Evaluating Performance

1. Introduction

Choosing investments is just the beginning of your work as an investor. As time goes by, you'll need to monitor the performance of these investments to see how they are working together in your portfolio to help you progress toward your goals. Generally speaking, progress means that your portfolio value is steadily increasing, even though one or more of your investments may have lost value.

On the other hand, if your investments are not showing any gains or your account value is slipping, you'll have to determine why and decide on your next move.

To assess how well your investments are doing, you'll need to consider several different ways of measuring performance. The measures you choose will depend on the exact information you're looking for and the types of investments you own.

For example, if you have a stock that you hope to sell in the short term at a profit, you may be most interested in whether its market price is going up, has started to slide or seems to have reached a plateau. On the other hand, if you're a buy-and-hold investor more concerned about the stock's value 15 or 20 years in the future, you're likely to be more interested in whether it has a historical pattern of earnings growth and seems to be well positioned for future expansion.

In contrast, if you're a conservative investor or you're approaching retirement, you may be primarily interested in the income your investments provide. You may want to examine the interest rate your bonds and certificates of deposit are paying in relation to current market rates and evaluate the yield from stock and mutual funds you bought for the income they provide.

In measuring investment performance, you want to avoid comparing apples to oranges. Finding and applying the right evaluation standards for your investments is important. If you don't, you might end up drawing the wrong conclusions. For example, there's little reason to compare yield from a growth mutual fund with yield from a Treasury bond, since they don't fulfill the same role in your portfolio. Instead, you want to measure performance for a growth fund by the standards of other growth investments, such as a growth mutual fund index or an appropriate market index.

2. Yield

Yield is one type of fairly straightforward income-based performance measure. It is typically expressed as a percentage, and is a measure of the income an investment pays during a specific period, typically a year, divided by the investment's price. All bonds have yields, as do dividend-paying stocks, most mutual funds and bank accounts including certificates of deposit (CDs).

Yields on Bonds

When you buy a bond at issue, its yield is the same as its interest rate or coupon rate. The rate is figured by dividing the yearly interest payments by the par value, usually $1,000. So if you're collecting $50 in interest on a $1,000 bond, the yield is 5 percent.

However, bonds you buy after issue in the secondary market have a yield that may be different from the stated coupon rate because the price you pay is different from the par value. Bond yields go up and down depending on the credit rating of the issuer, the interest rate environment and general market demand for bonds. The yield for a bond based on its price in the secondary market is known as the bond's **current** yield.

For instance, a bond with a par value of $1,000 with a 6 percent coupon rate might be sold in the market at a current yield of 5 percent. The bond itself keeps paying 6 percent of $1,000 every year, or $60. But because interest rates have fallen to 5 percent and newly issued bonds pay a lower coupon rate, a bond paying 6 percent is more attractive to investors. If you want to buy that bond, you will likely pay a premium—say, $1,200 instead of $1,000. If you divide the fixed annual income ($60) by the new market price ($1,200), you get the current yield (5 percent).

If you intend to hold a fixed-rate bond to maturity, the bond's coupon yield might be the only thing that matters to you since the coupon yield doesn't change after issue. However, current yield can matter a great deal if you're considering selling a bond before its maturity date. That's because bond yields go down when bond prices go up. As a result, you can often sell a bond you bought at the time of issue for a profit when the current yield is lower than the coupon rate because at that point the market price is higher than the price you paid.

Current yield might matter to you as well if the yield you're getting on older bonds is lower than the current yields of more recently issued bonds. In that case, you might consider selling your bonds even at a loss if you'd like to reinvest to get higher yields while they're available.

There are also two more complex and complete measures of bond yield that take other factors into account: Yield-to-maturity (YTM) and yield-to-first call.

Yield-to-maturity is the overall interest rate earned by an investor who buys a bond at the market price and holds it until maturity. Mathematically, it is the discount rate at which the sum of all future cash flows (from coupons and principal repayment) equals the price of the bond. YTM is often quoted in terms of an annual rate and may differ from the bond's coupon rate. It assumes that coupon and principal payments are made on time. It does not require dividends to be reinvested. Further, it does not consider taxes paid by the investor or brokerage costs associated with the purchase. There are a number of online calculators that you can use to help figure YTM on a particular bond, and your broker or other investment professional can provide YTM figures as well—along with a fuller explanation of how to use the information.

Similarly yield-to-first-call helps you evaluate the yield a callable bond would actually provide if the bond issuer chose to call, or redeem, the bond on the first date that was possible. (When a bond is callable, the issuer has the right to repay the principal and stop interest payments on dates that are set at the time of issue.) If a bond paying higher than current rates is called—as is often the case—you not only lose that source of income but must often reinvest at a lower yield. So the yield-to-first-call can be a useful tool as you compare bonds you are considering. For example, you might prefer a bond whose initial call date is further in the future or one without a call provision.

Yields on Other Investments

If your assets are in conventional certificates of deposit (CDs), figuring your yield is easy. Your bank or other financial services firm will provide not only the interest rate the CD pays, but its annual percentage yield (APY). In most cases, that rate remains fixed for the CD's term.

For a stock, yield is calculated by dividing the year's dividend by the stock's market price. You can find that information online, in the financial pages of your newspaper and in your brokerage statement. Of course, if a stock doesn't pay a dividend, it has no yield. But if part of your reason for investing is to achieve a combination of growth and income, you may have deliberately chosen stocks that provided a yield at least as good as the market average.

However, if you're buying a stock for its dividend yield, one thing to be aware of is the percentage of earnings that the issuing company is paying to its shareholders. Sometimes stocks with the highest yield have been issued by companies that may be trying to keep up a good face despite financial setbacks. Sooner or later, however, if a company doesn't rebound, it may have to cut the dividend, reducing the yield. The share price may suffer as well. Also remember that dividends paid out by the company are funds that the company is not using to reinvest in its businesses.

3. Return

Your investment return is all of the money you make or lose on an investment. To find total return, generally considered the most accurate measure of return, you add the change in value—up or down—from the time you purchased the investment to all of the income you collected from that investment in interest or dividends. To find percent return, you divide the change in value plus income by the amount you invested.

Here's the formula for that calculation:

(Change in value + Income) ÷ Investment amount = Percent return

For example, suppose you invested $2,000 to buy 100 shares of a stock at $20 a share. While you own it, the price increases to $25 a share and the company pays a total of $120 in dividends. To find your total return, you'd add the $500 increase in value to the $120 in dividends and to find percent return you divide by $2,000, for a result of 31 percent.

That number by itself doesn't give you the whole picture, though. Since you hold investments for different periods of time, the better way to compare their performance is by looking at their annualized percent return. For example, you had a $620 total return on a $2,000 investment over three years. So, your total return is 31 percent. Your annualized return is 9.42 percent. This is derived by: $(1+.31)^{(1/3)} - 1 = 9.42\%$.[1]

If the price of the stock drops during the period you own it, and you have a loss instead of a profit, you do the calculation the same way but your return may be negative if income from the investment hasn't offset the loss in value.

Remember that you don't have to sell the investment to calculate your return. In fact, figuring return may be one of the factors in deciding whether to keep a stock in your portfolio or trade it in for one that seems likely to provide a stronger performance.

[1] The standard formula for computing annualized return is $AR=(1+\text{return})^{1/\text{years}} - 1$

In the case of bonds, if you're planning to hold a bond until maturity you can calculate your total return by adding the bond income you'll receive during the term to the principal that will be paid back at maturity. If you sell the bond before maturity, in figuring your return you'll need to take into account the interest you've been paid plus the amount you receive from the sale of the bond, as well as the price you paid to purchase it.

There are several things to keep in mind when you evaluate return, however:

1. To be sure your calculation is accurate, it's important to include the transaction fees you pay when you buy your investments. If you're calculating return on actual gains or losses after selling the investment, you should also subtract the fees you paid when you sold.

2. If you reinvest your earnings to buy additional shares, as is often the case with a mutual fund and is always the case with a stock dividend reinvestment plan, calculating total return is more complicated. That's one reason to use the total return figures that mutual fund companies provide for each of their funds over various time periods, even if the calculation is not exactly the same result you'd find if you did the math yourself.

   One reason it might differ is that the fund calculates total return on an annual basis. If you made a major purchase in May, just before a major market decline, or sold just before a market rally, your result for the year might be less than the fund's annual total return.

3. It's also important to consider after-tax returns in measuring performance. For example, interest income from some federal or municipal bonds may be tax-exempt. In this case, you might earn a lower rate of interest but your return could actually be greater than the return on taxable bonds paying a higher interest rate.

   After-tax returns are especially important in your taxable accounts, since every year the amount you can reinvest is reduced by the taxes you pay, and the effect of smaller reinvestment amounts increases with time—a kind of compounding, but in reverse. This phenomenon is sometimes described as opportunity cost. That's one reason you may want to emphasize investments that don't pay much current income in your taxable accounts. In tax-deferred accounts, taxes are less of an issue since no tax is due when the earnings are added to your account, though you will owe tax when you withdraw.

4. With investments you hold for a long time, inflation may also play a big role in calculating your return. Inflation means your money loses value over time. It's the reason that a dollar in 1950 could buy a lot more than a dollar in 2013. The calculation of return that includes inflation is called real return. You'll also see inflation-adjusted dollars called real dollars. To approximate your real return, you subtract the rate of inflation from your percentage return. In a year in which your investments returned 8 percent but inflation sent prices rising 3 percent, your real return would be only about 5 percent.

As you gain experience as an investor, you can learn a lot by comparing your returns over several years to see when different investments had strong returns and when the returns were weaker. Among other things, year-by-year returns can help you see how your various investments behaved in different market environments. This can also be a factor in what you decide to do next.

4. Capital Gains and Losses

Investments are also known as capital assets. If you make money by selling one of your capital assets for a higher price than you paid to buy it, you have a capital gain. In contrast, if you lose money on the sale, you have a capital loss. Capital gains and losses may be a major factor in your portfolio performance, especially if you are an active investor who buys and sells frequently.

In general, capital gains are taxable, unless you sell the assets in a tax-free or tax-deferred account. But the rate at which the tax is calculated depends on how long you hold the asset before selling it.

Profits you make by selling an asset you've held for over a year are considered long-term capital gains and are generally taxed at a lower rate than your ordinary income. However, short-term gains from selling assets you've held for less than a year don't enjoy this special tax treatment, so they're taxed at the same rate as your ordinary income. That's one reason you may want to postpone taking gains, when possible, until they qualify as long-term gains.

With some investments, such as stocks you own outright, you can determine when to buy and sell. You will owe taxes only on any capital gains you actually realize—meaning in those instances where you've sold the investment for a profit. And even then you may be able to offset these gains if you sold other investments at a loss.

Mutual funds are different from stocks and bonds when it comes to capital gains. As with a stock or a bond, you will have to pay either short- or long-term capital gains taxes if you sell your shares in the fund for a profit. But even if you hold your shares and do not sell, you will also have to pay your share of taxes each year on *the fund's* overall capital gains. Each time the managers of a mutual fund sell securities within the fund, there's the potential for a taxable capital gain (or loss). If the fund has gains that cannot be offset by losses, then the fund must, by law, distribute those gains to its shareholders.

If a fund has a lot of taxable short-term gains, your return is reduced, which is something to keep in mind in evaluating investment performance. You can look at a mutual fund's turnover ratio, which you can find in a mutual fund's prospectus, to give you an idea of whether the fund might generate a lot of short-term gains. The turnover ratio tells you the percentage of a mutual fund's portfolio that is replaced through sales and purchases during a given time period—usually a year.

Exchange-traded funds (ETFs) can be a bit more complicated when it comes to capital gains. As with any investment, you will have to pay either short- or long-term capital gains taxes if you sell your shares for a profit. The actual rate you will pay, however, depends on the ETF's structure and the type of assets it holds. While most ETFs are structured as investment companies, some may be structured as trusts or limited partnerships. In addition, ETFs can hold a variety of assets—equity, bonds, or commodities, among others— that may trigger different capital gains tax rates. In some cases, the ETF's own capital gains may cause you to owe taxes even if you have not sold your shares. For these reasons, it is very important that you understand how any ETF is structured and what asset category it holds before you invest.

Unrealized gains and losses—sometimes called paper gains and losses—are the result of changes in the market price of your investments while you hold them but before you sell them. Suppose, for example, the price of a stock you hold in your portfolio increases. If you don't sell the stock at the new higher price, your profit is unrealized because if the price falls later, the gain is lost. Only when you sell the investment is the gain realized—in other words, it becomes actual profit.

This is not to say that unrealized gains and losses are unimportant. On the contrary, unrealized gains and losses determine the overall value of your portfolio and are a large part of what you assess in measuring performance, along with any income generated by your investments. In fact, many discussions of performance in the financial press, especially regarding stocks, focus entirely on these price changes over time.

5. Tracking Performance

One of the most important things you can do when tracking your investments is to have realistic expectations and to compare performance against an appropriate measure. A percentage return that could be considered weak in one market or economic environment might be considered strong in another. There's no single, unchanging standard—for instance, that all stocks should return a specific percentage each year. Instead, performance standards are moving targets—and historical returns are typically averages. That's why it's important to judge an investment in the context of your portfolio strategy as well as against an appropriate standard or benchmark.

Using benchmarks

Generally, when people refer to the stock market's performance, they're actually referring to the performance of an index or average that tracks representative stocks or bonds. The index serves as an indicator of the overall direction of the market as a whole, or of particular market segments. Investors use these indexes and averages as benchmarks, to see how particular investments or combinations of investments measure up.

For example, when a mutual fund manager says the fund's objective is to "beat the market," it generally means the manager attempts to assemble a portfolio that has a stronger return than a particular benchmark. In contrast, the objective of index mutual funds is to replicate the performance of the market they track and the fund managers typically structure their portfolios by purchasing all of or a sample of the investments that make up their chosen benchmark.

Though the terms "index" and "average" are sometimes used interchangeably, they're actually quite different because of the way they're calculated. Averages add up all the prices of the investments included in their roster and divide by the number of investments. Indexes, on the other hand, set a base starting value for their holdings at some point and then calculate percentage changes from that base. The best-known market measurement, the Dow Jones Industrial Average, is called an average but it's actually calculated using a blend of the two approaches.

Some of the more frequently cited indexes and averages are these:

- **Dow Jones Industrial Average.** The most widely cited measure of the market, the DJIA tracks the performance of 30 stocks of large, well-known companies.

- **S&P 500 Index.** Standard and Poor's index tracks 500 stocks of large U.S. companies and is the basis for several index mutual funds and exchange-traded funds.
- **Russell 2000.** This index tracks 2,000 small-company stocks and serves as the benchmark for that component of the overall market.
- **Dow Jones Wilshire 5000.** Tracking over 5,000 stocks, the Wilshire covers all the companies listed on the major stock markets, including companies of all sizes across all industries.
- **Lipper Fund Indexes.** Lipper calculates several indexes tracking different categories of mutual funds, such as Growth, Core or Value funds.
- **Barclays Capital Aggregate Bond Index.** This is a composite index that combines several bond indexes to give a picture of the entire bond market.

When choosing a benchmark, it's important to know what you're comparing your investment against and what the comparison means. For example, when you compare a stock's performance to the performance of the S&P 500, you're comparing it to U.S. large-company stocks. When you compare it to the Russell 2000, you're comparing it to small-company stocks. When you compare it to the Dow Jones Wilshire 5000, you're viewing it against the field of all listed U.S. stocks.

Which benchmark should you use? In general, if you want to know how an investment is performing you look at the benchmark that tracks investments that are most like it.

For example, it makes sense to compare the performance of a large-company stock or large-company mutual fund to large-company stock indexes, and small-company stocks or funds to small-company stock indexes. If you're concerned with how your stock is faring against others in its industry, you compare it against an industry benchmark. Comparing an investment to a vastly different benchmark may give you some information. For example, you may discover that your small-company stock fund isn't performing as well as the total stock market.

But that information might be of limited use, especially if small-company stock funds are an important part of your portfolio mix that you have included because they perform differently from the total stock market, and so you could reduce the risk of your portfolio. Instead, if you compare your small-cap stock fund against a small-cap index, and your fund is actively managed, you'll get a sense of whether your fund manager is performing well after the fees the fund is charging, or if you might be better off investing in a passively managed small-cap index fund.

There are, however, valid reasons for making cross-category comparisons when evaluating the performance of your entire portfolio as opposed to a single investment. For instance, you may be curious about whether your portfolio of stocks is doing as well as a mutual fund that has an investment objective similar to yours. Or, you may be considering changing your strategy by shifting some of your money to a different subclass of investment. In that case, you could compare the returns for your current portfolio to the benchmark for the class of investments you're considering.

You should always keep in mind, though, that you can't count on the market to behave the same way in the future as it has in the past. These comparisons, while a helpful way to evaluate your investment options, should not be considered predictors of future performance.

Another important rule to keep in mind when measuring investment performance against benchmarks is to examine returns over longer periods of time—ideally, several years versus one year or one quarter. Short-term results can be misleading because a particular company or fund may have a banner year or suffer a slump in comparison to its benchmark. But these results may be due to one-time events, which may be unusual and not a fair representation of the investment's performance over time.

On the other hand, the market as a whole could have an exceptionally good or bad quarter in the midst of what's known as a sideways market, where there's little long-term change. Benchmarking against an atypical quarter could give you a skewed view of actual performance of a particular investment.

Finally, you'll want to keep in mind that not all benchmarks are indexes or averages. For example, the standard benchmark for long-term bond yields is the yield of the 30-year U.S. Treasury bond.

6. Reading Your Statement

Keeping track of your investments is important, but you might wonder how often you should check on them. Some investors look at their portfolio values daily or weekly, and if you own extremely volatile investments and have a short-term investment strategy, that can be a good idea.

However, if your strategy is long-term, it's important not to get overly concerned with short-term fluctuations in value, since trading based on short-term volatility could sidetrack your long-term goals and cost you money in taxes and transaction fees. Instead, you may want to check performance monthly or quarterly on the statements you receive from your investment accounts.

It's important to read your statements before you file them away, both because you need to know how you're doing in relation to your goals and because you need to see whether your statement is accurate, with all your trades accounted for and recorded correctly.

If you have all of your investments in accounts with a single financial services company, you may get a consolidated statement containing information about all your accounts. However, if you have accounts at several firms, or if you have both tax-deferred and taxable accounts, you may need to look at several different statements to get a complete picture of your total portfolio performance.

In addition to sending you regular statements, many brokerage houses give you 24-hour access to your account information online, so you can look up the latest values for your holdings any time you like. In addition, you may be able to access your account information by phone or via an app on your smartphone.

Your monthly or quarterly statement will generally tell you the current market value of your investments as of the closing date, the change in value since the last statement and the year-to-date change. You'll also see a record of your transactions for the previous period, including purchases and sales, and information on dividends, bond income and mutual fund distributions, as well as realized and unrealized capital gains and losses. Some statements also show projected earnings and provide pie charts showing how your portfolio is allocated.

Most likely, your returns will fluctuate throughout the year, reflecting both the fortunes of your particular investments and the ups and downs of the overall market. This is where benchmarks can come in handy, so you can compare the returns in your statement with the returns of other investments. For example, if the market is strong but your portfolio value is flat, that might be a sign for you to look more closely at your individual investments. Yet if your portfolio slumps when markets everywhere are falling, your portfolio may simply be reflecting market conditions.

7. Using Research

Another way to evaluate your investments' ongoing performance is through analyst research. Analysts at brokerage firms and at independent research firms look not only at current performance, but also at future potential to give you a picture of an investment's strengths and weaknesses in the context of the wider market. Analysts also recommend actions based on performance. The actual language analysts use may vary, but in general, they recommend that you buy, hold or sell an investment.

Whether you actually buy or sell based on an analyst's recommendation is up to you. Among other things, you should decide whether buying or selling a particular investment is in line with your individual investing strategy. You should always look at analyst research in the context of your own goals and your own expectations for performance.

Furthermore, analysts don't always agree with each other. As a general rule, they also tend to give more positive than negative recommendations. If you're using professional research, it may be a good idea to read the recommendations of several analysts to help you determine how an investment is performing and whether you should make any changes to your portfolio.

With bonds, analysts don't give buy, hold and sell ratings. Instead, they provide credit ratings, which measure an issuer's financial ability to meet its debt obligations. If you've bought highly rated bonds, called investment-grade bonds, you'll rarely find the issuer's credit rating changing dramatically enough to affect your investment's return. However, unless you've bought U.S. Treasury debt, a lowered credit rating is always a possibility.

To keep current with your investments, you should also look at the reports issued by companies relating to their financial situation and future prospects. For example, companies that issue public stock must provide shareholders with annual reports, and they must also file annual reports with audited financial statements, known as 10-Ks, with the Securities and Exchange Commission, which you can find online using the SEC's EDGAR database at www.sec.gov/edgar.shtml.

Companies also file quarterly reports with the SEC. You can use these reports to evaluate corporate performance in more depth than you can manage by simply checking prices and yields online. You might also want to keep in mind that the annual report that companies send to shareholders, while easier to read than the 10-K, is usually designed to emphasize the positive aspects. The 10-K is plainer and more direct, and may provide insights you may overlook in an annual report.

Mutual funds also provide semi-annual and annual reports to help you track the fund's progress. The reports give you information about returns and fees, plus a list of the fund's holdings, so you can check the underlying investments that the portfolio manager has chosen. By comparing these reports over time, you can see how the fund's holdings have changed. You should also compare the fund's results to the appropriate benchmark, to see how it fares next to its peers. Most mutual fund reports provide this information, often in the form of a comparison chart.

In addition, it's very easy to set up online news trackers that will email you stories on the companies, funds, industries and markets that you're interested in. This way, you can be on the lookout for news that might have an impact on your investments, and provide you time to analyze the situation and decide what changes, if any, to make to your portfolio.