

## Measuring Mutual Fund Performance

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## Measuring Mutual Fund Performance

Perhaps the question most frequently asked by mutual fund investors is: How is a fund doing? That question is an essential one to consider *before* investing in any fund, or when you review an existing investment portfolio to make sure it's on course toward meeting your financial goal.

Unfortunately, evaluating a fund's performance can't be done simply by checking the investment returns of the fund, although that is a good starting point. Instead, an investor should see how the fund's returns compare with those of similar funds or with appropriate market indexes. It's also important to consider whether the fund is suitable given the investor's financial objective and time horizon (the length of time until you will need the money).

Two issues that are often overlooked involve costs and taxes. Costs can significantly reduce earnings on a fund investment, while taxes reduce the earnings that you are allowed to keep—and different types of funds have very different tax implications.

This brochure discusses the key issues in evaluating the performance of a fund. Keep in mind that much of the information about mutual funds is historical in nature. While past performance may help you to better understand a fund's risk and return characteristics, history is not a reliable predictor of future results. It's also important to study the fund's *current* characteristics, which can give you a sense of how the fund may perform going forward.

**Contents**

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What Is Total Return? ..... 1

Returns Vary by Type of Asset ..... 3

Using Total Return Data ..... 4

Put Performance in Perspective ..... 7

Don't Overlook a Fund's Risks ..... 8

Use the Proper Measuring Stick ..... 11

Other Factors to Think About ..... 14

How to Keep More of Your Returns ..... 16

Stay the Course ..... 20

How Vanguard Can Help..... 21

## WHAT IS TOTAL RETURN?

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To evaluate a mutual fund's investment performance, investors should start by studying its total return. Simply put, total return is the sum of a fund's income and capital returns—after ongoing expenses are paid.\* The nature of total return varies greatly from one type of fund to another, but all include one or both of the following components:

- **Income return.** A mutual fund may produce current income from investments in interest-bearing securities such as bonds or money market instruments, or from dividends paid on common stocks owned by the fund. Yield is the dividend and interest income that a fund pays over a time period—and it should not be confused with total return, which includes any capital returns.
- **Capital return.** When the securities held by a mutual fund rise in value—or appreciate—above the price at which they were purchased, the fund has a positive capital return. This can create capital gains when the fund sells the securities or when an investor sells fund shares. Investments that can generate capital gains can also suffer capital losses if the securities decline in price, as shown in **Figure 1**.

Figure 1

The impact of capital returns		
	Fund A	Fund B
Income return	2%	3%
Capital return	6%	-5%
Total return	8%	-2%

Understanding the components of a fund's total return can help you determine whether that fund is appropriate given your

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\*A more precise definition is that total return is the change in the value of an investment in a fund, taking into account any change in the fund's share price during the period and assuming the reinvestment of income dividends and capital gains distributions. This calculation of total return does not factor in the effect of income taxes, which would reduce the total return on funds held in taxable accounts. A fund's ongoing expenses are reported as an *expense ratio*—annual expenses as a percentage of average annual net assets.

investment goal, the amount of time until you expect to sell the investment in the fund, your tolerance for investment risk, and your financial condition. For instance, if you need current income, select a fund (such as a money market or bond fund) whose total return comes primarily from income rather than capital growth.

### Funds make money different ways

Although there are thousands of funds to choose from, most fit into one of four basic categories, depending on the assets held in the fund.

- **Money market funds\*** invest in very short-term debt, and their total returns should consist entirely of interest payments. Money market funds are sometimes referred to as short-term reserves—or simply as cash.
- **Bond funds** invest in longer-term debt, and they typically earn the largest part of their total returns from interest payments—but they can also generate capital gains or losses.
- **Stock funds** invest in common stocks, which represent part-ownership in corporations, and the bulk of their total returns usually comes from capital returns, although they can also receive income from dividends and cash investments.
- **Balanced funds** invest in both stocks and bonds (and, sometimes, cash investments), so they combine the benefits and the risks of the three other types of funds.

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Total return is a good place to start in evaluating a mutual fund, but you shouldn't stop there. You may reasonably choose a fund with lower historical returns if you prefer lower risks and a less volatile return.

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\*An investment in a money market fund is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although a money market fund seeks to preserve the value of your investment at \$1 per share, it is possible to lose money by investing in such a fund.

# RETURNS VARY BY TYPE OF ASSET

Each of the three main financial asset classes—cash, bonds, and stocks—derives a different proportion of its total return from income versus capital return, as shown in **Figure 2**. While total return is the most complete measure of a fund's performance, investors too often ignore how much of the total return comes from income return (dividends and interest) and how much from capital return.

In assessing a mutual fund, it is often useful to consider total return in terms of its income and capital components, especially when you are relying on your investments for current income. Capital returns are both unpredictable and volatile—sometimes positive and sometimes negative. Over long periods, this volatility is dampened in balanced funds, even more muted in bond funds, and lowest of all in money market funds. The dividend payments of stock and balanced funds have been fairly stable, tending to rise slightly over time, while the dividends on money market funds have often fluctuated significantly.

Of course, future returns for any type of fund are likely to vary—sometimes substantially—from historical numbers. In addition, the characteristics of those returns (such as their volatility) could also change.

Figure 2

<b>Components of total return</b>			
Average annual returns: 1926–2000			
	<b>Income Return</b>	<b>Capital Return</b>	<b>Total Return</b>
<b>Cash investments</b>			
(U.S. Treasury bills)	3.9%	0.0%	3.9%
<b>Bonds</b>			
(Long-term U.S. corporate bonds)	6.1	−0.5	5.6
<b>Stocks</b>			
(S&P 500 Index)	4.6	6.4	11.0

Note: The various returns for each asset class may at times differ from the historic figures shown in this table. For instance, the income return on stocks in recent years has been under 2% a year—even though the total return has been higher than the historical 11% figure.

Source: The Vanguard Group.

## USING TOTAL RETURN DATA

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Merely knowing a fund's past total return—particularly for shorter periods such as one or two years—doesn't enable you to properly evaluate the fund. Investors should use long-term performance

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The total return data for funds that charge sales commissions (or "loads") do not include the effect of the sales charges—which reduce the actual return you receive.

data whenever possible, compare a fund's returns with those of similar funds or with an appropriate market benchmark, and keep in mind that market conditions vary from year to year—so it's unlikely that last year's performance will be duplicated this year.

Reliable information about total returns is readily available. The

Securities and Exchange Commission requires all fund marketing literature and any advertising that provides performance data to report 1-, 5-, and 10-year total returns as of the most recent calendar quarter.

### **Use long-term performance data**

The longer the period covered by fund performance data, the more reliable your conclusions about the fund's record—unless the fund has changed advisers during that period. While comparing returns over just one year is of little value in determining the relative merits of two funds, comparing year-by-year returns (to see how performance has varied over time) can be a revealing exercise.

### **Use the same time period**

When comparing two funds, it is essential that you compare total returns for the *same period* for both funds. Market conditions can vary significantly from one period to another, even for long periods of time—a phenomenon called "period sensitivity." For instance, U.S. stocks had an average annual total return of 14.8% for the ten

years ended September 30, 1997, but an average of 17.2% for the ten years ended October 31, 1997\*—*two 120-month periods that overlap for 119 months*. An investor who compared one stock fund's performance for the period ended October 31 might mistakenly conclude that the fund was superior to a second stock fund that had lower returns for the period ended September 30. The reason for the difference in total returns is that one of the measurement periods began *after* the October 1987 crash—when the stock market fell 22% in a single day.

### **Total return is reported two ways**

Total return is commonly reported as an average annual percentage. An investment that has an average annual return of 10% for five years will have grown 61% across that entire period because of compounding (the 10% return is earned on both the original principal and earnings from years two through five).

#### **Measuring your personal returns**

Shareholders sometimes ask why their personal returns (or the changes in the value of a fund investment) don't always match the returns reported by the mutual fund company for that fund. Here's why: In calculating total return, a fund company assumes that dividend and capital gains distributions are all reinvested and that there are no redemptions or other purchases during the period. If you do not reinvest distributions, if you purchase or redeem shares during the period, or if you do not hold the shares for the full period, then your personal return likely will not match the fund's reported total return for the period.

Investors who would like to calculate their personal returns on portfolios may do so with the help of personal finance software such as Quicken®. Of course, any return figure can only be evaluated in comparison with an appropriate benchmark. Unfortunately, it's not likely that there is a reliable benchmark for an individual's unique mix of investments.

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\*Performance based on the Standard & Poor's 500 Index.

Sometimes fund companies advertise “cumulative returns,” which show how much an investment has grown (or shrunk) over several

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Checking long-term performance records of some funds and fund managers may not be possible. New funds are created each year, and some existing funds change managers frequently.

years. A seemingly impressive cumulative return, when translated into average annual returns, may not be impressive at all. Consider a large-company stock fund that, during the ten years ended December 31, 2000, had a cumulative return of 210%—a seemingly strong performance.

But during that same period the S&P 500 Index’s total return was 400%—or 17.5% a year—so the fund’s relative performance was actually poor.

While both average annual and cumulative return data can be useful, neither provides information about the volatility of a fund’s total return—and the level of volatility could be a key factor in your decision to invest in a particular fund. Reviewing a fund’s year-by-year results may be a better way to gauge how much its returns have fluctuated in the past, as shown in **Figure 3**.

Figure 3

**Identical returns can be reached with varying degrees of volatility**

	Average Annual Total Return	Annual Total Returns (percentages)									
		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Fund A	19.05%	41.30	4.20	4.60	1.68	39.88	20.39	29.35	37.30	39.04	-12.21
Fund B	19.05%	58.68	1.12	3.62	-8.35	47.19	17.05	16.79	64.00	58.48	-28.23

**Two mutual funds had identical average annual total returns for the ten years ended in 2000, although their year-by-year returns varied. Fund B had four years that were better—significantly better—than the best year for Fund A. But Fund B underperformed Fund A in six of the ten years, and it also had two years in which it lost money. An investor who loses confidence because of such uneven performance may not be able to “stay the course” toward long-term financial goals.**

## PUT PERFORMANCE IN PERSPECTIVE

Historical performance isn't a good predictor of future results, as **Figure 4** demonstrates. Funds that ranked high in one year often performed poorly in subsequent years. Over time, there's a tendency for once top-performing funds to produce only average results. Investors should be careful to not chase the latest "hot" fund based on performance during the most recent month, quarter, or 1-, 5-, or 10-year period. Many top-performing funds achieved their spectacular returns because of temporary market movements or because they invested in narrow segments of the stock market. These hot investments invariably cool off and are replaced by another group of short-term stars.

Figure 4

### Hot funds can turn cold

The top ten general U.S. stock funds in 1991 did not do so well in later years. Their rankings in other years are shown below.

	1991	1992	1995	2000
<b>Number of funds considered</b>	<b>605</b>	<b>687</b>	<b>1,465</b>	<b>4,545</b>
<b>Fund (investment focus)</b>				
Fund A (multi-cap value stocks)	1	90	126	2,304
Fund B (mid-cap core stocks)	2	308	479	4,301
Fund C (specialty diversified stocks)	3	71	1,465	4,518
Fund D (multi-cap growth stocks)	4	355	1,333	4,038
Fund E (multi-cap growth stocks)	5	570	573	3,749
Fund F (multi-cap growth stocks)	6	229	147	4,328
Fund G (small-cap growth stocks)	7	167	108	3,248
Fund H (large-cap growth stocks)	8	629	235	4,108
Fund I (multi-cap growth stocks)	9	81	205	3,877
Fund J (mid-cap growth stocks)	10	243	305	993

Ranking of funds at year-end are based on their total returns for that year.

Source: Lipper Inc.

## DON'T OVERLOOK A FUND'S RISKS

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Focusing only on a fund's recent returns means an investor is ignoring the fund's risk characteristics. A brief period of strong returns may simply be the result of a risky fund's volatility—and it might be followed by a period of very poor returns. But an investor may be able to obtain higher long-term returns by taking on additional, carefully considered risk. For instance, you might invest in the stock market for a goal that is many years away—expecting that you will probably receive higher long-term returns (and greater volatility) than if you invested in a money market fund.

Some of the key risks that affect mutual funds are the following:

- **Market risk** The general prices of stocks and bonds can move up and down dramatically. This risk may be reduced by holding an investment for a long period—at least ten years—or by investing in more than one asset class.
- **Interest rate risk** Bond prices and some common-stock prices can rise or fall because of changes in interest rates. When interest rates fall, bond prices rise. Conversely, when interest rates rise, bond prices fall.
- **Income risk** As interest rates change, so can the income provided by money market and bond funds.
- **Sector risk** If a fund's holdings are concentrated in a single industry, the fund is less diversified than the broad stock market and may provide lower returns than the market by a wide margin or for extended periods.

Of course, there are a number of other risks specific to particular types of funds. You can find a discussion of the relevant risks in a fund's prospectus.

## How to measure volatility

The net asset values (share prices) of stock and bond funds routinely fluctuate, but some fluctuate more than others. This volatility is an important consideration for investors, some of whom are better able to accept it because of their longer time horizon, greater tolerance for risk, or stronger financial circumstances. The following is a brief summary of some commonly used measures of historical volatility, which some investors use to estimate a fund's potential riskiness. These measures may change over time, as changes in a fund make it more or less volatile.

- **Beta.** A measure of how volatile a fund's past returns have been compared with an appropriate market benchmark. By definition, the benchmark's beta is 1. The returns of a fund with a high beta (more than 1) are expected to rise and fall more than those of the benchmark, while the returns of one with a low beta (less than 1) are expected to be less volatile than those of the benchmark. Of course, a fund's beta is based on its volatility for a given past period, and that may change over time. One word of caution: A fund may have a low beta in comparison with a market benchmark that is itself extremely volatile. That means the value of the fund would also be fluctuating considerably, though less so than the benchmark.
- **Duration.** An estimate of how much a bond fund's share price will rise or fall in response to a one-percentage-point change in interest rates. The share price of a bond fund declines when interest rates rise, and when interest rates fall, the share price rises. A bond fund's average duration (expressed in years) can be used to calculate how much the fund's share price will change in response to an increase or decrease in interest rates. The percentage change in the share price is equal to the duration multiplied by the percentage-point change in interest rates. (If rates fall 0.5 percentage point and a fund has a duration of 10 years, then the share price will rise about 5%.)

- ***R-squared*** A measure of how much a fund's past returns can be explained by the returns from the overall market or a benchmark index. If a fund's total return were precisely synchronized with the overall market's return or the index's return, its R-squared would be 1.00 (100%). If a fund's returns bore no relationship to the market's returns, its R-squared would be 0.00. The higher the R-squared, the more the fund's return is explained by the market's performance. The lower the R-squared, the more the return is explained by the fund manager's decisions.

### **Don't track just the share price**

Some investors monitor funds by checking the net asset value (share price) listed in daily newspapers and other publications. But the net asset value can provide a misleading picture of a fund's performance, which is best measured by its total return.

A fund's net asset value is reduced whenever a dividend or capital gain distribution is paid. The amount of the reduction often differs from the change in the net asset value on that day because of changes in the market price of the securities held by the fund. For example, say a fund has a net asset value of \$10, and it pays a \$0.10 dividend per share—so the net asset value is reduced by \$0.10. But if the securities in the fund declined 1% in value that day (\$0.10 a share), then the total change would be \$0.20, and the net asset value would be \$9.80—not the \$9.90 that would reflect only the dividend payment. An investor who only paid attention to the net asset value would think the fund had lost 2% that day—twice what it actually lost.

Finally, share prices of stock and bond funds fluctuate almost every day, but you need to keep those changes in perspective. For instance, a \$1 drop in a \$100 share price is a change of 1%, but a \$1 decline in a \$10 share price is a 10% shift.

## USE THE PROPER MEASURING STICK

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Historical performance alone doesn't tell you whether a fund's returns are good or bad. How well a fund has performed can better be determined by comparing the fund's performance with the performance of an appropriate benchmark during the same period. For instance, if a large-company stock fund returned 20% in 1998, some of its shareholders might have been pleased. After all, 20% is nearly twice the long-term historical average return for the stock market as represented by the S&P 500 Index. But that 20% return was well below the S&P 500 Index's total return of 29% that year, so the fund would have underperformed its benchmark.

Mutual fund performance can be gauged against two types of benchmarks or measuring sticks—market indexes and peer group averages. An index tracks the total return of all the securities (stocks or bonds) in the market or some segment of the market. Peer group averages measure the average returns achieved by a group of mutual funds with similar investment goals and policies. Two of the best-known providers of peer group averages are Morningstar, Inc., and Lipper Inc. The performance of major indexes and peer group averages is reported regularly in financial publications such as *The Wall Street Journal*.

Different market indexes are used as a basis of comparison for different types of funds. The one that is most appropriate for a given fund is typically listed in the fund's prospectus and its annual report.

### **Compare apples with apples**

The best-known and most-often quoted benchmark for the stock market is the Dow Jones Industrial Average. However, the Dow is rarely (if ever) an appropriate benchmark for a stock mutual fund because the Dow consists of only 30 of the largest U.S. companies. A broadly diversified large-company stock fund

is more aptly compared with a broader index (such as the S&P 500 Index) that more closely matches the fund's investment characteristics. Conversely, the S&P 500 Index, because it tracks the stocks of 500 of the largest U.S. companies, would not be an appropriate benchmark for a small-company stock fund. The best measure for the entire U.S. stock market is the Wilshire 5000 Total Market Index, which is based on more than 6,500 stocks.

Studying the appropriate market indexes\* can also provide an investor with perspective on a fund's potential risk. **Figure 5** shows the average annual total return for various indexes—as well as each index's largest one-year gain or loss. These data

provide an idea of the volatility of various types of investments.

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A fund's name may not accurately reflect its investment objective and policies. Carefully review a fund's current prospectus and its most recent annual report to make certain that the fund is an appropriate choice for your investment goal.

Of course, an actively managed fund may fare better or worse than its benchmark because of the concentration of its investments. For instance, if a stock fund has 40% of its assets invested in an industry that represents only 10% of the fund's benchmark index, then conditions in that industry will have a larger effect on the fund than on the index. Problems

in that industry could create a drag on the fund's returns relative to the index, while prosperous times could help the fund beat its benchmark.

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\*The performance of an index is not an exact representation of any particular investment as you cannot invest directly in an index. Benchmark comparative indexes represent unmanaged or average returns on various financial assets, which can be compared with funds' total returns for the purpose of measuring relative performance.

Figure 5

**Historical performance for selected market segments**

<b>Market</b>	<b>Index (Year of inception, average annual total return since inception*)</b>	<b>Largest Annual Gain (Year)</b>	<b>Largest Annual Loss (Year)</b>	<b>Average Annual Total Return 1991–2000</b>
All U.S. stocks	Wilshire 5000 Total Market Index (1971, 13.1%)	38.5% (1975)	-28.4% (1974)	17.0%
Large-cap U.S. stocks	Standard & Poor's 500 Index (1926, 11%)	54.2% (1933)	-43.1% (1931)	17.5%
Small- and mid-cap U.S. stocks	Wilshire 4500 Completion Index (1979, 14.3%)	43.5% (1991)	-15.8% (2000)	15.9%
Small-cap U.S. stocks	Russell 2000 Index (1979, 14.3%)	46.1% (1991)	-19.5% (1990)	15.5%
International stocks, excluding emerging markets	Morgan Stanley Capital International Europe, Australasia, Far East Index (1970, 12.2%)	69.9% (1986)	-23.2% (1990)	8.6%
All U.S. bonds	Lehman Brothers Aggregate Bond Index (1976, 9.3%)	32.6% (1982)	-2.9% (1994)	8.0%
Short-term investment-grade U.S. bonds	Lehman Brothers 1–5 Year Government/Credit Index (1976, 9.1%)	23.6% (1982)	-0.7% (1994)	6.9%
Intermediate-term investment-grade U.S. bonds	Lehman Brothers 5–10 Year Government/Credit Index (1976, 10.9%)	31.7% (1982)	-4.5% (1994)	8.4%
Long-term investment-grade U.S. bonds	Lehman Brothers Long Government/Credit Index (1973, 12.6%)	43.7% (1982)	-7.7% (1999)	9.6%
High-yield U.S. corporate bonds	Lehman Brothers High Yield Bond Index (1983, 9.9%)	46.2% (1991)	-9.6% (1990)	11.1%

\*Returns do not include partial-year results for the index's first calendar year.

Source: The Vanguard Group.

## OTHER FACTORS TO THINK ABOUT

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Before investing in a fund, carefully review its investment style, and check on how long the current fund manager has been on the job. Both factors can affect your assessment of a fund's past performance.

### **Investment style matters**

A fund's investment style can have an important impact on returns, both short- and long-term. For example, a value-oriented stock fund may have performed well during 1999, even if it lagged the overall stock market, because growth stocks were leading the bull market that year. Such cycles of variation in performance can last for several years; indeed, value stocks underperformed growth stocks for six years from 1994 through 1999. But in 2000, value stocks returned 6.1%—while growth stocks lost 22.1%.\* Performance also varies between large- and small-company stocks and between U.S. and international stocks. (Bond funds also have different performance characteristics, depending on the average credit quality and maturity of the bonds in each fund.)

### **A useful tool to show a fund's focus**

“Style boxes” such as those on the opposite page, are often used to illustrate the investment focus of a fund. The specific square filled in the style box grid indicates a fund's investment emphasis in two criteria, which vary depending on the type of fund. This does not mean that the fund holds only securities that fit those criteria—just that the largest part of its assets do.

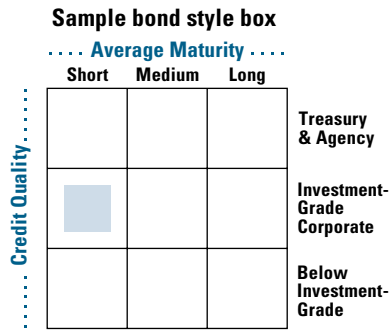
Stock style boxes typically classify mutual funds according to the size of the companies held in the fund and the investment style used by the fund manager (value, growth, or a blend). The size of a company is typically measured by the market value of its stock.

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\*Returns based on the S&P 500/BARRA Value Index and S&P 500/BARRA Growth Index.

Bond style boxes typically classify mutual funds according to the credit quality of the bonds held in the fund and the average maturity of the bonds (the average amount of time until principal and interest are due to be fully paid on the funds).

Credit quality is typically listed as high, medium, and low, but Vanguard uses a slightly different system for taxable bond funds. We divide the credit quality listing into Treasury & Agency (U.S. government bonds—the highest quality), Investment-Grade Corporate (the

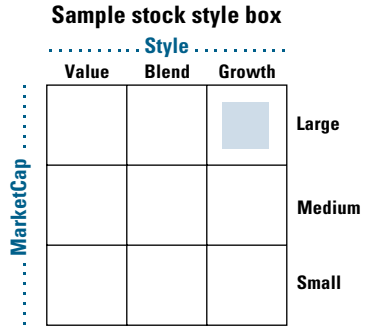


next-highest quality), and Below Investment-Grade (low quality). Along with most of the mutual fund industry, we classify tax-exempt bond funds (municipal bond funds) as having high, medium, or low credit quality.

A short-term bond fund has an average maturity of less than 5 years, an intermediate-term fund has an average maturity of 5 to 10 years, and a long-term fund has an average maturity of more than 10 years.

### Give credit or blame where it's due

Ask when the manager began running the fund—the current manager doesn't deserve credit or blame for the performance of a predecessor. In addition, a recently hired fund manager will only have a short-term record—and short-term results may not accurately reflect a manager's skill (or lack of skill).



## HOW TO KEEP MORE OF YOUR RETURNS

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Two other characteristics of mutual funds directly affect the ultimate results of your investments and should be kept in mind when choosing a fund. A fund's operating expenses and transaction costs (from buying and selling securities) reduce the total return provided to shareholders, while the income tax due on the fund's income and capital gains reduces the amount of the return that the shareholder actually retains.

While investors cannot control a fund's expenses, they should carefully consider the costs associated with owning a particular fund. If the costs are high, then an investor should steer clear of the fund unless there is good reason to believe that the costs will be overcome by higher gross returns or that the investor will receive superior service that will make the added expense worthwhile.

An investor should also consider the tax liabilities that are likely to be incurred on an investment in a fund for a taxable account.

Taxes are due on capital gains and income distributed after a fund's operating expenses are paid. Long-term capital gains are taxed at lower rates than are dividends, interest payments, and short-term capital gains. A fund with a high turnover rate (the percentage of its holdings that are bought and sold in a year) may generate more short-term capital gains than long-term gains, possibly raising shareholders' tax bills. Similarly, a fund whose returns derive mainly from interest payments or dividends may cause shareholders to incur higher tax liabilities than a fund whose return comes mostly from long-term capital gains.

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Many funds levy sales charges, or "loads," which means fewer of your dollars get invested. Studies show that there's no difference in performance between load funds and no-load funds.

Source: Morningstar, Inc.

A fund's total returns are not consistent and stable from year to year, but other factors are—at least to some degree. By reviewing a fund's expenses, style of investing, turnover rate, and tax-efficiency, you can get an idea of how these factors are likely to affect the returns you receive in the future.

### **Why cost matters**

All mutual funds have expenses, but some funds are much more costly to own than others. Up-front sales commissions reduce the amount of your money that actually goes to work on your behalf. Ongoing operating expenses and other costs are deducted from the fund's returns before they are distributed to investors.

Loads can be charged when shares are purchased (front-end loads) or when they are sold (back-end loads). Ongoing operating expenses—expressed as the expense ratio—are deducted from the fund's returns before the returns reach shareholders. One type of operating expense charged by some—but not all—funds is the 12b-1 fee, which pays for marketing and distribution costs.

Before selecting a fund, consider how expenses can affect fund performance.

- Expenses act as a drag on investment returns—the higher the expenses, the greater the drag. One way to compensate for this is to seek higher returns—but a fund manager who tries for that may have to take additional risks.
- Index funds have tended to perform better than the averages (including actively managed funds) for their peer groups. This is because their lower portfolio turnover results in transaction costs that are below average, and they pay far less in investment management fees than actively managed funds. Over the last ten years, the overall U.S. stock market has outperformed 61% of actively managed diversified stock funds.\*

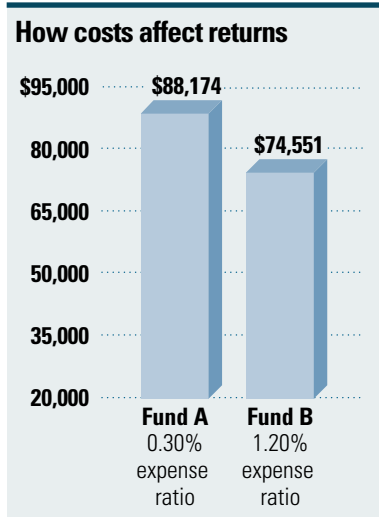
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\*Based on the Wilshire 5000 Total Market Index, according to Lipper Inc.

- The gross yields of comparable bond funds (those with similar average maturities and credit quality) tend to be fairly similar, so lower expenses should help a bond or money market fund provide higher net yields and returns to shareholders.
- Some funds may temporarily waive fees to attract shareholders. This practice boosts returns—until the fees are reinstated. At that point, investors who don't like the fees may not be able to redeem their shares without incurring taxable capital gains.

Vanguard strives to keep its expenses low and charges neither loads nor 12b-1 fees. The average expense ratio for Vanguard funds in 2000 was 0.27%, compared with 1.30% for the average mutual fund.\* **Figure 6** shows a hypothetical example of how costs can affect long-term returns.

Figure 6



**Investment expenses can have a major effect on investment returns, as shown in the example above. Over a 20-year period, a one-time investment of \$20,000 in Fund A, that has an annual expense ratio of 0.30%, grew to \$88,174. Meanwhile, a one-time \$20,000 investment in Fund B, that has an annual expense ratio of 1.20%, grew to \$74,551. The difference between the two results is \$13,623—or more than two-thirds of the value of the original \$20,000 investment.**

This example assumes an average annual return of 8%, before expenses, in a tax-deferred account. All dividends and distributions were reinvested. This is a hypothetical illustration and should not be considered indicative of the return on any particular investment.

\*Source: Lipper Inc.

## Keep taxes in mind

When it comes to investing, the money you get to keep after paying all taxes due is what is important.

Here are some ways to decrease your tax liabilities on income and capital gains from investments in taxable fund accounts. Consider:

- Investing in funds that produce relatively little income.
- Investing in tax-managed funds.
- Investing in tax-exempt bond funds.
- Taking advantage of tax deferral in retirement accounts, such as IRAs or 401(k) plans.

Keep in mind that tax considerations are less important than maintaining proper asset allocations for each of your investment portfolios, however.

## Look at the turnover rate

Another too-often-overlooked factor is a fund's turnover—the rate at which it buys and sells securities. A high turnover rate can be undesirable for two reasons:

- **Higher costs.** A mutual fund incurs transaction costs, such as brokerage commissions, whenever it buys or sells a security—and a fund with a higher turnover rate incurs more of those costs. These added costs—which are not reflected in the fund's expense ratio—reduce the amount received by investors.
- **Potentially higher taxes.** A stock or bond fund can realize a capital gain or loss any time it sells a security. Any *net* capital gain (the amount by which the fund's capital gains exceed its capital losses in a year) must be distributed to fund shareholders, who may then have to pay income taxes on the gain. In general, the higher a fund's turnover rate, the more likely the fund is to realize short-term rather than long-term capital gains—and short-term gains may be taxed at a higher rate than long-term gains.

## STAY THE COURSE

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Bear in mind that you can overanalyze fund performance and hurt your investment performance by switching from one fund to another in search of the highest possible returns. No one can predict with certainty the returns and volatility of the financial markets or individual funds for any given period. If a fund investment is growing at a pace that will meet your financial goals at an acceptable level of risk, then there is probably no reason to change. And by selling shares of a stock or bond fund, you may incur taxable capital gains or losses.

Many investors have a balanced personal portfolio, including stock, bond, and cash investments. The goal of such a portfolio is not to achieve the highest possible return but to help achieve financial goals at an acceptable level of risk. Because a balanced portfolio contains more than one asset class, its return will always be lower than the return provided by the best-performing asset class in any given period—but it will also be better than the return of the worst-performing asset class. (The same is true for a balanced mutual fund.)

Keep in mind why you own or want to own a particular fund. If you have a bond fund to provide a cushion against a possible downturn in the stock market, do not be dismayed if it fails to match the returns provided by stock funds in a bull market. Bonds historically have underperformed stocks over the long run. However, bond funds are useful for providing steady income and a stabilizing influence during a stock market decline. These are valid reasons for holding a fund, so it is important to remember a fund's purpose in your overall portfolio—not just its recent performance.

## HOW VANGUARD CAN HELP

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For more information about Vanguard® funds and services, to learn more about investing, or to open an account online, visit our website at [www.vanguard.com](http://www.vanguard.com). There you'll find our complete Plain Talk® Library, Retirement Center, and our popular Education Center. Register for immediate secure access to our online investment-management center, and you can monitor your accounts, conduct transactions, trade securities, and invest in both Vanguard and non-Vanguard funds—24 hours a day.

Or you can speak with a Vanguard associate by calling us at **1-800-662-7447** on business days from 8 a.m. to 10 p.m. and on Saturdays from 9 a.m. to 4 p.m., Eastern time. Our associates are always pleased to answer your questions or provide information about our funds and services.

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## **Invest with a leader**

The Vanguard Group traces its roots to the opening of its first mutual fund, Wellington™ Fund, in 1929. The nation's oldest balanced fund, Wellington Fund emphasized conservatism and diversification in an era of rampant market speculation. Despite its creation just before the worst years in U.S. financial history, Wellington Fund prospered and within a generation was one of the largest mutual funds in the nation.

The Vanguard Group was launched in 1975 solely to serve the Vanguard mutual funds and their shareholders. From its start as a single fund in an infant industry, Vanguard has become one of the largest investment management firms in the world. Today, some \$550 billion is invested with us in more than 100 investment portfolios. And some 11,000 crew members now serve millions of shareholders who have entrusted their investment assets—indeed, their financial future—to a company that they believe offers the best combination of investment performance, service, and value in the industry.



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