called B Lab, which assesses social and environmental performance, accountability, and transparency—things that may be difficult for an individual investor to determine. You can find a list of certified B Corps, plus additional information at www.bcorporation.net.

Why Invest?

Being able to accumulate the assets you need to meet your financial goals is the best incentive to invest.

The financial goals that matter most to you may be ones that other investors share. You may want to buy your first home or trade up to one that meets your needs better. If you have children, one of your primary goals may be ensuring that you're able to afford the tuition at the college or university they want to attend. And, if you're thinking about retirement at all, you know you'll want to be financially secure enough to live comfortably.

Of course, your goals don't have to be limited to big-ticket items or meeting responsibilities. You may want to take a year off and travel the world, get an advanced degree so you can switch careers, or start your own business. A common thread is that all these aspirations are likely to require a healthy investment account on which you can draw.

WHY TIME MATTERS

The time you have to meet a goal influences the specific investment strategies you use to achieve it.

But the energy and money you put into meeting one of your goals during a certain period of your life may have a direct impact on your progress toward meeting the others. For example, you may plan to allocate 10% to 15% of your earnings each month among your various investment goals. But if you're making the down payment on a new home in the next few months, you'll probably need most of your available cash to cover the closing costs and the expenses of moving.

Will you still put money into a college savings plan or individual retirement account (IRA)? You probably should. But if you have to skip contributing to these accounts for a few months, your overall plan won't be doomed. As long as you resume investing for your longer-term commitments as quickly as you can, you usually can catch up.

Timing also affects the level of investment risk you may be comfortable taking for different goals. For example, you certainly wouldn't want to put the money you've accumulated for next semester's tuition into a speculative investment. But you'll probably be more willing to invest somewhat aggressively in your IRA if your retirement is still 20 or even 30 years in the future and you'll have time to make up for potential losses you may encounter now.

A trusted adviser can be an invaluable resource, not only in helping you articulate your major goals and establishing your priorities, but also in creating a comprehensive plan to help achieve them.

10% HERE, 10% THERE

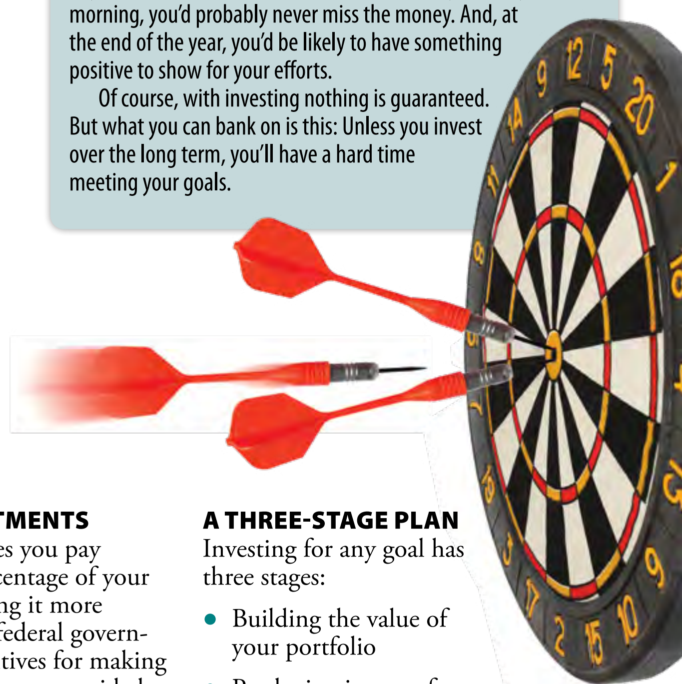
Are you convinced that you can't afford to invest 10% of your income? Try calculating it this way:

1. Multiply your annual income by 10% (0.10).
2. Divide the answer by 52.
3. Divide that answer by 7.

That's the amount you need to set aside each day to invest 10% a year.

If you arranged a direct debit from your checking account to your brokerage or mutual fund account every Monday morning, you'd probably never miss the money. And, at the end of the year, you'd be likely to have something positive to show for your efforts.

Of course, with investing nothing is guaranteed. But what you can bank on is this: Unless you invest over the long term, you'll have a hard time meeting your goals.



SPECIALIZED INVESTMENTS

Because the income taxes you pay absorb a significant percentage of your income—perhaps making it more difficult to invest—the federal government provides tax incentives for making certain types of investments, provided you follow the rules that govern these accounts.

Earnings in designated education investments, including 529 college savings plans and Coverdell education savings accounts (ESAs), can be withdrawn tax free if you use the money to pay for qualified education expenses.

Earnings on and, in some cases, contributions to employer sponsored retirement savings plans and individual retirement accounts (IRAs) are deferred until you withdraw from your account, which could be as long as 40 or 50 years after you invest. Other retirement plans offer the potential of eventual tax-free withdrawals.

And while the investments you make to accumulate the down payment on a home don't qualify for special treatment, you may be entitled to deduct some or all of your mortgage loan interest and local real estate taxes when you file your federal income tax return, reducing what you owe.

A THREE-STAGE PLAN

Investing for any goal has three stages:

- Building the value of your portfolio
- Producing income from earnings and capital gains
- Protecting the accumulated value

In most situations, all three are important to some degree, though your emphasis may shift from growth to income or preservation at different rates. For example, most college savings accounts have a 20 to 25 year lifespan, while a retirement account you open in your 20s may span six or seven decades.

Converting your emphasis from growth to having cash available requires several decisions, including how to reallocate your portfolio, which investments to sell off, and where to put the cash these sales generate for the greatest potential return at the least risk. Liquidating a maturing bond, for example, may make more sense than selling off an asset that has dropped in value if you expect it may rebound.

This is another instance when expert advice can help you understand the alternatives and make a wiser choice.

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INVESTING FOR GOALS

Paying for College

Once you fit all the pieces together, you'll have a clearer view of how funding your child's education works.

There's no doubt that the cost of higher education has increased dramatically in recent years. Yet, perhaps surprisingly, the number of students enrolling in all types of institutions has increased as well. One reason may be the recognition that a college education makes financial sense. Another may be the commitment—and sometimes sacrifice—that families are willing to make to pay for the opportunity that education provides. But a third, and possibly equally powerful factor, is that families can draw on a number of sources to help them cover the cost of college.

While saving for college may not be easy, there are a number of programs designed not only to encourage you to put money away but to provide tax benefits if you do. These benefits include the right to use tax-free earnings to pay for qualified education expenses.

Among the most widely available choices are those that share the **529** label: college savings plans, state prepaid tuition plans, and the private college prepaid plan. Another alternative is the **Coverdell education savings account (ESA)**, which has lower contribution limits but more flexibility in choosing investments.

THE ROLE OF SAVING

Whether you're a brand new parent or you've had lots of practice as a mom or dad, this probably isn't the first time you've thought about saving for college. It's hard to avoid the bottom line: Colleges and universities, as well as the federal government, consider it your responsibility to contribute to your children's higher education expenses. Without at least some savings, meeting that obligation may not be possible.

COLLEGE RESOURCES

You can look to a number of websites for help in planning for your child's education.

- **www.collegesavings.org**
  Valuable information about 529 savings and prepaid plans.
- **www.studentaid.ed.gov**
  Guidance on the process of applying to and paying for college.
- **www.collegeboard.org**
  Information on college costs, scholarships, and entrance exams.

You may also realize tax savings in certain cases by paying college expenses with interest you earn on US savings bonds.

Better yet, you don't have to select just one method. You can create a savings plan that combines several of the options and takes advantage of their most attractive features.

IT'S A GRANT WORLD

It's the unusual person who doesn't enjoy receiving a gift. And the best gift a college student—and his or her parents—can receive is a grant or scholarship. Grants directly reduce the amount of your child's education expenses and, unlike loans, never have to be repaid. Grants make up about 50% of all financial aid that college students receive. About half of the grants in any year come from private institutions and individual colleges and universities, while others are provided by public institutions, including certain states and, in the case of **Pell grants**, the federal government.

One challenge may be determining the requirements a student must meet to qualify for a grant. Certain grants, such as Pells, are need based. Others are merit based, which means they're given in recognition of the student's achievements. Still others may take both the student's merit and need into account.

In most cases, students are offered grants after they've been accepted at a college or university, but sometimes a school or organization will offer a grant as an incentive to attract a student. You can check with the high school guidance office and organizations you belong to for a list of potential scholarships. You might also discover lists online—though few of these lists are really useful. Beware of sites that ask you to pay a fee to access their files: There's no reason to pay to find scholarships.

BUYING TIME

Unlike grants, higher education loans must be repaid. Like other loans, they accumulate interest, so that borrowers end up repaying more than the amount they actually spend on tuition, room, board, and other expenses. But the federal government offers both parents and students guaranteed loans that can reduce—though not eliminate—the costs of borrowing.

To be eligible for federal aid, you and your child must complete a comprehensive application called the FAFSA. You can find the application, and detailed information on the loans that are available, including Direct Loans for students and PLUS loans for parents, on the US Department of Education website (www.studentaid.ed.gov). If your child is applying for scholarships and loans from a private college or university, you may also need to complete a College Scholarship Service (CSS) profile.

If federal and college-based funding doesn't meet your needs, you may consider taking student loans from private lenders. But one of the things you'll need to consider carefully if you and your child borrow large sums, even for a good cause like education, is that repayment can impose a substantial financial burden.

MAKING COMPROMISES

The other thing to remember about paying for college is that there are many routes to an undergraduate degree.

While some students finish their college education at one school within four years, many don't follow that pattern. For instance, students may begin at a local two-year public college and then transfer to another public institution or to a private college. They may attend school part-time throughout the year for five or six years rather than full-time during the fall and spring semesters for four years. Or they may select a school that expects students to combine time in class with paid internships.

Certain circumstances may also provide you with different ways to reduce the overall cost of your child's education. For instance, someone in your extended family might provide housing for your child to live off campus, perhaps in return for doing certain chores. Or your child may accumulate advanced placement credits or take some required courses in the summer to reduce the length of time it takes to graduate.

Obviously, decisions such as these must be collaborative if they're going to work. But if you and your child can talk frankly about your shared goals and the financial realities, you generally can find a way to achieve what you both want.

529 Savings Plans

Once you know how 529 plans work, you'll be ready to pick the plan that's right for you.

Opening a 529 college savings account couldn't be easier: You complete a brief application and make a minimum contribution. Many plans allow you to enroll online through their websites, or you can complete an application with your financial professional.

But that doesn't mean you should enroll in a 529 plan blindly. Every plan is a little different, so you should research the key features of each plan you're considering. Then you'll be sure to find the one that works best for you.

THE ROSTER

The federal government authorizes 529 savings plans, and they are run by individual states.

- **State sponsors** are responsible for choosing a plan manager and determining the rules and limits that govern their plans.
- The **plan manager**, which may be a mutual fund company, brokerage firm, or insurance company, handles all transactions and investments within individual owners' accounts.
- As **account owner**, you're responsible for naming a beneficiary, making contributions, choosing an investment track, and managing withdrawals.
- The **beneficiary** can attend any accredited US college, vocational, or graduate school to which he or she is admitted.

CONTRIBUTING

Contribution limits vary by plan and typically range from $300,000 to $400,000. If you approach the limit of one plan, you can open another account in the same beneficiary's name in a different state.

You can make your after-tax contributions in lump sums or in regular installments. Making contributions in installments may put less strain on your overall budget. On the other hand, making lump-sum contributions creates a larger investment base, which means the potential for faster growth over a long period of time. A unique feature of 529 plans allows individuals to make a gift of five times the annual limit once every five years.

Most plans allow contributions from multiple donors, so grandparents or other family members may want to add to your beneficiary's account. Gifts up to the annual tax-free limit don't have to be reported to the IRS.

On the account beneficiary's behalf, you can use up to $10,000 tax-free each year for qualified K-12 expenses.

Any earnings in your account are determined by how the assets are invested, how they perform, and what you pay in fees. But remember that returns aren't guaranteed.

PROFESSIONAL HELP

You can open a 529 college savings plan directly or with the advice and assistance of an investment professional. Someone with experience in evaluating plans can help you analyze the investment tracks, compare pros and cons, and perhaps provide the encouragement you need to enroll.

If you buy directly, you assume responsibility for doing your own research and choosing the plan that's best for you. One advantage is that the overall cost is likely to be less.

INVESTING FOR GOALS

THE SUN DOESN'T SET

Eligibility to benefit from an ESA sunsets, or ends, when the beneficiary reaches 30. But that's not the case with 529 plans. The beneficiary can use the money at any age in any eligible program.

STAY ON TRACK

When you contribute to a 529 savings plan, the plan manager pools your money with that of other plan participants to invest in a portfolio that's allocated to a specific investment track. You can choose from among different investment tracks provided by your plan:

- **Age-based tracks** gradually reallocate to shift the investment focus from growth to preservation as your beneficiary nears college age. You can usually choose an aggressive, moderate, or conservative age-based track, which determines how your money is invested initially.
- **Fixed tracks** remain the same over time. While these tracks are often either 100% equity or 100% fixed-income, you can choose several fixed tracks to allocate your contributions among asset classes.

As with all investments, you'll want to monitor performance and reallocate if returns aren't meeting your reasonable expectations. You can make changes in your existing tracks twice a year and invest new contributions in different tracks than the ones you're already using. But you should have a plan that guides the changes you make. Too many shifts can be as counterproductive as making no changes at all.

MAKING WITHDRAWALS

Withdrawals from a 529 savings plan are tax free as long as they're used to pay for your beneficiary's qualified education expenses, which include tuition, books, fees, school equipment, room and board, as well as any technology needs.

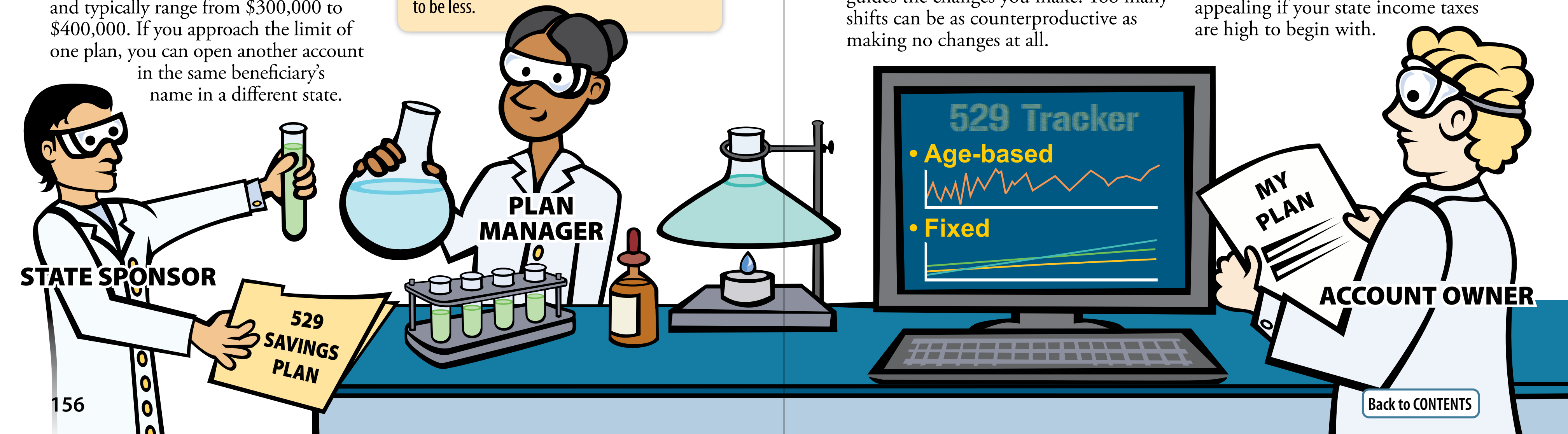
You can arrange to have your beneficiary's qualified expenses paid directly by your plan, or you can pay the expense yourself and request reimbursement later. Either way, it's up to you to match all qualified expenses with withdrawals when you file your federal income tax return each year. Your plan will provide an annual statement that details your contributions, earnings, and withdrawals for the year. If your withdrawals exceed your qualified expenses for the calendar year, you'll have to calculate the percentage of earnings on which tax and penalty payments are due.

CHOOSING THE RIGHT PLAN

Here are some questions that may help you choose the plan that's best for you:

- Does the plan offer investment choices that suit your needs?
- How much will you owe in enrollment, sales, and annual fees?
- Can you deduct contributions from your state income tax?
- Will earnings be exempt from state income taxes if you invest in this plan?
- Does the plan accept out-of-state participants?
- How have the plan's investments performed in the past?
- How long are you required to hold an account?
- What are the minimum and maximum contribution limits?
- Can anyone contribute to the plan?

You may want to start by looking at the plans offered by your own state, since tax benefits may be especially appealing if your state income taxes are high to begin with.



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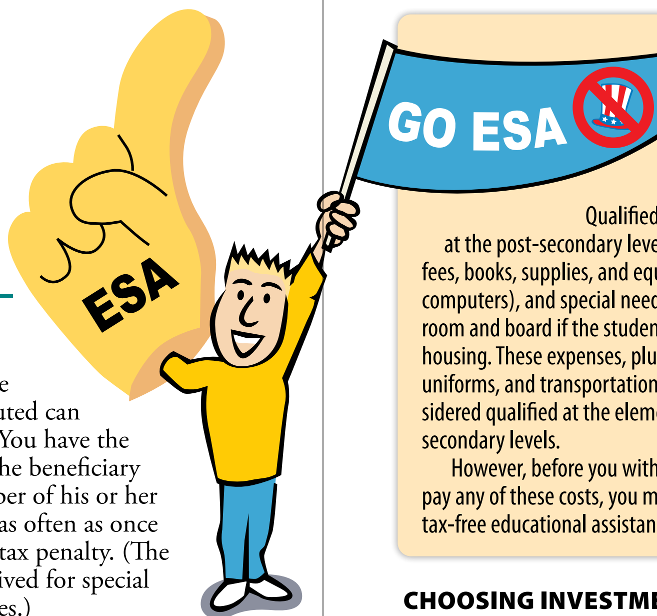
INVESTING FOR GOALS

Education Savings Accounts (ESAs)

If you're looking for ways to save for education, you might think about opening an ESA.



When you invest through a **Coverdell education savings account (ESA)**, you make after-tax contributions. The earnings your investments provide aren't taxed as they accumulate or when you withdraw them—provided you use the money to pay qualified education expenses for the account's beneficiary. He or she must be attending an eligible school for grades K through 12 or be enrolled at least half-time in an eligible undergraduate, graduate, or professional degree program or a technical or vocational school.

Anyone who is younger than 18 when you open the ESA and less than 30 when the money is distributed can be a beneficiary. You have the right to change the beneficiary to another member of his or her extended family as often as once a year without a tax penalty. (The age limits are waived for special needs beneficiaries.)

You can also roll over an ESA or consolidate two or more ESAs tax free, provided you follow the rules that apply.

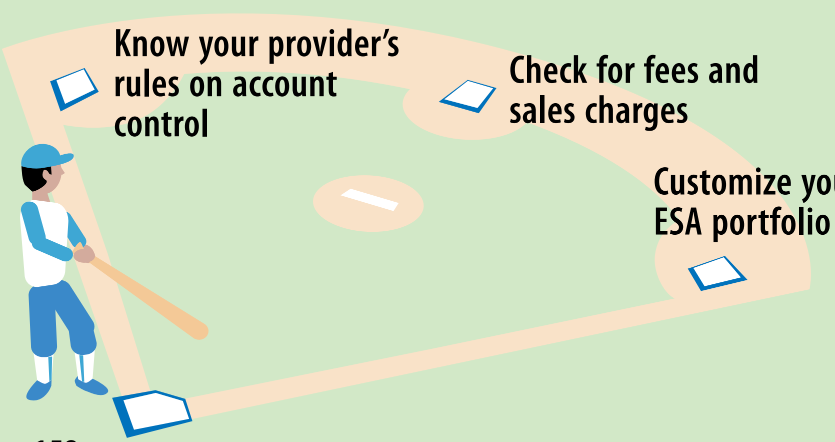
Getting Started

Many financial institutions that offer individual retirement accounts (IRAs) offer ESAs. Probably the primary factor in choosing a provider is that it offers the types of investments you plan to make. Unlike other tax-advantaged college savings plans, ESAs allow you to select any combination of stocks, bonds, ETFs, mutual funds, CDs, or other qualifying products.

Although there are certain prohibitions such as investing in life insurance or fine art, you can customize your ESA portfolio to suit your investment strategy and the level of risk you're comfortable taking. You can also trade investments as you wish without owing capital gains taxes if you realize a profit on a sale. However, transaction fees are likely to apply.

Next, you'll want to check the opening, annual maintenance, and other fees, as well as possible sales charges, or commissions, to be sure you won't be overpaying for the account.

Finally, you'll want to investigate the provider's rules about who controls the account after the beneficiary reaches majority. In most states, it's 18, but may be 19 or 21. In some plans, the responsible party—almost always the beneficiary's parent or guardian—oversees the account as long as it exists. In others, that person can turn over management of the account to the beneficiary at majority. And in still others, the beneficiary has the right to assume control at that age. You don't want to be taken by surprise.



SPENDING THE MONEY

Qualified education expenses at the post-secondary level include tuition and fees, books, supplies, and equipment (including computers), and special needs services plus room and board if the student lives in school housing. These expenses, plus those for tutoring, uniforms, and transportation if required, are considered qualified at the elementary and secondary levels.

However, before you withdraw ESA funds to pay any of these costs, you must subtract any tax-free educational assistance the beneficiary receives from other sources from the total cost of attendance. The balance, known as **adjusted qualified education expenses**, is what you can cover with your tax-free withdrawal.

If you plan to claim an American opportunity or lifetime learning tax credit, you'll also need to ensure that the credit isn't used to offset the same expenses that you've paid for with ESA funds.

If you withdraw more than you're eligible to use for qualified expenses, the amount of the excess distribution that comes from account earnings is taxable, though the portion that comes from your contributions is not. The IRS provides a formula and worksheets for calculating those amounts in Publication 970, "Tax Benefits for Education."

CHOOSING INVESTMENTS

If you're using an ESA to save for college, you'll probably want to emphasize stocks and the funds that invest in stocks while the beneficiary is young. While return on these equities isn't guaranteed, they have the potential for growth. And as your account value grows, you can make new investments or add shares of the ones you own.

As your beneficiary gets older, you may want to begin switching a portion of your portfolio into less volatile investments to protect your gains and provide more stability. But you'll still want to invest for growth.

By the time he or she enrolls in college, it can be smart to have transferred part of your equity assets into income-producing investments that mature on a schedule that approximates when major payments are due—say August and January, when semesters tend to begin. Short-term bonds may be one choice, as are CDs or US Treasury notes.

CHECKING THE LIMITS

While ESAs are more flexible than other college savings plans, that flexibility has limits. The total contribution for any one beneficiary is $2,000 a year, or a total of $36,000 by age 18 if you open the account the year he or she is born. Even if the account value doubles, the total won't cover the cost of education at most colleges and universities. And no additional contributions are permitted after 18.

In addition, your adjusted gross income (AGI) determines whether you are eligible to contribute to an ESA. You can invest the full $2,000 if your AGI is less than $95,000 if you file your tax return as a single, and a gradually phased out amount until your AGI reaches $110,000. The comparable amounts if you're married and file a joint return are $190,000 and $220,000.

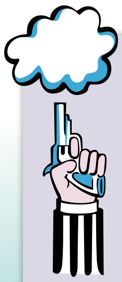
However, people other than the responsible party are eligible to contribute, such as the beneficiary's grandparents or the beneficiary herself.

The Retirement Marathon

Investing for retirement is a long-term pursuit of financial security.

A successful plan for reaching your goal of long-term financial security includes earning income that you invest over time. That's true in part because earned income is essential for taking advantage of most tax-deferred opportunities for building retirement savings.

Tax-deferral allows assets in qualifying accounts to compound untaxed until they're withdrawn. Postponing taxes means the account value can grow much more quickly than it could in a taxable account where money was taken out each year to pay the taxes that would be due.



READY, SET, GO

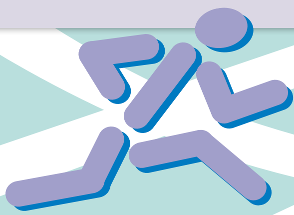
You can start investing for retirement when you earn income for the first time. That's when you can begin contributing to an individual retirement account (IRA). You can participate in retirement plans that your employers offer. If you work for yourself or own a small business, you can establish your own retirement plan. In fact, ideally, you'll take advantage of several of these ways to accumulate retirement savings during your working life. These dedicated assets, in combination with your taxable investment accounts, Social Security, and an employer pension if you have one, are the foundation of a financially secure future.

STARTING OUT

In the first few years you're working, there are lots of demands on your income, from living expenses and commuting costs to income taxes and required payments on a student loan.

Putting money away for retirement is probably the last thing on your mind. But it's actually the best time to get in the habit of contributing regularly to an employer plan, IRA, or taxable account. The sooner you begin investing, the stronger the potential for building the financial resources you'll need when that time eventually comes.

Many employers make the decision easy by enrolling all new hires automatically in their plans and matching a portion of each participant's contribution.



HITTING YOUR STRIDE

One thing that's likely to remain constant as you pursue your goal of building your long-term investments is the need to juggle your income to pay for things that might seem more pressing, like buying a home, starting a business, or anticipating your children's college expenses.

One technique is to split the amount you invest between long- and short-term goals. Even if you put less into long-term plans than you'd like, these tax-deferred investments have the potential to grow, especially if you're building on a portfolio you started earlier. Generally speaking, investments for longer-term goals should focus on stocks, stock mutual funds, or stock ETFs. But investments for nearer-term goals should probably be more liquid.

Keep in mind that investing for the long term is often good for your current financial situation too:

- You may save on taxes by participating in a tax-deferred retirement savings plan
- You may qualify for a mortgage loan more easily or be offered a lower rate if you have investment assets
- You be able to borrow from some retirement plans without incurring taxes and penalties though interest will be due

WHAT THE FUTURE HOLDS

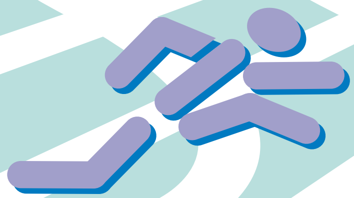
When people retire is relative, not fixed. Some wait until they qualify for full Social Security benefits, once 65, but now 67 for anyone born in 1960 or later. Many retire the first day they're eligible. Others work productively through their 80s or 90s, dismissing retirement as something other people do. Still others leave work unwillingly, with an early retirement package if they're lucky.

But whether retirement is a long way off, or sneaking up on you faster than you care to imagine, planning for this part of your life has two, or perhaps three. main targets:

- Enough income to live comfortably
- Access to affordable good healthcare
- Benefits for your heirs

CHECK IT OUT

Recognizing that the burden of repaying student loans keeps some employees from investing for retirement, employers are authorized but not required under the CARES Act of 2020 to make tax-free loan repayments up to $5,250 directly to an employee or loan servicer annually though 2025.



THE FAR TURN

As time goes by, you may be earning more than before, but you may be spending more too. College expenses can wreak havoc on a family budget, cutting into what you can contribute to retirement savings. So can buying a vacation home or expanding your business.

On the other hand, if you've established good investing habits—like participating in a retirement savings plan and putting money into stocks, ETFs, and stock mutual funds—your long-term goals should be on track. You may also find that the demands on your current income eventually begin to decrease: The mortgage gets paid off, the children grow up, or you inherit assets from your parents.

That means you can begin to invest more money in your long-term portfolio—through your employer's retire¬ment plan, IRAs, taxable mutual funds or brokerage accounts, and perhaps income-producing investments such as REITS or bonds.

THE HOME STRETCH

When you start thinking seriously about retirement, you'll want to be sure you have enough income to live comfortably. If you have money com¬ing in from both tax-deferred and taxable investments, you'll have more flexibility to retire when you want.

Because many people can expect to live 20 or 30 years after they retire, you'll want to continue to invest even as you begin collecting on Social Security and your retire¬ment plans. One approach is to deposit earnings on certain investments into an account earmarked for new investments. Another is to time the maturity dates of bonds or other fixed income assets, like CDs, so that you have capital to reinvest if a good opportunity comes along.

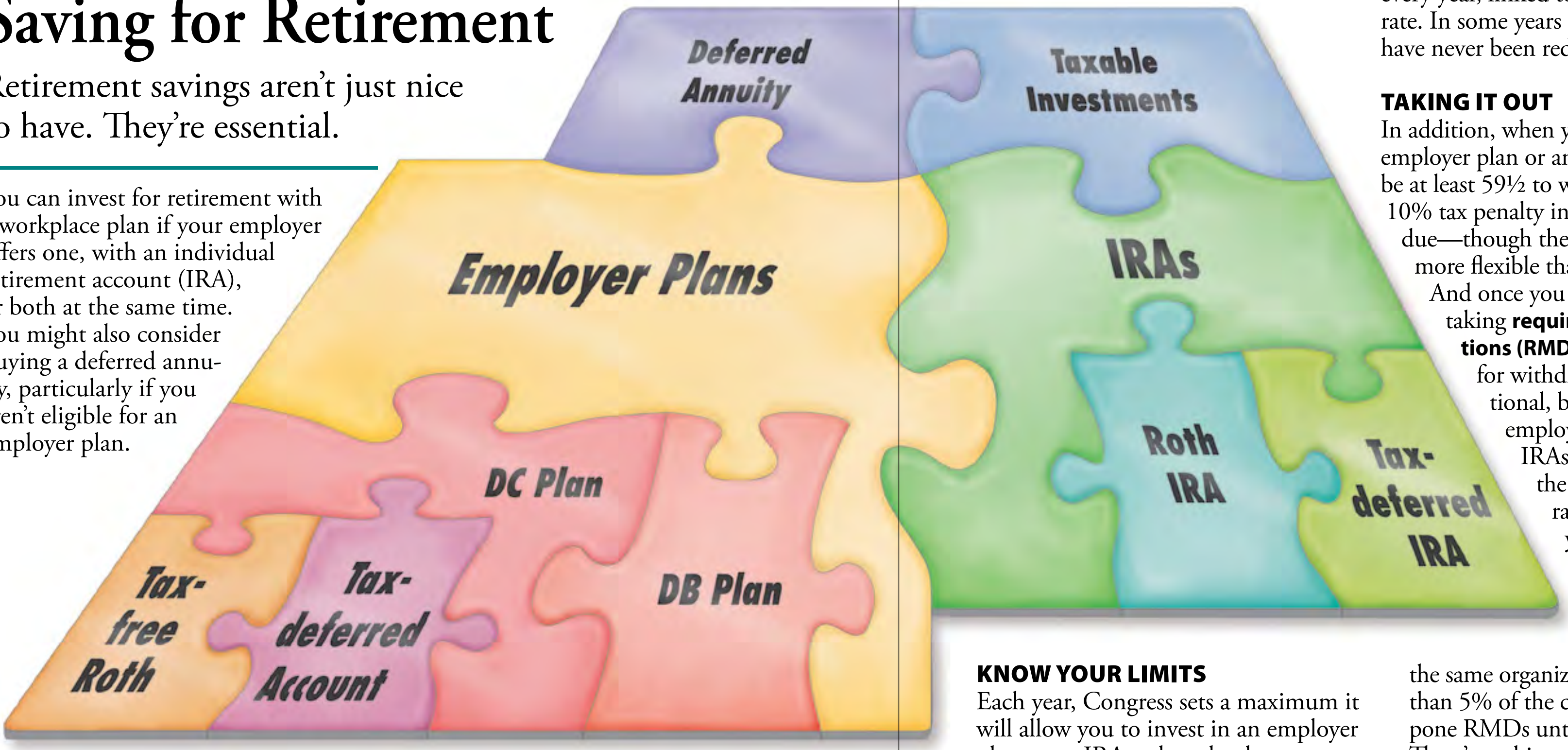
Some of the financial decisions you'll be facing may be dictated by government rules about when and how much you must withdraw from your tax-deferred accounts. Others may be driven by your concerns about healthcare or your desire to leave money to your heirs. At the least, you'll have to consider:

- Shifting investments to produce more income with fewer risks, in case of a sudden downturn in the financial markets
- Rolling over eligible retirement payouts to preserve their tax-deferred status
- Finding ways to reduce taxes and pay for those that are unavoidable

Saving for Retirement

Retirement savings aren't just nice to have. They're essential.

You can invest for retirement with a workplace plan if your employer offers one, with an individual retirement account (IRA), or both at the same time. You might also consider buying a deferred annuity, particularly if you aren't eligible for an employer plan.



All these retirement-specific accounts are similar in one way: Earnings you accumulate are tax deferred and automatically reinvested, so your account can compound more quickly than if you were withdrawing to pay annual income taxes or other expenses. Contributions may also be tax deferred.

DEFINING THE PLAN

When you invest for retirement by deferring income to a plan your employer offers, you're participating in a **defined contribution (DC) plan**. The earnings you accumulate and the value of your account when you're ready to begin taking money out are determined by how much you—and your employer if your contributions are matched—contribute, the return on your investments, and the number of years you participate. There are no guarantees about how much it will be.

Participation in the plan may be voluntary, so you must enroll. But employers are increasingly enrolling everyone who is eligible automatically, with the condition that you can drop out if you wish.

In contrast, a **defined benefit (DB) plan** is funded entirely by your employer with money that's separate from your salary. A DB plan pays a benefit, determined by the plan's formula, when you retire. That income, called a pension, generally depends on how old you are when you begin to collect, the number of years you worked, and what you were earning. All employees are enrolled, and it's the employer's responsibility to meet its obligation to pay. However, these plans are increasingly rare.

PUTTING IT OFF

If you contribute pretax income to a tax-deferred employer plan, you reduce your salary and what you owe in income tax for the year. The tradeoff is that when you begin taking money out, you'll owe tax on what you withdraw at the same rate you're paying on your ordinary income.

Employers who offer a tax-deferred plan may have the option of also offering a Roth version of the plan. If you choose this alternative, you contribute after-tax income but are eligible to take tax-free withdrawals, provided your account has been open at least five years when you retire and you're 59½ or older. Some employers allow you to split your contribution between a traditional account and a Roth account.

IRAs also have a tax-free version, called a Roth IRA. The big difference is that there are income caps that may limit your eligibility to contribute to a Roth IRA. There are no such limits with the Roth alternative in an employer's plan.

KNOW YOUR LIMITS

Each year, Congress sets a maximum it will allow you to invest in an employer plan or an IRA—though what you put in one doesn't affect what you can put in the other. If you split your contribution among IRAs or between traditional and Roth employer accounts, the total you can contribute is the same as if you were using one IRA or employer account.

If you're 50 or older, you're also entitled to make an annual **catch up contribution** to either type of plan even if you've always contributed the maximum amount.

Basic and catch-up contributions, which are higher for employer plans than for IRAs, may be adjusted as frequently as every year, linked to increases in the inflation rate. In some years they are unchanged but have never been reduced.

TAKING IT OUT

In addition, when you invest in either an employer plan or an IRA, you usually must be at least 59½ to withdraw without owing a 10% tax penalty in addition to the tax that's due—though the rules for IRAs are a little more flexible than for employer plans.

And once you reach 73, you must begin taking **required minimum distributions (RMDs)**—the official name for withdrawals—from all traditional, but not Roth, tax-deferred employer savings plans and IRAs, even if you don't need the income. The withdrawal rate is fixed, based on your age.

There is an RMD exception with employer plans. If you're still working for the same organization and you own less than 5% of the company, you can postpone RMDs until after you leave the job. There's nothing comparable for IRAs.

GETTING BACK TO BASICS

In addition, you can invest for retirement in a taxable investment portfolio that gives you more flexibility than retirement plans, plus some tax benefits. Rules that apply to qualified plans and IRAs—like contribution limits and required withdrawals—don't apply to taxable accounts. This means you have more control over how much you invest and what you do with your account assets.

CHANGING JOBS

If you're part of a DC plan and you change jobs—as about 30% of the work force does every year—all the contributions you've made to the plan plus the earnings they've generated belong to you. So do any employer contributions and their earnings if you've been on the job long enough to be entitled to them, or **vested**.

It's your responsibility to decide what to do with these portable assets:

- You always have the option to roll the balance over into an IRA.
- You may be able to leave your account with your former employer.
- You may be able to roll the account value into your new employer's plan if the plan accepts rollovers.

It's smart to discuss the alternatives with your financial adviser, as there are pros and cons with each approach. Among the things to consider are the fees you'll pay and the flexibility you'll have in making contributions and taking withdrawals.

Even if you're short of cash, the biggest mistake you can make is taking a cash distribution and spending the money. You'll pay taxes and a 10% penalty, plus miss out on potential future earnings.

Employer Plans

Work-based savings plans are critical to a financially secure retirement.

Your retirement savings plan account holds investments you select from among the choices your plan offers. Those choices will be a diversified mix of asset classes that may include mutual funds, index funds, annuities, stable value funds, and, in the case of corporate plans, company stock. Some plans may also offer managed accounts, target date funds, or brokerage accounts known as brokerage windows.

The portfolio you'll want to assemble is one that has the potential for producing the strongest possible long-term growth at the level of risk you're comfortable taking.

HOW A DC PLAN WORKS

When you participate in an employer plan, you designate the percentage of your income that will be deferred to the plan each pay period. That amount is divided among the investments you've chosen, in the percentages you designate. As an example, you might choose four investments and allocate 25% of your contribution to each one. If you've been automatically enrolled in the plan, your employer will choose the initial percentage to be deferred. You have the right to change it, and may want to increase it to build your savings more quickly.

Some, though not all, employers match a portion of your contribution, up to a cap. One example is a match of 50% of what you contribute, up to 5% of your salary. So if you were earning $60,000 and contributed 5% or $3,000, your employer would add 50% of that 5%, or another $1,500. If your account is tax-deductible, the match goes into the same account. But if you have chosen the Roth alternative, the match goes into a separate, but identically invested, tax-deferred account.

If you're eligible for a match, you'll want to contribute at least enough to qualify for the maximum. Just think of the match as a tax-deferred bonus.

GETTING RISK RIGHT

You'll want to think carefully about the way you allocate your contributions to your work-based retirement account. Your choices will be a primary factor in the earnings you'll accumulate over your working life and the amount you'll be able to withdraw in the future.

One common mistake people make is to think about this allocation just once, when they join the plan. The problem is that what's right for you in your 20s or 30s is probably not the best allocation when you're older. So every few years, it makes sense to evaluate your portfolio and reallocate if it seems wise.

One advantage of changing allocations in a tax-deferred plan is that no tax is due on any capital gains you realize on an investment that has increased in value during the time you owned it. So, you can move the entire amount into the new selection you make from the plan's menu. Transaction costs do apply, though.

In addition to your time horizon, you'll want to be honest about your risk tolerance. Employer plans typically don't offer alternatives that pose higher than average risk, in part because plan sponsors are responsible for providing sound choices. But some investments could expose you to potential losses, especially in a broad market downturn. At the same time, these choices may also be the ones that offer the most potential growth.

On the other side of the equation, some retirement plan investments are designed to preserve capital, which means reducing the risk that you'll lose principal. The downside is that these investments are unlikely to provide growth or inflation protection. These are both essential in any long-term investment plan.

PART OF A WHOLE

As you assemble a retirement savings portfolio and reallocate it over time as your time frame or risk tolerance changes, you'll want to keep in mind that as important as the account is to meeting your goals, it's only part of your overall investment portfolio. So, you may decide, with guidance from a trusted adviser, that it makes sense to diversify across your entire portfolio rather than within each individual account.

For example, you might decide to invest in municipal bonds in your taxable account while emphasizing equities in your retirement account. Or you might hold dividend-paying equities in your taxable account to take advantage of the lower tax that applies to qualified dividends and concentrate your retirement funds in small- and mid-cap stocks, international investments, and fixed income.

OTHER PLAN FEATURES

Employer plans have a number of benefits beyond a tax-deferred way to invest for retirement. Many plans allow you to borrow against your accumulated balance with minimum hassle at a reasonable rate. You typically have to repay within five years through deductions from your paycheck.

There are some risks. One is that any money you borrow isn't accumulating earnings, so your account will grow more slowly. Another is that you might reduce the amount of your annual contribution by the amount you're using to repay the loan. That has the potential to reduce your earnings even more. Finally, if you leave your job, the loan is likely to be due in full within a limited time. If you can't pay it off, the outstanding amount becomes a taxable withdrawal.

You may also be able to take a hardship withdrawal in a financial emergency. Using your retirement savings for other reasons is never ideal, but it can make sense if it helps prevent serious consequences.

THE PLANS AT A GLANCE

There are several varieties of defined contribution plans, including the ones mentioned here. With all except SIMPLEs, contribution limits are the same and balances can be moved between plan types if you change jobs. The type of plan you're eligible for depends on where you work.

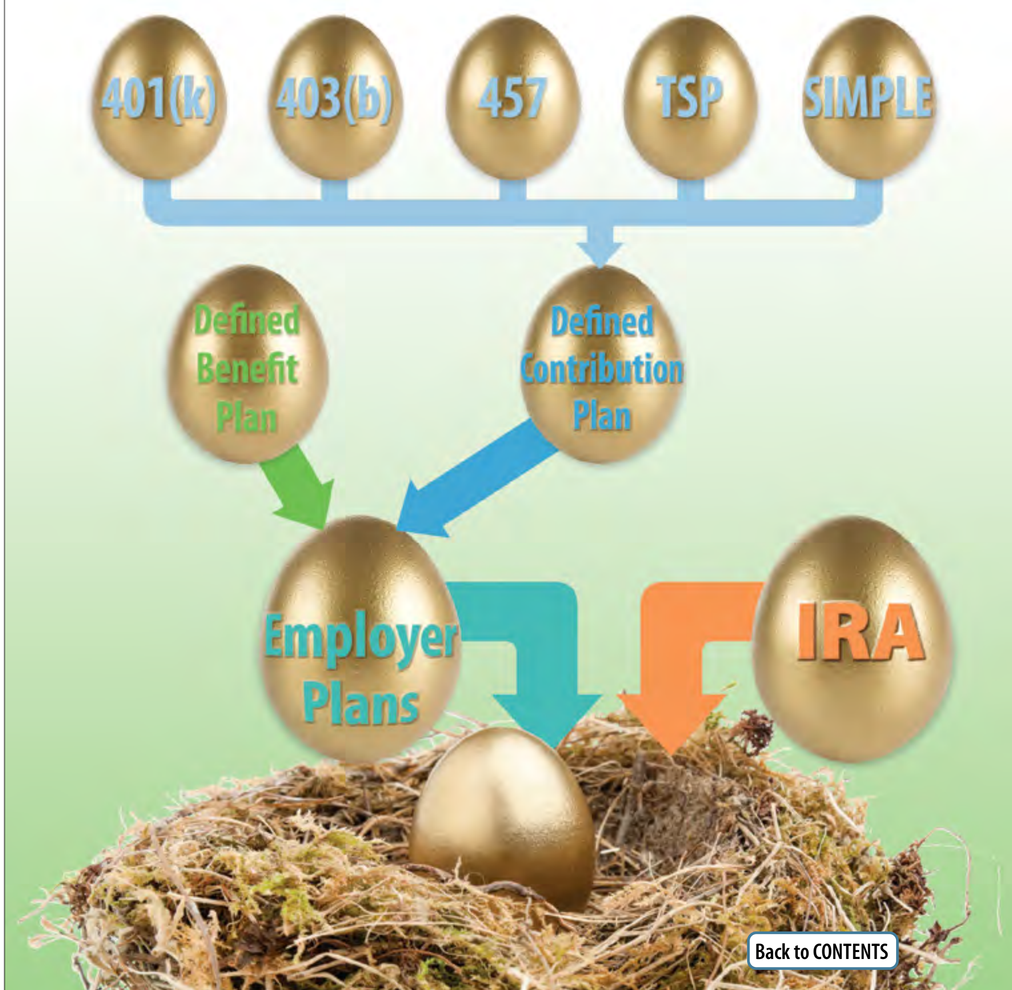
401(k)
- All employees of businesses that sponsor plans
- Matching contributions optional

403(b)
- Employees of nonprofit, tax-exempt organizations
- Matching contributions optional

Section 457
- State and municipal workers
- No matching contributions

Thrift Savings (TSP)
- Federal employees and employees of companies offering plans
- Matching contributions for federal employees, others optional

SIMPLE
- Employees of companies with fewer than 100 workers
- Matching contribution required



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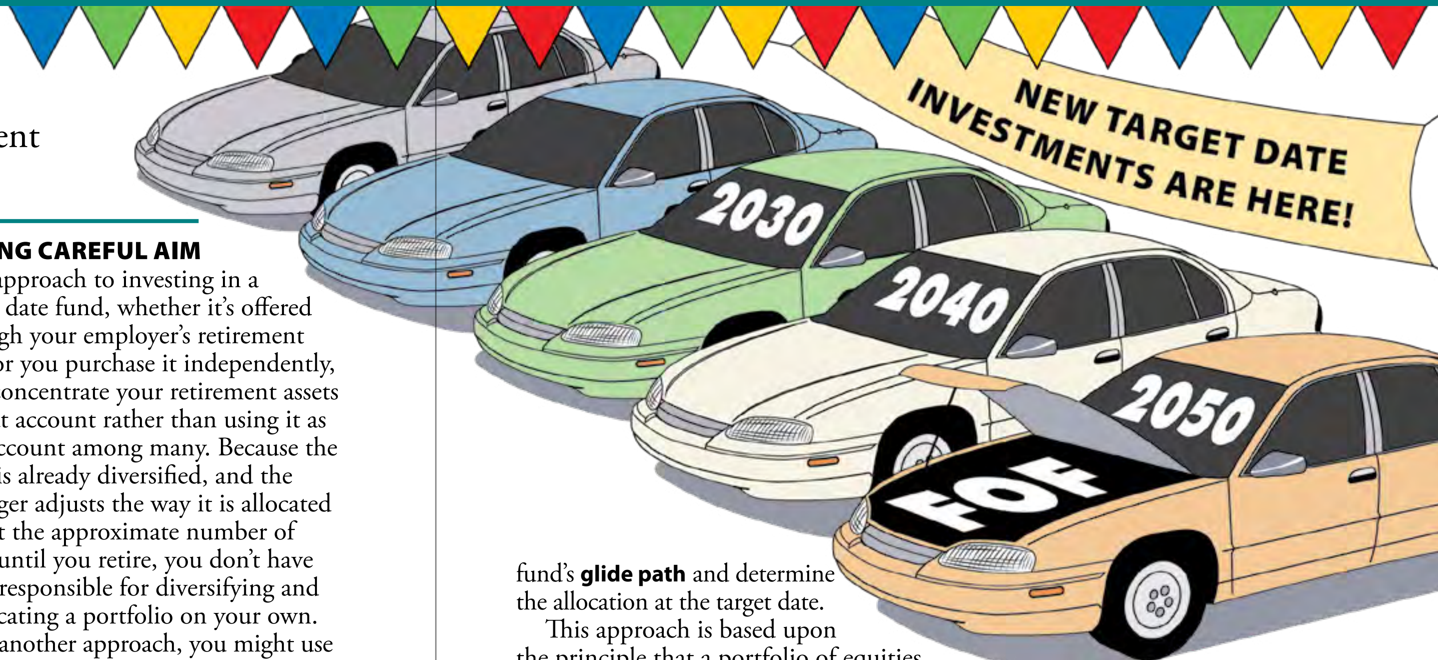
INVESTING FOR GOALS

Target Date Funds

If you've got your eye on a retirement date, a target fund may fit the bill.



When you invest for retirement, you can select a portfolio of individual securities, mutual funds, and ETFs or choose a **target date fund**. Its objective is to build and then preserve assets, so that investors in the fund can look forward to a more financially secure retirement.

To meet its goal, a target date fund assembles and regularly realigns a portfolio of individual mutual funds to:

- Help manage investment risk without significantly reducing return during the fund's growth phase
- Try to provide continued, if sometimes modest, growth during the fund's income-producing or asset-preservation phase

FINDING A FUND

While target date funds currently make up only a small percentage of all mutual funds, they're increasingly available in 401(k) and similar retirement plans, as an investment choice in individual retirement accounts (IRAs), and as an investment alternative in regular taxable accounts.

The financial institutions that offer target date funds never sponsor just one, but offer several funds with different end points to meet the needs of people at different stages in their lives. These end points are usually spaced in five-year or ten-year intervals—2030, 2035, 2040, and so on, for example.

In selecting a target date fund, you typically choose a fund whose date is closest to the date you plan to retire. For most people, that's often at some point in their 60s, since 65 remains the traditional, though not necessarily the average, retirement age.

TAKING CAREFUL AIM

One approach to investing in a target date fund, whether it's offered through your employer's retirement plan or you purchase it independently, is to concentrate your retirement assets in that account rather than using it as one account among many. Because the fund is already diversified, and the manager adjusts the way it is allocated to suit the approximate number of years until you retire, you don't have to be responsible for diversifying and reallocating a portfolio on your own.

In another approach, you might use a target date fund for a portion of your retirement portfolio while putting the rest into other investments. If you're comfortable taking more risk than may be typical for someone your age—perhaps because your spouse has an employer pension or you have received an inheritance—you might invest a portion of your IRA in a target fund and the rest in more aggressive funds. Or, you may want to put a larger percentage into conservative investments from the start.

THE INNER WORKINGS

The **time horizon** of a target date fund largely determines the investments the fund owns. Over time, the balance between risk and return is adjusted, either as part of a gradual, planned reallocation or in response to a combination of changing market conditions and the passage of time, depending on the philosophy of the fund.

Reallocation generally decreases the fund's assets invested in equity funds, while over time increasing the assets invested in bond funds. The pace and style of these changes are known as the fund's **glide path** and determine the allocation at the target date.

This approach is based upon the principle that a portfolio of equities, even if well diversified, tends to be more volatile than a portfolio of bond funds, thereby exposing you to greater risk. Of course, bond returns aren't guaranteed either, since bond funds are subject to credit and interest-rate risk.

Like other funds, most target date funds hold a percentage of fund assets in cash. While cash returns tend to be lower than those of equities or bonds, and may be a drag on fund results, having money on hand gives the fund managers the flexibility to make new investments without necessarily having to sell off other assets in the portfolio. The fund may also elect to keep cash on hand to buy back shares of the fund that investors wish to sell. That reserve prevents having to sell off assets to repurchase shares, potentially throwing off the current allocation.

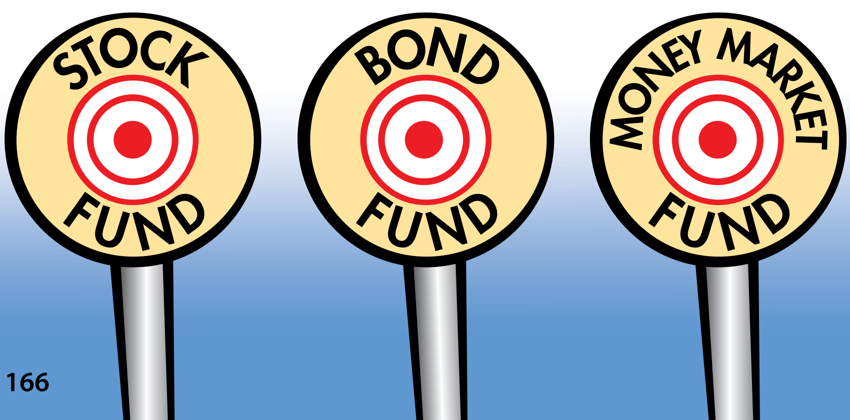
LOOKING UNDER THE HOOD

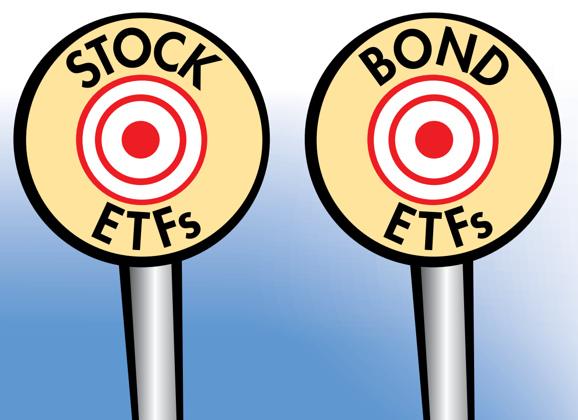
When a target date fund is a **fund of funds (FOF)**, as most are, its underlying investments may be proprietary mutual funds offered by the investment company sponsoring the FOF, funds offered by other investment companies, or a mix of affiliated and nonaffiliated funds. Some FOFs also invest in exchange traded funds (ETFs), which share similarities with both index funds and individual equities. And some FOFs use derivative products, such as equity or index options or certain futures contracts, to hedge against risk or to leverage the fund's assets.

The **prospectus** provides an overview of each fund and must be detailed enough to cover the information the Securities and Exchange Commission (SEC) requires. It's an essential read if you're considering a fund.

In addition, US Department of Labor rules require that employers who offer target date funds in a retirement savings plan provide a detailed explanation of each fund's risks and potential return. It must cover the fund's primary investment strategy, performance history, the risks it poses, and its fees and other expenses. In addition, you must be told what allocation the fund plans for its target date, whether that allocation will continue to change, when it will reach its most conservative point, and when the fund expects investors to start withdrawing.

You'll want to consider these factors as you decide whether to invest in a FOF, and you'll want to continue to monitor the fund's progress in helping you reach your goals.





INVESTING FOR GOALS

IRAs: An Overview

IRAs are easy to set up—but not always easy to understand.

IRAs, or individual retirement accounts, are tax-deferred, personal retirement plans. You can contribute every year you have earned income whether or not you participate in an employer's retirement plan. There are two types: the traditional IRAs, to which contributions may be deductible or nondeductible, and the Roth IRA.

- All **traditional IRAs** are **tax deferred**, which means you owe no tax on your earnings until you withdraw.
- **Roth IRAs** are also tax deferred, so you owe no tax on your earnings as they accumulate. Withdrawals are **tax free** if you're at least 59½ and the account has been open at least five years.

CHOOSING AN IRA

If you have a choice of which IRA to open, you'll want to weigh the pros and cons:

	ROTH	TRADITIONAL IRA Nondeductible	TRADITIONAL IRA Deductible
PROS	• Tax-free income at withdrawal • No required withdrawals	• Tax-deferred earnings • No tax due on contributions at withdrawal	• Immediate tax savings on tax-deductible contributions • Tax-deferred earnings
CONS	• Not deductible • Limitations on qualifying to contribute based on MAGI	• Not deductible • Earnings taxed at regular rates at withdrawal • Required withdrawals beginning at 73	• Tax due at regular rates at withdrawal • Required withdrawals beginning at 73

A SWEET DEAL

The only requirement for opening an IRA is having earned income—money you make for work you do. Your total annual contribution is limited to the annual cap. That amount is increased from time to time to reflect changes in inflation. It could—though rarely does—go up every year. You can ask your financial adviser for the current limit or check the IRS website. If you're 50 or over, you can also make an additional annual catch-up contribution.

Any amount you earn qualifies, and you can contribute as much as you want, up to the cap. But you can't contribute more than you earn.

SPOUSAL IRAs

If you have earned income but your husband or wife doesn't, you can invest up to the maximum you're qualified to contribute to your own account and up to the same amount in an account in your spouse's name. If either or both of you are 50 or older, you can add the catch-up contribution to the eligible account or accounts.

Your spouse owns the spousal IRA, chooses the investments, and ultimately takes the distributions. The advantage for the non-earning spouse is being able to build a personal retirement account while out of the work force.

WHICH IRA FOR YOU?

In addition to having earned income, you must qualify to deduct your contributions to a traditional IRA or contribute to a Roth IRA. The rules are different in each case.

If you're single, you qualify for a fully deductible IRA contribution when you file your federal income tax return if you were not eligible for an employer-sponsored retirement plan during that year. If you were covered by a plan, you may be able to deduct some or all of your contribution based on your modified adjusted gross income (MAGI).

If you're married and file jointly, either of you can deduct your own contribution if you are not covered by a retirement plan at work. But if either of you is covered by a plan, the other's right to a deduction is reduced gradually if your joint MAGI is over the annual limit.

You can find these amounts, which typically increase slightly each year, on the IRS website or ask your adviser or account custodian for them.

Eligibility for a Roth IRA is based on your filing status and MAGI, with higher income limits for married couples filing a joint return than for single filers. If you qualify to make a partial contribution to a Roth, you can put the balance in a traditional IRA. Married couples filing separate returns usually aren't eligible to deduct contributions or contribute to a Roth.

While you can't deduct your contribution to a Roth IRA, taxes on earnings in your account are deferred as they accumulate, and you make tax-free withdrawals if you qualify. In most cases, that means you are at least 59½ and have had your account open at least five years before you withdraw.

IT'S YOUR ACCOUNT

It's easy to open an IRA. All you do is fill out a relatively simple application provided by the mutual fund company, bank, brokerage firm, insurance company, or other financial institution you choose to be **custodian** of your account.

Because IRAs are self-directed, meaning that you decide how to invest the money, you're responsible for following the rules that govern the accounts. Basically, that means putting in only the amount you're entitled to each year. You must also report your contribution to a traditional IRA to the IRS, on Form 1040 if it's deductible and on Form 8606 if it's not.

You can invest your IRA money any way that is available through your custodian, including individual securities, funds, and bank products. The things you can't buy are fine art, gems, non-US coins, and collectibles. And you can sell investments within your IRA account without paying tax on your gains until you withdraw from your account, but there may be transaction costs.

NAMING BENEFICIARIES

When you open an IRA, you name a beneficiary or beneficiaries who will inherit the account. In fact, it's always a good idea to name both a primary and a contingent beneficiary, if for any reason your primary designee dies first or chooses to reject the bequest. Your initial choices can be modified at any time during your lifetime.

After your death, your beneficiary withdraws from the IRA using one of the methods explained in IRS Publication 590-B, "Distributions from Individual Retirement Arrangements (IRAs)." The alternatives for spouses are more flexible than those for non-spouses or charitable institutions. But individual beneficiaries generally have the option of taking a lump sum or withdrawing over ten years.

WHEN TO CONTRIBUTE

You have until the day taxes are due—usually April 15—to open an IRA and make the contribution for the previous tax year.

You can contribute to your IRA in a lump sum or spread the deposit out over the year. You may put in the whole amount the first day you can, January 1 of the tax year for which you're making the contribution, to give your money the longest time to grow. If you're like many people, you're more apt to make the deposit on the last possible day. A compromise solution may be making contributions on a regular schedule.

IRAs: Weighing the Merits

The more you know about your IRA, the more there is to love.

The tax-deferred advantage of an IRA is that your investment can compound faster than it would in an account from which you withdrew earnings to pay taxes, as this hypothetical example shows.

START CONTRIBUTING AT AGE 22

If you begin contributing $5,000 a year to your IRA as soon as you start earning income, your investment will continue to compound until you are ready to withdraw. Even after you start taking money out, anything left in the account will continue to accumulate earnings.

AT AGE 42

If your average annual return in the IRA is 6%, your account will be worth $194,964 after 20 years. If your average return is higher or lower, the value will reflect that.

Compounding earnings are the key to tax-deferred growth.

CONTINUE TO CONTRIBUTE UNTIL AGE 70

When you reach 70, your account could be worth $1,359,792. This amount, compounding at an average annual rate of 6%, would allow you to take required minimum distributions for your projected life expectancy without running out of money.*

* This result is not based on the performance of any specific investment.

TAXING ISSUES

Traditional IRAs and **Roth IRAs** both give you the advantage of **tax-deferred** growth. What's different is what happens when you take money out of your account any time after you reach 59½.

With a traditional account, what you withdraw is considered regular income, and you owe income tax on the earnings at your current rate. If you've deducted your contributions, you owe tax on that part of your withdrawal as well. As a result, the amount you have available to spend is reduced by whatever tax you owe.

Withdrawals from a Roth account are completely **tax free** if your account has been open at least five years. That's a big difference that gets bigger as your tax rate goes higher. For example, if you withdrew $40,000 in one year, you would have about $10,000 more in your pocket if the money came out of a tax-free account than if you paid income tax on it at the 24% rate.

ADDED APPEAL

If you're eligible to contribute, Roth IRAs offer other advantages. Unlike a traditional IRA, you can continue to contribute for as long as you have earned income—even if you're 90.

Perhaps more important, you're not required to begin withdrawals at age 73 as you are with a traditional IRA. That means you can manage your finances to suit yourself, or use your account to build the estate you'll leave to your heirs. There may be tax consequences with that approach, though, so you should discuss your plans with your tax or financial adviser.

If there's a drawback to Roth IRAs, it's that the contribution is never deductible. But for most people long-term, tax-free income may have more advantages than a deduction now.

THE PENALTY QUESTION

To get the tax breaks that come with an IRA, you agree that you won't have access to the money until you reach 59½. It's the government's way of encouraging you to save for retirement. In fact, you have to pay a 10% early withdrawal penalty on top of the tax due when you take money out ahead of schedule.

But the law is also flexible. If you need money you've put into an IRA to pay specific expenses, buy your first home, or pay your children's college tuition, you can withdraw from your account without owing the 10% penalty that usually applies to early withdrawals.

If the money is coming out of a traditional IRA, you'll owe whatever tax is due, just as you would if you withdrew after 59½. With a Roth, you'll owe tax at your regular rates for earnings you withdraw but no tax on contributions you withdraw. And, you can take up to $10,000 tax free from Roth IRA earnings if you're buying a first home for yourself, your child, or your grandchild.

You can also withdraw contributions you make to a Roth IRA at any time without penalty. The advantage is having that money available for college or other expenses. The risk is reducing what you've saved for retirement.

IRA COSTS

Setting up an IRA usually requires just an opening deposit and sometimes a administrative fee, usually less than $50. The costs of owning the account depend primarily on the investments you make and the custodian you select. If you choose a brokerage firm or mutual fund company, you may pay a commission or transaction costs when you buy or sell investments, annual asset-based fees on mutual funds in the account, and perhaps an annual maintenance fee. It pays to know what these costs will be before selecting the custodian, as they do affect your return.

STRATEGIC PLANNING

When you're ready to start taking money out of your IRAs, you need a strategy to meet the legal requirements while realizing the best return you can. After you turn 73, you must withdraw at least the required minimum, and you may take more if you need money for living expenses. But you don't want to withdraw too fast so your accounts can continue to grow, helping to ensure you'll have a source of income for as many years as you need it.

If you have more than one IRA, one issue is deciding which one or ones to draw on first. One advantage IRAs have over employer accounts is that you calculate the total you must take out from each account, but you may take the entire withdrawal from any one account or any combination of the accounts. With multiple 401(k)s, on the other hand, you must take the required withdrawal from each account separately.

FINDING THE CASH

Since wise investment strategy suggests you should diversify your retirement accounts by investing in several asset classes, you probably won't have the exact withdrawal amount waiting for you in a savings account.

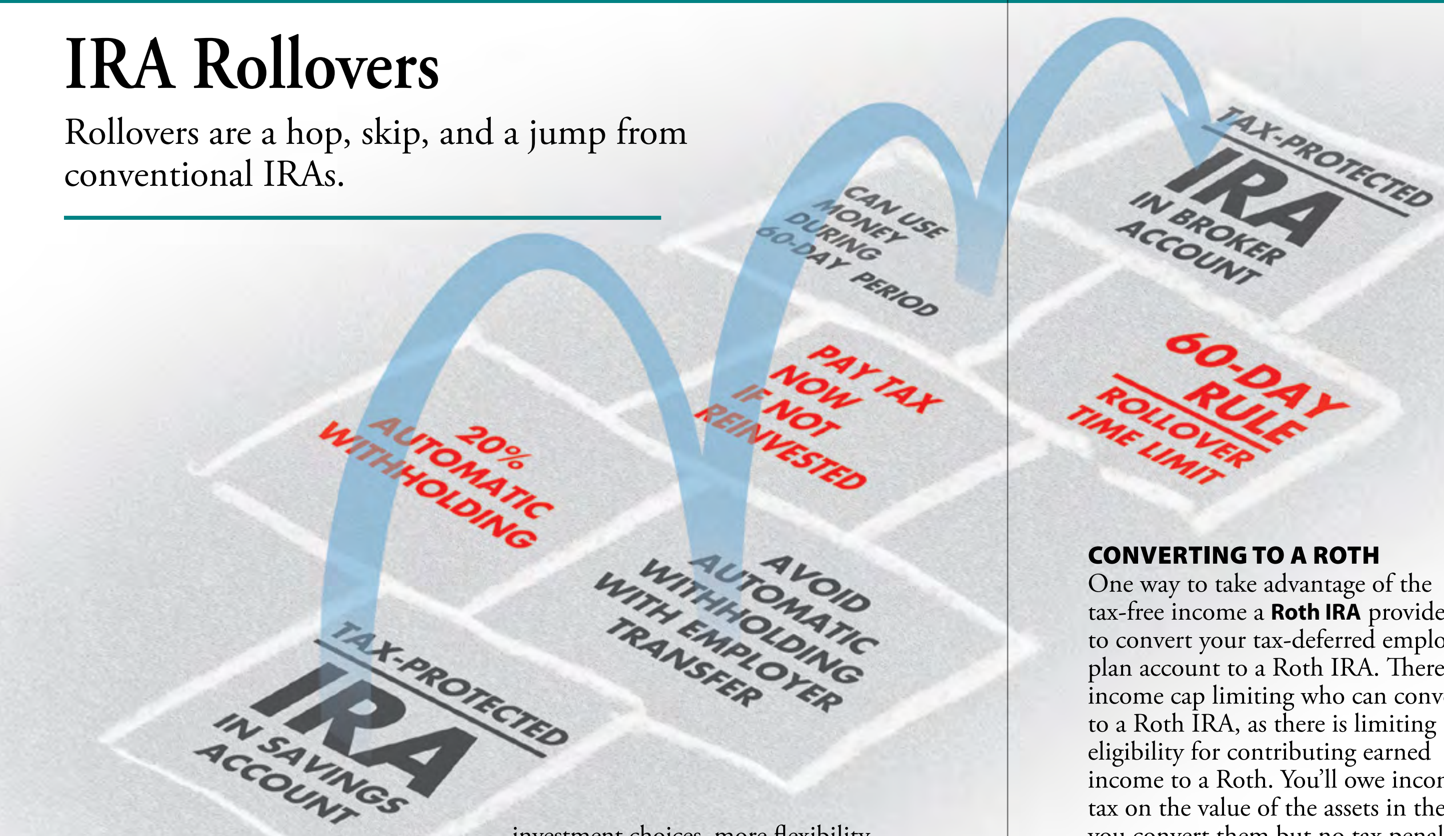
You could sell stocks or bonds, but what if the market is down or they're strong performers you'd really like to hold on to? One option may be to open a money market account with your custodian to collect dividends, interest payments, and capital gains you realize as part of managing your portfolio. The amount you accumulate that way probably won't equal your RMD, but could give you a head start.

If you prefer you can take the RMD as a lump sum any time before the end of the year. Or you might arrange regular monthly distributions with your plan custodian. The only thing you don't want to do is miss the RMD. There's a major penalty if you do.

INVESTING FOR GOALS

IRA Rollovers

Rollovers are a hop, skip, and a jump from conventional IRAs.



When you leave your job or retire, you can roll over the value of the assets in your employer sponsored retirement plan to an **individual retirement account (IRA)**, keeping the tax-deferred status of your assets intact. To begin the process, you choose a financial services company to be the custodian of your account. Most companies that offer IRAs provide a range of investment alternatives, so you should have no trouble finding one that offers the types of investments you want to make. In fact, you may already have an account with the custodian you choose, or you may select a new one.

The best approach to moving the money is almost always a **direct rollover**, or **transfer**, of assets from your employer's plan to the IRA. While the time it takes to complete the process varies, your chief responsibilities are to be sure you've provided the information the custodian needs to initiate the rollover, to follow up to be sure the transfer has been completed, and to choose your new investments.

WHY A ROLLOVER?
There are potential advantages in moving your retirement plan money to an IRA. You generally have more investment choices, more flexibility in managing withdrawals, and more options in choosing beneficiaries. But there are also potential drawbacks. The fees could be higher with an IRA, and IRAs have no loan provisions.

CONVERTING TO A ROTH
One way to take advantage of the tax-free income a **Roth IRA** provides is to convert your tax-deferred employer plan account to a Roth IRA. There's no income cap limiting who can convert to a Roth IRA, as there is limiting eligibility for contributing earned income to a Roth. You'll owe income tax on the value of the assets in the year you convert them but no tax penalty. Ideally, you'll use money from non-IRA sources to cover the tax that's due.

You'll probably want to get some expert advice on whether this strategy pays for you.

The decision will depend in part on:

- How much you have to convert
- Current and anticipated tax rates
- Your age
- The time until you plan to withdraw

As with other Roth accounts, you must keep an account with transferred funds open for at least five years and be 59½ before you can withdraw tax-free earnings. If you're not confident you'll wait that long, it's probably not smart to convert, pay the tax, and withdraw early, only to face more taxes (and potentially a tax penalty).

The long-term advantage of a Roth IRA, in addition to providing tax-free income, is that no withdrawals are required while you are alive. This allows you to take advantage of the IRA's tax-deferred growth potential as long as you don't need the money.

FUTURE CONSIDERATIONS
You can extend the tax-deferred life of your IRA by naming a living beneficiary rather than leaving it to your estate. That's because IRA withdrawals are based on life expectancy and an estate hasn't got one. So your account comes to a quick (and bad) end, with a tax bill to settle. It's an easy mistake to avoid.

Making wise moves

You can make the most of the opportunity to roll over your retirement assets if you know what you can accomplish by moving your money and the most effective ways to meet those goals.

1 FOLLOW THE RULES

You may handle a rollover yourself rather than with a direct transfer. But you take on more responsibility and face potential problems that don't arise with a direct rollover or transfer.

The one advantage of an indirect rollover may be that you have short-term access to cash for 60 days between taking money out of one account and putting it in another. However, if you miss the 60-day deadline, your money is no longer tax deferred and you owe income tax plus a potential 10% tax penalty if you're younger than 59½.

There's an added complication if you are moving money from an employer's plan to an IRA. By law, your employer must withhold 20% of the total you're moving yourself—for example, $20,000 of an account worth $100,000—to cover potential income taxes if you miss the 60-day deadline.

If you want all of your savings to continue to be tax deferred, you must come up with an amount equal to the 20% that was withheld from some other source. If you do that, you'll get back the money that was withheld as a tax refund. But if you can't, any amount you don't deposit is considered a withdrawal.

2 INVEST WISELY

When you've rolled over the money from your old plan to your IRA, it's your responsibility to invest it to meet your long-term goals. You'll want to have a strategy for choosing investments for your portfolio and a plan for evaluating your progress toward your goals. Working with an experienced professional can be a big help.

3 CONSIDER ANOTHER ROLLOVER

If you take a new job where the employer offers a retirement savings plan that accepts rollovers from IRAs or other employer plans, you may choose to move your money into the new plan. You are allowed to move money from one type of plan—say a 403(b)—to another type—such as a 401(k), if the plan accepts rollovers. That increases your flexibility, and allows you to consolidate your retirement assets. One of the things to consider is the quality of the new plan's offerings, and whether you believe they will help you meet your objectives as well as investments you select for your IRA.

4 PUT AWAY PENSION PAYOUTS

You can put all or part of your lump sum pension payout in a rollover IRA. If you receive the payout in a series of payments over a period of less than ten years, you can put some or all of those payments into a rollover IRA too.

INVESTING FOR GOALS

SEPs and Keogh Plans

Setting up an employee pension plan isn't exactly a piece of cake, but it can be a sweet addition to your retirement.

If you run a small business, a **Simplified Employee Pension**, or **SEP**, may offer the most effective way to put money away for retirement. That's because you can shelter a lot more than you can in an IRA and the rules governing SEPs are a lot less stringent than for other qualified retirement plans.

Because a SEP is a qualified plan, the amount you contribute each year for yourself and your employees can be deducted from your company's earnings, reducing your current taxes. The contribution cap per employee is set each year, as a dollar cap or percentage of earnings.

You also get flexibility with a SEP. You can change the amount of your contribution each year, skipping poor years and putting away the maximum in good ones. And if you end the plan, you can roll over the account into an IRA without penalty and keep earning money on a tax-deferred basis.

But there are a couple of restrictions on SEPs that don't apply to other qualified retirement plans:

- You must cover everyone who works for you
- You can't invest in insurance

Neither of these by itself is reason to ignore the advantages of a SEP. And you don't have to file an annual report with the IRS the way you must with other qualified plans.

COMPARING SEP-IRAs AND KEOGHS

If you work for yourself, you have a choice of qualified retirement plans that allow you to accumulate tax-deferred savings for retirement. Each type has advantages and some potential drawbacks, so you'll want to compare them carefully.

Money purchase plans are customizable but require specific annual contributions.

Profit-sharing plans let you decide each year whether and how much to contribute.

SEP-IRAs are flexible plans that are relatively simple to set up and administer.

ELASTIC PLANS

If you have a profit-sharing or money-purchase plan, you can rollover a payout from another employer plan into your Keogh rather than into an IRA. This allows you to consolidate your retirement plans under one administrative roof.

The opposite is true as well. If you'll be making no additional contributions, you can roll the assets in a Keogh plan into a rollover IRA. It's the simplest alternative for consolidation, with the least paperwork.

SPECIALIZED IRAs

Since SEPs are actually specialized IRAs, sometimes referred to as SEP-IRAs, they're always set up and controlled by the person who benefits from them, even though they're funded exclusively by an employer.

That makes it easier if you're the employer: You don't have to pay some-one to run a pension plan. It's also better if you're an employee: All the money in your SEP account is yours from the minute it's deposited. You don't have to wait to be vested, as you do with some other qualified plans.

EQUALITY'S THE RULE

If you have employees, you have to give them the same kind of SEP benefits you give yourself. For example, if you contribute 10% of your earnings to your SEP, you have to contribute 10% of their earnings to accounts in their names.

Anyone who is at least 21 years old, has worked for you for at least three of the last five years, and makes at least the annual minimum must be included. There are exceptions for certain union employees.

OPENING A KEOGH

If you're self-employed, earn money for work outside your regular job, or own a small business, you can set up a profit-sharing or money-purchase tax-deferred plan—known generically as Keogh plans—that lets you save for retirement. You can contribute only earnings from eligible sources. But there's no requirement that these earnings are your only source of income or that the Keogh is the only plan in which you participate.

Establishing your plan requires filing an IRS-approved plan. Many financial institutions provide standardized plans, but you can have one designed for you. The advantage—some would say the necessity—of a specialized plan is the flexibility it provides for managing and investing your plan's assets.

HOW A KEOGH WORKS

A Keogh works like other qualified plans in many ways. But, like a SEP-IRA, it is often set up to benefit just one person—you. And the amount that can be contributed is substantially higher than the annual limit on a 401(k) and similar plans, as it is with a SEP.

A Keogh lets you deduct pension contributions you make as the sponsor of the plan. As a participant, you owe a 10% tax penalty plus taxes due if you withdraw funds before turning 59½. You can borrow against the funds accumulated in your plan, with certain restrictions. That's not possible with an IRA or SEP-IRA.

If you have employees, you must provide benefits to those who qualify for the plan that are comparable to the benefits you provide for yourself. In addition, the law requires that you have a plan administrator and dictates how to compute contributions based on your net profit. If you're using a money-purchase plan, you must contribute at least a minimum each year, regardless of your net earnings. That rule doesn't apply to profit-sharing plans.

MAKING CONTRIBUTIONS

Once a Keogh is set up—by December 31 of the first year for which you're going to take a tax deduction for your contribution—you can make annual or periodic additions to it as long as you don't put in more than the cap for the year. The deadline for depositing funds is the day your tax return is due, including any extensions you take advantage of.

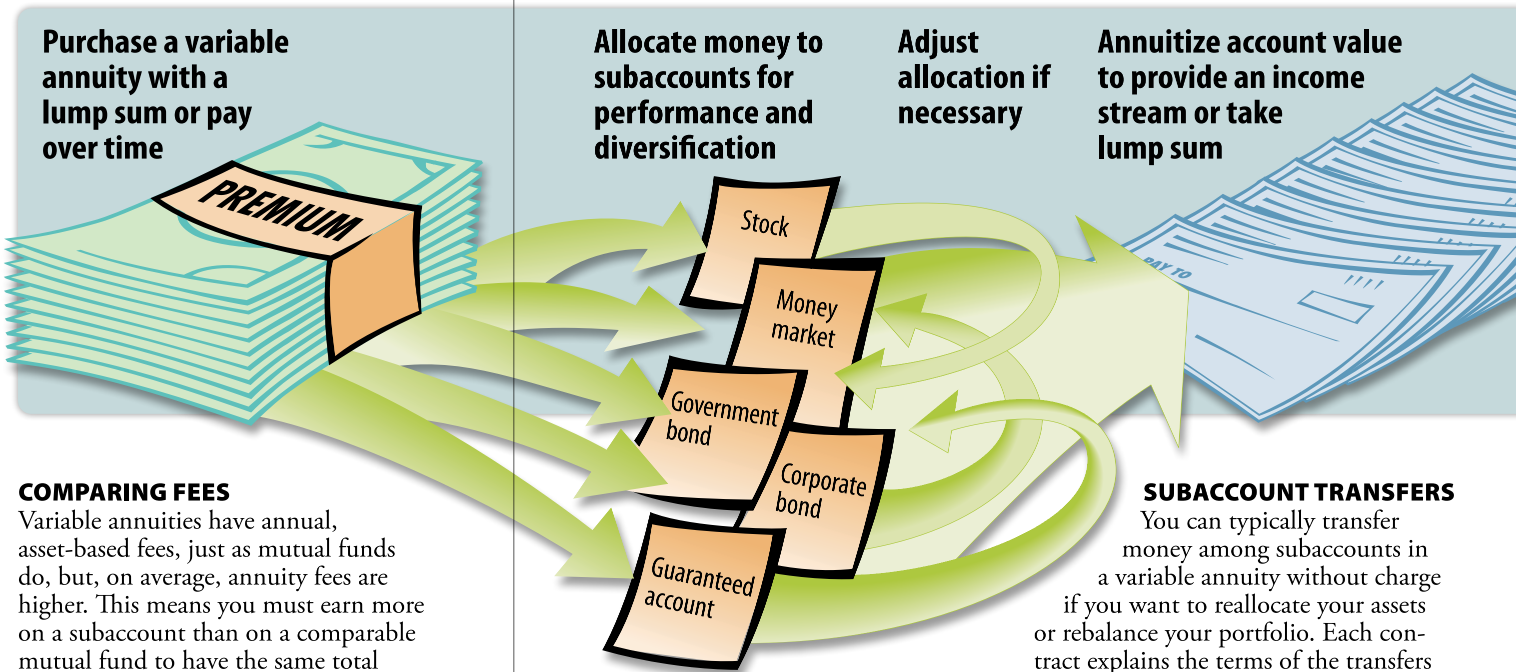
Since you can make your contribu-tion after the end of your fiscal year, you'll know for certain what your earnings were. That's useful if you're self-employed or your income is unpredictable, and you can't be sure what your balance sheet will show.

Variable Annuities

A variable annuity is hard to classify. It's an investment, a retirement plan, and an insurance contract rolled into one.

Annuities are tax-deferred retirement savings plans offered by insurance companies. You purchase an annuity from an insurer and sign a contract agreeing to pay a **premium**, or certain amount of money, either as a lump sum or over time.

The insurer credits the premium and earnings to your account. When you're ready to begin withdrawing the money, the insurer will, if you choose, **annuitize** your account value, which means converting it to a stream of lifetime income. You'll typically have other withdrawal options, too, including taking the money as a lump sum or receiving systematic payments over a period of time.



VARIABLE ANNUITY BASICS

With a **variable annuity**—which does not have a predetermined rate of return the way a **fixed annuity** does—you decide how your premium is invested by choosing from among a number of **subaccounts**, or investment options, which the annuity contract offers.

Subaccounts resemble mutual funds in some ways. Each subaccount holds a portfolio of underlying investments—stocks, bonds, cash equivalents, or a combination of stocks and bonds—purchased with money pooled from different investors. Your return depends on how well the subaccounts you've selected perform, which in turn is based on the performance of the investments in these subaccounts. The fees and expenses you pay are subtracted before return is reported.

COMPARING FEES

Variable annuities have annual, asset-based fees, just as mutual funds do, but, on average, annuity fees are higher. This means you must earn more on a subaccount than on a comparable mutual fund to have the same total return. The details of these fees—how they're calculated and when they're debited from your account—are described in the annuity's prospectus.

In addition, many annuities have **surrender fees**—up to 7% or more of the amount you invest—if you end the contract during the surrender-charge period, typically seven to ten years from the time you purchase the annuity. While some mutual funds similarly impose trading restrictions or redemption fees, fund fees usually remain in effect for a matter of days or months, not years.

INSURANCE PROTECTION DEBATE

Most variable annuity contracts include a **death benefit** for which you pay a mortality and expense (M&E) fee. The death benefit guarantees that your beneficiaries will receive at least as much as you paid in premiums if you should die before you begin to receive annuity income. Some contracts may also lock in gains on a regular schedule. This means your beneficiaries would receive more than the premiums you paid into the annuity, even if the account balance drops below the principal amount.

However, these guarantees, like guarantees for lifetime income, depend on the claims-paying ability of the company issuing the insurance.

Annuity advocates argue that having this protection encourages people who might otherwise avoid investing to benefit from its potential rewards while being insured against total loss.

Critics of annuities, and of the death benefit provision in particular, point out that M&E fees typically cost more than they're worth—unless the market takes a dramatic turn for the worse right after you purchase the annuity and you die immediately.

FREE-LOOK PERIOD

Every state has a law requiring a **free-look** period on annuities and life insurance. The period varies from state to state, but you generally get at least ten days from the day you buy an annuity to cancel it and get your money back without paying surrender charges.

TAX ISSUES

Earnings in a variable annuity grow tax deferred, and are taxed at your regular income tax rate when you begin withdrawals, usually after you're at least 59½. However, early withdrawals before you reach 59½ may be subject to a 10% federal tax penalty.

Unlike money invested in a deductible IRA or employer sponsored plan, such as a 401(k), you invest post-tax income in a variable annuity that you purchase on your own. When you receive income from the annuity, a portion of the payment is a tax-free return of your premiums.

Also unlike traditional IRAs and employer plans, nonqualified annuities don't require you to begin withdrawals when you turn 73. You may also find that an annuity is one of the options available in your employer sponsored plan—especially if it's a 403(b). Then, your contributions as well as your earnings are tax deferred and, in most cases, you're required to begin taking withdrawals when you retire or reach 73, whichever comes first.

SUBACCOUNT TRANSFERS

You can typically transfer money among subaccounts in a variable annuity without charge if you want to reallocate your assets or rebalance your portfolio. Each contract explains the terms of the transfers it allows.

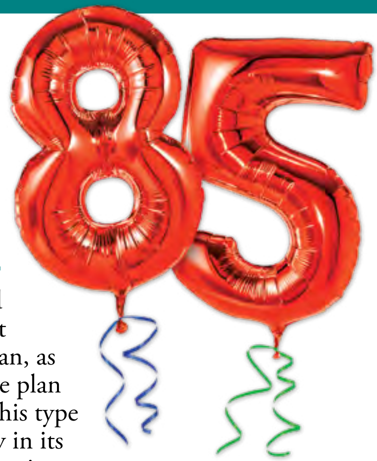
There may be a **market value adjustment (MVA)** on transfers out of a fixed-income subaccount offered in the annuity. For example, if you wanted to move $10,000 from a fixed account to an equity account after interest rates have gone up, you might be able to move only a portion of the total. The balance would go to the annuity provider.

RATING ANNUITY PROVIDERS

One of the primary concerns in choosing an annuity is knowing whether or not the provider is going to be able to meet its long-term commitments. One way to make this assessment is to investigate the company's financial situation by using evaluations provided by professional rating services. For example, both Standard & Poor's and Moody's Investors Service measure financial strength and ability to pay.

With a variable annuity, the principal you allocate to subaccounts—other than those that provide a fixed return—cannot be seized by the insurance company's creditors. But you're still dependent on the insurer to pay you lifetime income once you annuitize. Since that's money you'll be counting on, finding an insurer that is likely to meet its obligations to pay is of paramount importance.

Longevity Annuities



One challenge in investing for retirement is the possibility that you could outlive your savings.

People over 80 are the fastest growing age group in the United States, a trend that the Bureau of the Census expects to continue for the next 40 years. One consequence of this demographic shift is increased interest in the ways retirement savers may be able to avoid running short of cash as they live into their eighties and nineties.

One relatively new long-term planning tool is an insurance company product known as a **longevity annuity**. These annuities resemble pension annuities from an employer's defined benefit plan or the fixed immediate annuities that you might purchase when you retire. The insurance company, in return for a lump-sum payment, promises to pay income for your lifetime.

The difference is that the income doesn't start right away, or within a year of purchase, as it does with a pension or an immediate annuity. Rather, the starting date is a number of years in the future, based on the age you select. It just can't be older than 85.

BENEFITS OF LONGEVITY

You may purchase a longevity annuity through your investment professional or directly from an insurance company. Or, you may make a lump-sum transfer within a tax-deferred IRA or employer-sponsored retirement savings plan, as long as the plan includes this type of annuity in its menu of options.

One of the key benefits of owning a longevity annuity within a tax-deferred plan is that the US Department of the Treasury has ruled that a longevity annuity's account value is exempt from the required minimum distribution provision that applies to tax-deferred IRAs and employer plans once account holders turn 73.

If you choose to transfer a lump sum to a **qualified longevity annuity contract (QLAC)**, you effectively reduce your IRA or defined contribution (DC) plan balance. This, in turns, reduces the amount you would otherwise need to withdraw each year from your tax-deferred accounts until you begin receiving income from the QLAC. This may add to the annuity's appeal, particularly if you have a substantial IRA or DC balance and would be required to take large taxable withdrawals when you don't really need the income to live comfortably.

There is a catch. You can't transfer everything from your IRA or retirement savings account to a QLAC.

INVESTING FOR GOALS

The limit is $210,000 in 2025, with no percentage-of-savings limit. That amount may increase over time to keep pace with inflation.

LONGEVITY INCOME

The annual amount you'll eventually receive from a longevity annuity is based on four factors:

- Purchase amount
- Current interest rate
- Your age when you purchase the annuity
- Age at which you plan to begin receiving income

Obviously, the larger the principal, the higher the rate, and the longer the time between purchase and payout, the more you should expect to receive. However, if you die before the annuity payments begin, many contracts state that no payouts will be made.

Some newer contracts, though, guarantee return of principal to your account, and so to your heirs, if you die before the full amount has been paid out in benefits. The drawback of this protection is that the amount the annuity will pay you, if you do live long enough to collect, is substantially reduced. Other riders, which provide principal protection or inflation protection, may be available as well, though they also significantly reduce your payout.

A GOOD IDEA, OR NOT?

There are some potential advantages to a longevity annuity. If you're in good health and can reasonably expect to live a long time, the expectation of a regular income stream from the longevity annuity may make you more comfortable about how you manage your money earlier in retirement. It may also ease any concerns you may have of becoming a burden on your family or needing income to pay for long-term care.

On the other hand, once you've purchased a longevity annuity, you'll have no access to the money even if you need it for unexpected expenses. Further, since all longevity annuities have a fixed rate of return, the future income that you're promised when you purchase the contract is likely to have more limited buying power when you begin receiving payouts than it does at the present, thanks to the impact of inflation.

OPTIONS TO CONSIDER

If you have $210,000 available to purchase a longevity annuity, you might want to work with your financial adviser to explore alternatives that have the potential to provide a stronger return and so more future income. One example is a Roth IRA, from which no distributions are required. Withdrawals are tax free, while payments from a longevity annuity are not.

Another alternative is a managed account, which can gradually be reallocated to focus less on growth as you grow older and more on income-producing investments. You might also consider a target date or target risk fund. The difference, of course, is that none of these approaches guarantees you lifetime income.

If you do decide that a longevity annuity makes sense for you, you'll discover that each insurer's calculation of future income will vary somewhat from the others. An adviser can help you evaluate whether that's the result of higher fees or a different assessment of future interest rates. You should also evaluate the financial standing of the insurer issuing the product. Any future income will depend on the claims-paying ability of the issuing company.

Taxable Investing

You can diversify your retirement investing by using taxable as well as tax-deferred accounts.

When you think about investing for retirement, you probably focus on your employer sponsored retirement plans, individual retirement accounts (IRA), and maybe an annuity. It's these sources, as well as Social Security and perhaps a pension, which you expect to provide the income you'll need for a comfortable retirement. But in concentrating on these retirement-specific accounts, you may lose sight of the advantages of investing for retirement with a taxable account.

TAX-DEFERRED vs. TAXABLE

The great appeal of tax-deferred investing is that it lowers your tax bill now and allows your account value to compound more quickly than it would if you were withdrawing annually to pay taxes on earnings. The trade-off is that you lose a certain amount of flexibility. There are limits on the amount you can contribute, when you can (or must) withdraw, and sometimes on your choice of investments. In addition, you pay tax at your regular rate on all earnings you withdraw from tax-deferred accounts and on any pretax contributions or those you deducted.

In contrast, you can invest as much as you can afford in a taxable account. There's no annual contribution limit, nor a requirement that you invest earned income. There's no early withdrawal penalty before you turn 59½, and no required minimum distributions after 73.

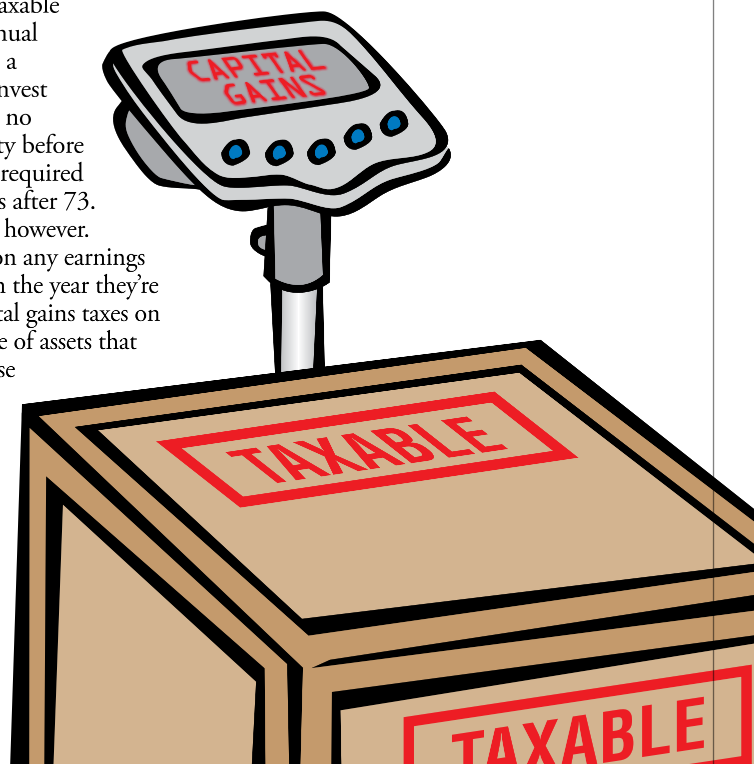
There is a downside, however. You owe income taxes on any earnings on your taxable assets in the year they're paid, and you owe capital gains taxes on any increase in the value of assets that you sell at a profit. Those taxes reduce the value of your portfolio, but perhaps not as much as you might think.

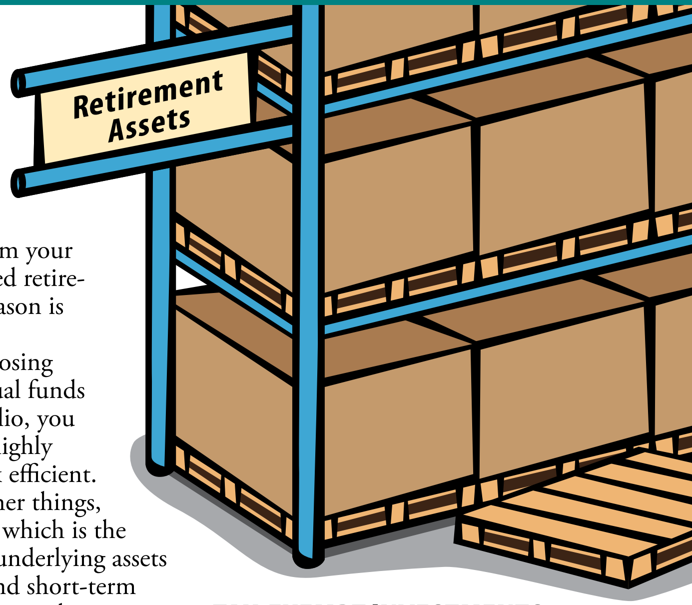
By investing strategically, you can benefit from a number of tax-saving opportunities, including lower tax rates on most dividends, stock fund distributions, and long-term capital gains.

Not all taxable investment income receives special treatment, though. Interest on corporate and Treasury bonds, certificates of deposit (CDs), and bank accounts is taxed at your regular rate, as are income distributions from bond mutual funds and real estate investment trusts (REITs).

One way to replicate one of the chief benefits of tax-deferred investing in a taxable account is to reinvest any dividends or capital gains in your investment account and pay any taxes that are due from your checking account. The reinvested earnings help to build your account value, boosting the base on which new earnings can accumulate.

You can work with your financial adviser to decide whether you want to reinvest the earnings in additional shares of the same stocks, ETFs, and mutual funds or add different investments to your portfolio. Similarly, you can reinvest the principal of maturing bonds, or those that you sell, to purchase new ones.





TAX-EFFICIENT INVESTMENTS

If you use taxable accounts to build increased retirement security, your investing strategy may be somewhat different from your approach to tax-deferred retirement investing. The reason is simple: the tax factor.

For example, in choosing actively managed mutual funds for your taxable portfolio, you may want to look for highly rated funds that are tax efficient. This means, among other things, that the **turnover rate**, which is the frequency with which underlying assets are bought and sold, and short-term capital gains, which are taxed at your regular rate, are kept to a minimum.

Or, you might decide to use passively managed index funds or index-linked ETFs. The portfolios of these funds change only when the components of the underlying index change, which is sometimes as infrequently as once a year.

If your risk tolerance allows it, you may also seek tax efficiency by investing a portion of your stock allocation in small- and mid-capitalization stocks that typically pay no dividends but may have a greater potential than large-company stocks to increase in value over the long term. And if you do eventually sell these investments at a profit, that's the only time you'll owe tax.

In a tax-deferred account, on the other hand, tax efficiency is not a factor in your choice of funds since all withdrawals will be taxed at the same rate. There you want to emphasize return.

TIMING CAPITAL GAINS

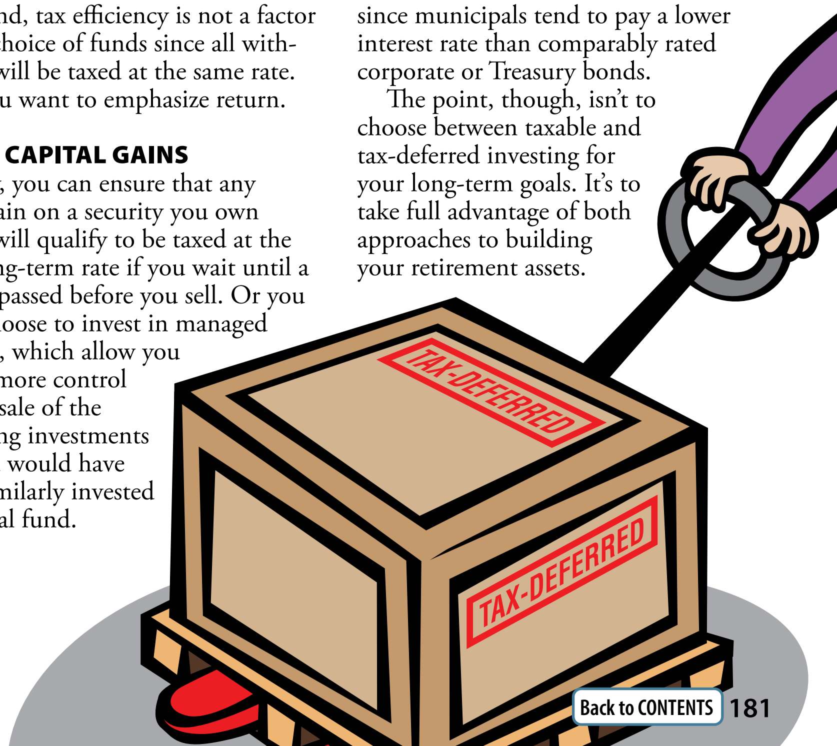
Similarly, you can ensure that any capital gain on a security you own directly will qualify to be taxed at the lower long-term rate if you wait until a year has passed before you sell. Or you might choose to invest in managed accounts, which allow you to exert more control over the sale of the underlying investments than you would have over a similarly invested mutual fund.

TAX-EXEMPT INVESTMENTS

Keeping tax consequences in mind, you might invest the fixed-income portion of your taxable portfolio either in municipal bonds issued by the state where you live or in a single-state bond fund that invests in those bonds. In most cases, the interest income is completely tax-exempt. However, if you sell the investment before maturity, any long-term capital gain is taxed at the same rate as other long-term gains.

In contrast, it's generally smart to avoid buying municipal bonds in a tax-deferred retirement plan because all withdrawals are taxed, including any portion that might have been tax-exempt in a taxable account. Municipal bonds may not be the best choice for a tax-free Roth retirement account either, since municipals tend to pay a lower interest rate than comparably rated corporate or Treasury bonds.

The point, though, isn't to choose between taxable and tax-deferred investing for your long-term goals. It's to take full advantage of both approaches to building your retirement assets.



Tax Planning for Investments

Don't overlook the tax consequences when figuring the return on your investments.

Taxes are a vital part of any investment decision. But remember that taxes are only a part of an overall investment strategy. Financial advisers recommend that you make investment choices not solely on tax avoidance—but on what you can expect to earn, the level of risk you're willing to take, and the diversification of your portfolio.

A capital gain is the profit produced by selling investments or real estate for more than their cost.

CAPITAL GAINS

A **capital asset** is any property you can buy or sell. That includes securities, your home and other real estate, jewelry, cars, and collectibles. A **capital gain** is your profit when you sell an asset for more than it cost you. You have a **capital loss**, on the other hand, if you sell the asset for less than it cost.

Capital gains are usually taxable. Capital losses are deductible only if you've held the item for investment and not for personal use. So you'll need complete records for all of your transactions and expenses. See IRS Publication 550, "Investment Income and Expenses," for the details. You can download or view a copy at the IRS website, www.irs.gov.

LONG- AND SHORT-TERM GAINS

If you hold an asset for 12 months or less, any increase or **appreciation** in its value will result in a **short-term gain**. These gains are taxed as ordinary income, at your regular tax rate. But if you own an asset for more than a year before you sell at a profit, you have a **long-term capital gain**. Those gains are taxed at a maximum rate of 15% for most taxpayers, but 20% for those in the highest income bracket. If your regular tax rate is 10% or 12%, long-term capital gains are taxed at 0%.

You could owe a net investment income tax of 3.8% as a Medicare contribution surtax if your modified adjusted gross income (MAGI) is more than $200,000 and you're a single tax filer or more than $250,000 if you're married and file jointly.

DEDUCTING CAPITAL LOSSES

If you lose money on an investment, you may be able to deduct your losses. You can combine your capital gains and capital losses to offset, or reduce, the gains on which you owe tax. Or you may wipe out all your gains and have a net loss.

If you have a net loss, you may use it to reduce your taxable income, but there's a cap of $3,000 per year. If your loss is greater than that amount, you can carry over the excess and deduct it in later years.

Specific rules apply to figuring losses on investments you receive as gifts. You may want to consult your tax adviser to be sure you report them correctly.

FIGURING GAIN

You figure gain or loss by subtracting your **basis** from the proceeds of a sale. Basis is the price paid for the item, plus the expense of buying, holding, and selling it. For example, the commissions and costs of an investment transaction are subtracted from the proceeds of a sale when you figure a gain or loss. If you received the item as a gift, your basis is the same as the giver's was. If you inherit an asset, your basis is the market value on the date of the giver's death. See IRS Publication 551, "Basis of Assets."

PROCEEDS	**The amount you get when you sell your asset**
– BASIS	**The original cost of the asset, plus the cost of buying, holding, and selling it**
= GAIN OR LOSS	

Here's how you would figure a capital gain:

$ 22,000	**Gross proceeds from the sale of stock**
– 20,000	**Amount you paid for the stock**
– 385	**Broker's commission and fees on sale**
= $ 1,615	**Your capital gain**

THE LONG AND THE SHORT OF IT

An investor in the 35% tax bracket sells stock for a capital gain of $20,000. She saves $4,000 if she has a long-term gain on stock held more than one year.

$20,000 taxed at 35%

= $7,000 TAX DUE

$20,000 taxed at 15%

= $3,000 TAX DUE

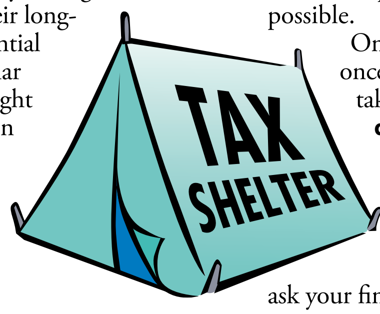
Short-term gains are taxed at your top regular income tax rate.

Long-term gains are usually taxed at a rate of 15%.

HOLDING STOCKS DEFERS CAPITAL GAINS TAXES

While you're holding an investment, you don't pay tax on any increase in value. The market price of a stock you bought for $5 a share may climb to $50, but the tax on that capital gain is deferred until you sell the stock and collect the proceeds. If you sell when you've held stock for more than a year, you owe tax at the capital gains rate, which is always lower than your ordinary income tax rate.

For this reason, you might pick stocks for their long-term growth potential as well as for regular dividends they might pay. You pay tax on most dividends as they are paid, at your long-term capital gains tax rate.



THE GAIN OF GIVING

If you donate appreciated property, such as stock or a house that you've held for over a year, to a recognized charitable organization, you may deduct the market value and avoid capital gains tax on the appreciation. If a stock's value has dropped, you can sell it, take the capital loss and donate the proceeds of the sale.

However, all appreciated property may not be equal in the eyes of your beneficiary. While publicly traded securities are generally welcome, assets that can't be converted easily to cash or require expensive maintenance may not be.

PASSIVE INCOME

Passive income or **losses** come from businesses in which you aren't an active participant. These include limited partnerships, rental real estate, and other business ventures that you don't help manage.

Losses from passive investments may be used to offset only income from similar ventures. The losses cannot shelter other income. That is, they can't be used to offset active income, such as wages and salaries, or portfolio income, such as interest, dividends, and capital gains. Losses you can't use may be deducted only when the passive investment is sold or disposed of in a taxable transaction. A gift is not a taxable transaction.

RETIREMENT INCOME

You'll also want to plan ahead so that when you begin to take income from your retirement accounts you'll be able to keep your taxes as low as possible.

One factor, of course, is that once you reach 73, you'll have to take annual **required minimum distributions (RMDs)** from your tax deferred employer plans and IRAs, and these amounts are fully taxable. If you have large account balances, you may want to ask your financial adviser about managing your withdrawals to spread out the tax burden.

However, if you've contributed to a Roth account or rolled over assets to a Roth IRA, you can take tax-free withdrawals at any time if the account has been open 51/2 years. Interest on municipal bonds is tax free as well. And, if qualified dividends and distributions make up a portion of your retirement income, they will be taxed at a lower rate than your ordinary income.

If you sell your home, up to $250,000 of profit from the sale is tax free if you file an individual return, and up to $500,000 if you file jointly.

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LIGHTBULB PRESS develops and publishes financial education guides and content for consumers and financial professionals. The company's signature guides, which combine straightforward language with colorful, informative graphics to clarify complex financial information, have introduced millions of people to personal finance and investing. The company publishes over 35 titles in print and digital formats on a broad range of topics that are customized for businesses, demographic groups including children, and market regulators.

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