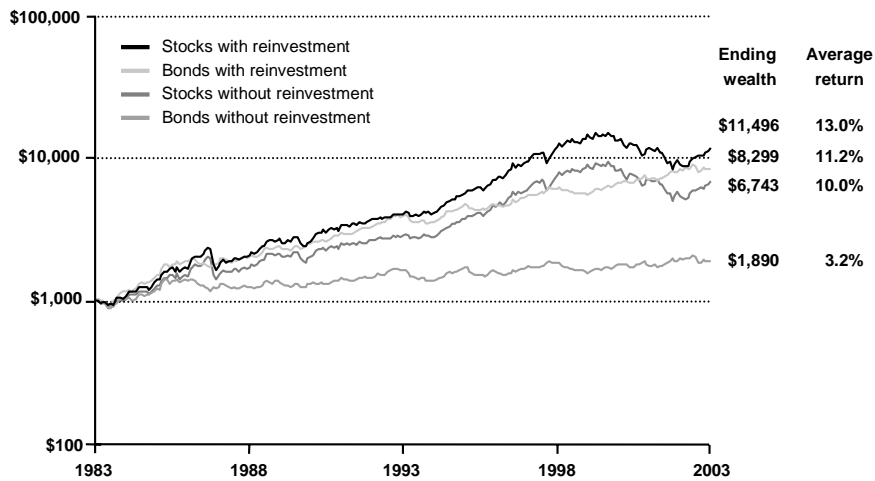


# Principles of Investing

**Power of reinvesting**

1983–2003



Hypothetical value of \$1,000 invested at year-end 1983.

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**Power of reinvesting 1983–2003**

The key to enhancing returns is the reinvestment of income. Returns decline dramatically if dividends or coupon payments are consumed rather than reinvested.

The image compares the difference in hypothetical growth of \$1,000 invested in stocks and bonds with and without reinvestment of dividends or coupon payments.

Reinvesting your income enables you to take advantage of compounding. With compounding, you earn income on the principal in addition to the reinvested dividends and coupon payments.

Growth of a hypothetical \$1,000 investment in stocks:

	<b>Ending value</b>	<b>Compound annual return</b>
with reinvestment:	\$11,496	13.0%
without reinvestment:	\$6,743	10.0%

Growth of a hypothetical \$1,000 investment in bonds:

	<b>Ending value</b>	<b>Compound annual return</b>
with reinvestment:	\$8,229	11.2%
without reinvestment:	\$1,890	3.2%

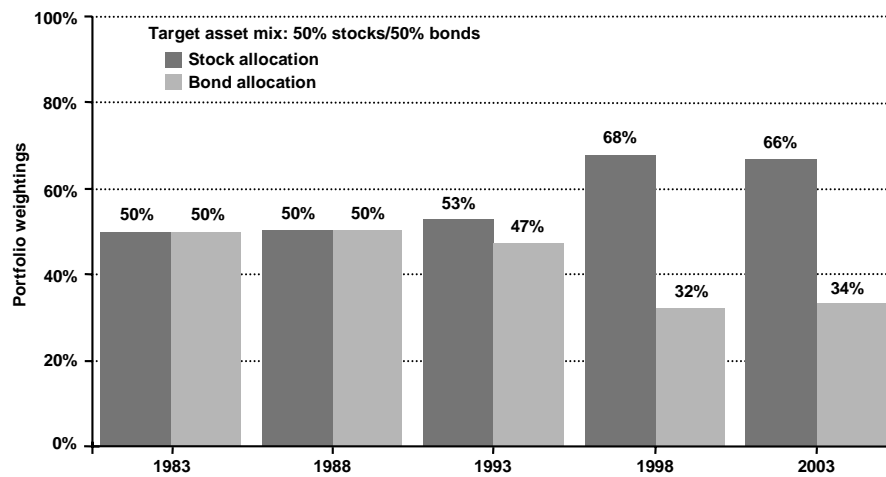
If you are an investor who does not need to spend the dividends or coupon payments, you should consider reinvesting the income in order to maximize the growth of your portfolio.

The information presented herein is for illustrative purposes only and not indicative of any investment. The data does not account for taxes or transaction costs. Total return represents capital appreciation, income, and reinvestment of income. Capital appreciation is the return due only to changes in price. The average return represents a compound annual return. Government bonds are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Stocks are not guaranteed and have been more volatile than bonds. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

Source: Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and is considered to be representative of the stock market in general; Bonds—20-year U.S. Government Bond.

## Importance of rebalancing

1983–2003



Assumes reinvestment of income and no transaction costs or taxes.  
Stocks: 50% large and 50% small company stocks. Bonds: intermediate-term government bonds.

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### Importance of rebalancing 1983–2003

Because asset classes grow at different rates of return, it is necessary to periodically rebalance a portfolio to maintain a target asset mix.

This image illustrates the effect of different growth rates on a static (unbalanced) portfolio over a 20-year period. In 1983, the target asset mix began with a 50% allocation to stocks and a 50% allocation to bonds.

The proportion of stocks in the portfolio grew modestly up through 1993 when it accounted for 53% of the portfolio. The bull market of the late 1990s helped propel the value of stocks, causing the portfolio to be overweighted. By 2003 stocks accounted for 66% of the portfolio.

Asset classes associated with high degrees of risk tend to have higher rates of return than less volatile asset classes. For this reason, a portfolio that is not rebalanced periodically may become more volatile (riskier) over time.

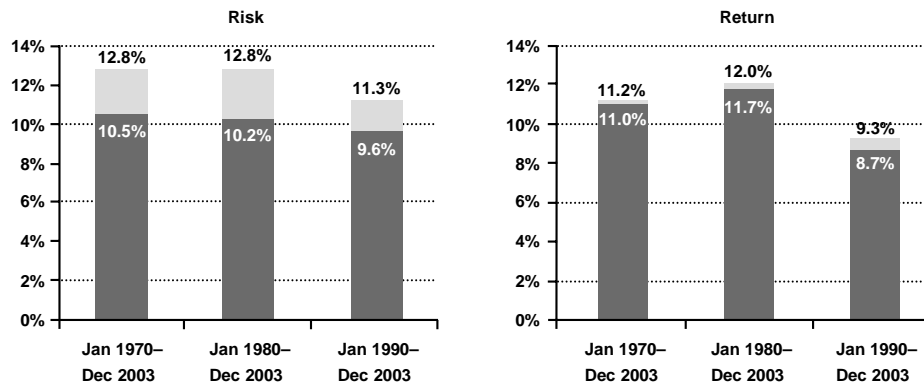
The information presented herein is for illustrative purposes only and not indicative of any investment. Government bonds are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Stocks are not guaranteed and have been more volatile than bonds. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

Source: Small Company Stocks—Dimensional Fund Advisors, Inc. (DFA) U.S. Micro Cap Portfolio; Large Company Stocks—Standard & Poor's 500®, which is an unmanaged group of securities and considered to be representative of the stock market in general; Intermediate-Term Government Bonds—5-year U.S. Government Bond.

## Rebalancing versus not rebalancing

The risk and return of rebalanced versus non-rebalanced portfolios

■ Non-rebalanced portfolio  
■ Rebalanced portfolio



Risk is measured by annualized standard deviation. Return is measured by annualized geometric mean.

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## Rebalancing versus not rebalancing

Historically, rebalancing a portfolio allowed investors to reduce portfolio risk without sacrificing too much return.

Over time, the investor's portfolio asset allocation policy can get disturbed by market ups and downs. For example, stocks tend to outperform bonds in the long run. Since stocks are riskier than bonds, greater allocation in stocks can also increase the portfolio risk. Rebalancing is an essential account management tool that helps to keep the portfolio within the risk tolerance level that is comfortable for the investor's asset allocation strategy.

The image compares the risk and return of portfolios that are rebalanced to those that are not rebalanced beginning at three different time periods. The first set of portfolios begins in January 1970 and ends in December 2003, followed by the second set that begins in January 1980 and ends in December 2003, and finally the third set that begins in January 1990 and ends in December 2003.

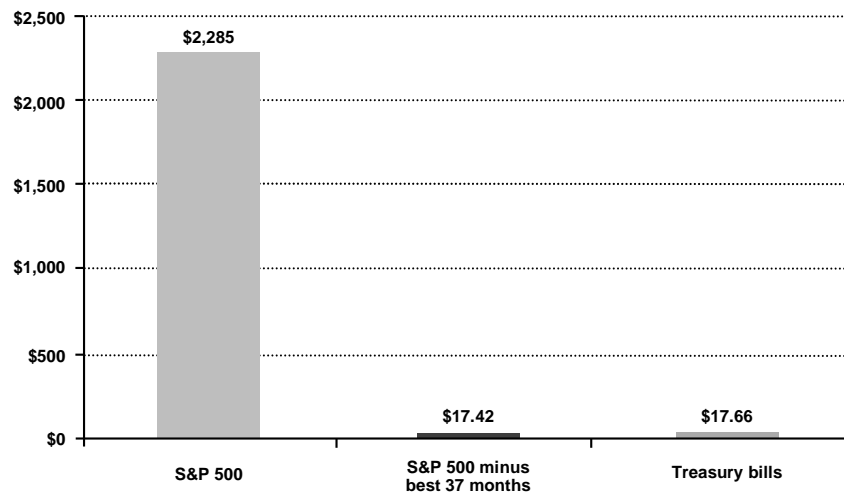
In all three portfolios, the rebalanced portfolio had a lower risk than the non-rebalanced portfolio. For instance, the rebalanced portfolio beginning January 1980 had a risk of 10.2%, which is only 79.6% of the 12.8% risk of the non-rebalanced portfolio. Although rebalancing was able to reduce the portfolio risk to the policy level, the tradeoff was a slight reduction in returns. For example, the rebalanced portfolio beginning January 1980 had a return of 11.7%, which is 97.5% of the 12.0% return of the non-rebalanced portfolio.

The information presented herein is for illustrative purposes only and not indicate of any investment. Each portfolio consisted of 60% stocks, 20% bonds, and 20% cash at portfolio begin date. Stocks consist of 33.3% large, 33.3% small, and 33.3% international stocks at each portfolio begin date. The bond allocation consists entirely of 5-year U.S. Government bonds, while the cash allocation consists of 30-day U.S. Treasury bills. The portfolios have been rebalanced semi-annually. Risk is measured by standard deviation. Standard deviation measures the fluctuation of returns around the arithmetic average return of the investment. The higher the standard deviation, the greater the variability (and thus risk) of the investment returns. The data assumes reinvestment of income and does not account for taxes or transaction costs. Government bonds are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. With government bonds, the investor is a creditor of the government. Stocks are not guaranteed and have been more volatile than bonds. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. International investments involve special risks such as fluctuations in currency, foreign taxation, economic and political risks, and differences in accounting and financial standards. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

Source: Large Company Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and considered to be representative of the stock market in general; Small Company Stocks—represented by the fifth capitalization quintile of stocks on the NYSE for 1926–1981 and the performance of the Dimensional Fund Advisors, Inc. (DFA) U.S. Micro Cap Portfolio thereafter; International Stocks—Morgan Stanley Capital International Europe, Australasia, and Far East (EAFE<sup>®</sup>) Index; Government Bonds—5-year U.S. Government Bonds; Cash—30-day U.S. Treasury Bill.

## Dangers of market timing

Hypothetical value of \$1 invested from year-end 1925–2003



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### Dangers of market timing 1925–2003

Investors who attempt to time the market run the risk of missing periods of exceptional returns. This practice may have a negative effect on a sound investment strategy.

This image illustrates the risk of attempting to time the stock market over the past 78 years.

A hypothetical \$1 investment in stocks invested at year-end 1925 grew to \$2,285 by year-end 2003. However, that same \$1 investment would have only grown to \$17.42 had it missed the 37 best months of stock returns. One dollar invested in Treasury bills over the 78-year period resulted in an ending wealth value of \$17.66. An unsuccessful market timer, missing the 37 best months of stock returns, would have received a return that was lower than Treasury bills.

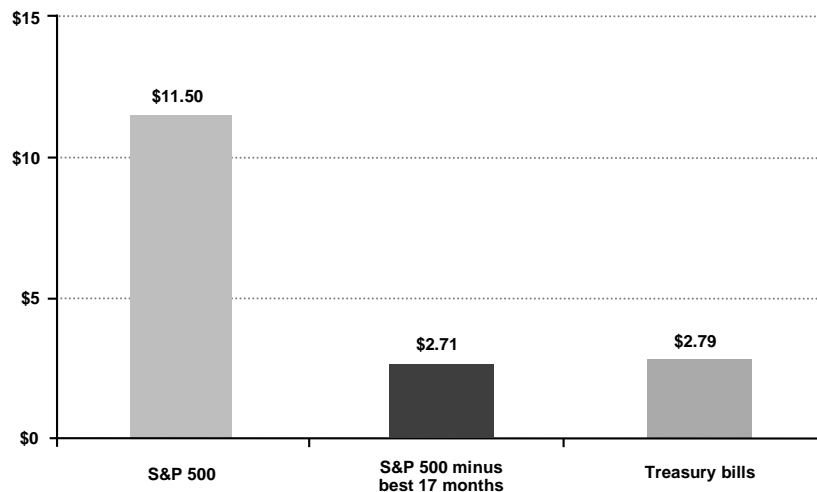
Although successful market timing may improve portfolio performance, it is very difficult to time the market consistently. In addition, unsuccessful market timing can lead to a significant opportunity loss.

The data presented herein assumes reinvestment of income and does not account for taxes or transaction costs. An investment cannot be made directly in an index. Returns and principal invested in stocks are not guaranteed. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. Government bonds and Treasury bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Past performance is no guarantee of future results.

Source: Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and considered to be representative of the stock market in general; Treasury Bills—30-day U.S. Treasury Bill.

## Dangers of market timing

Hypothetical value of \$1 invested from year-end 1983–2003



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### Dangers of market timing 1983–2003

Investors who attempt to time the market run the risk of missing periods of exceptional returns. This practice may have a negative effect on a sound investment strategy.

This image illustrates the risk of attempting to time the stock market over the past 20 years.

A hypothetical \$1 investment in stocks invested at year-end 1983 grew to \$11.50 by year-end 2003. However, that same \$1 investment would have only grown to \$2.71 had it missed the 17 best months of stock returns. One dollar invested in Treasury bills over the 20-year period resulted in an ending wealth value of \$2.79. An unsuccessful market timer, missing the 17 best months of stock returns, would have received a return that was lower than Treasury bills.

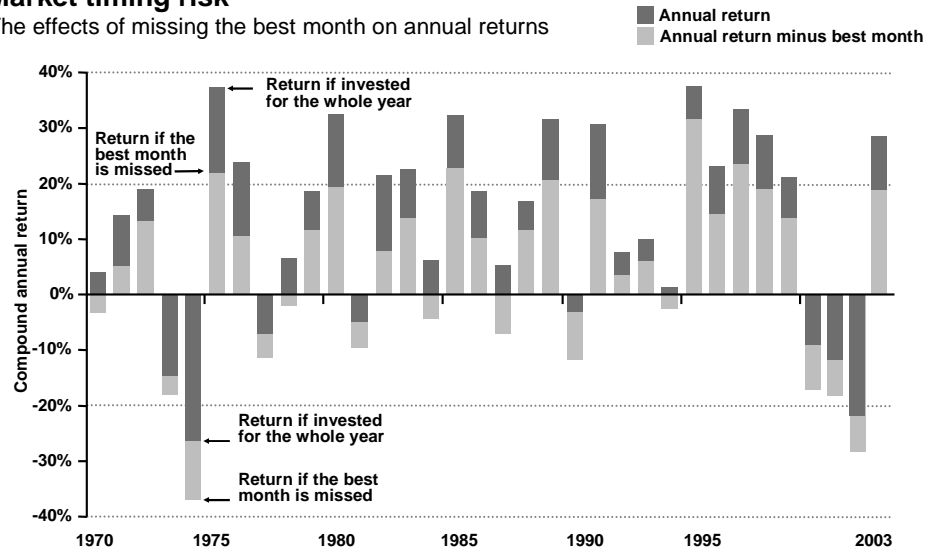
Although successful market timing may improve portfolio performance, it is very difficult to time the market consistently. In addition, unsuccessful market timing can lead to a significant opportunity loss.

The data presented herein assumes reinvestment of income and does not account for taxes or transaction costs. An investment cannot be made directly in an index. Returns and principal invested in stocks are not guaranteed. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. Government bonds and Treasury bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Past performance is no guarantee of future results.

Source: Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and considered to be representative of the stock market in general; Treasury Bills—30-day U.S. Treasury Bill.

## Market timing risk

The effects of missing the best month on annual returns



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### Market timing risk

Investors who attempt to time the market run the risk of missing periods of exceptional returns. This practice may have a negative effect on a sound investment strategy.

This image illustrates the risk of attempting to time the stock market by showing the effects of missing the one best month on an annual return.

Missing the one best month during a year drastically reduced returns. During years when returns were already negative, the effect of missing the best month only exaggerated the loss for the year. In five of the 34 years shown, 1970, 1978, 1984, 1987, and 1994, otherwise positive returns would have been dragged into negative territory by missing the best month in those years.

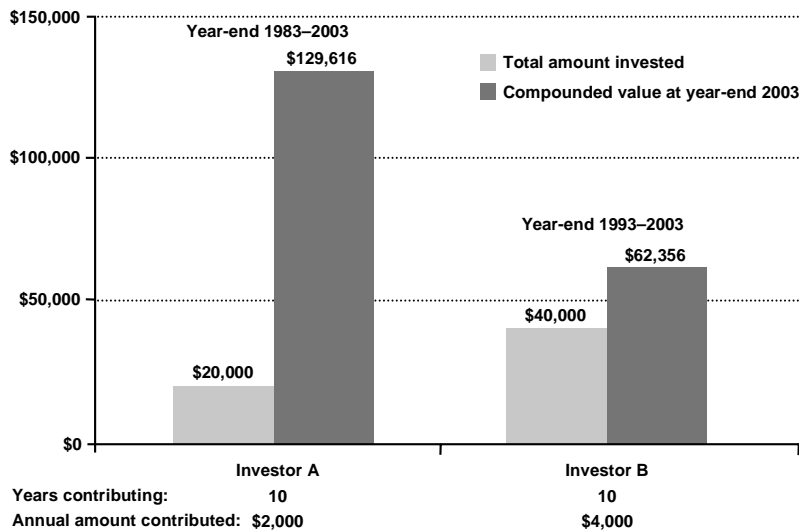
Although successful market timing may improve portfolio performance, it is very difficult to time the market consistently. In addition, unsuccessful market timing can lead to a significant opportunity loss.

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Source: Stocks—Standard & Poor's 500®, which is an unmanaged group of securities and considered to be representative of the stock market in general.

## Power of compounding

Hypothetical investment in stocks



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## Power of compounding

It's easy to procrastinate when it comes to initiating a long-term investment plan. However, the sooner you begin, the more likely it is that the plan will succeed.

This image illustrates the effects of compounding over time. Investor A began investing in stocks at year-end 1983, investing \$2,000 each year for 10 years. After 10 years, Investor A stopped contributing to the portfolio but allowed it to grow for the next 10 years. The \$20,000 outlay grew to \$129,616 by year-end 2003.

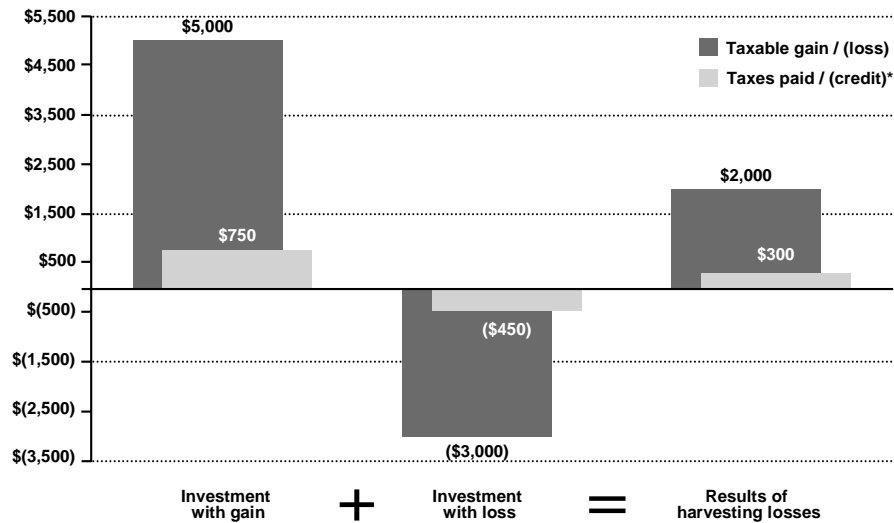
Investor B postponed investing for 10 years. At year-end 1993, Investor B began investing \$4,000 each year in stocks for 10 years. The \$40,000 outlay of Investor B grew to \$62,356 by year-end 2003.

By starting early, and thereby taking advantage of compounding, Investor A accumulated \$67,260 more than Investor B, while still investing \$20,000 less.

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Source: Stocks—Standard & Poor's 500®, which is an unmanaged group of securities and considered to be representative of the stock market in general.

## Tax-loss harvesting



\*Assumes capital gains tax rate of 15%.

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## Tax-loss harvesting

Selling losers to reinvest funds in investments that are similar in style may allow investors to maintain their long-term asset allocation and enjoy the benefits of a potentially lower tax bill.

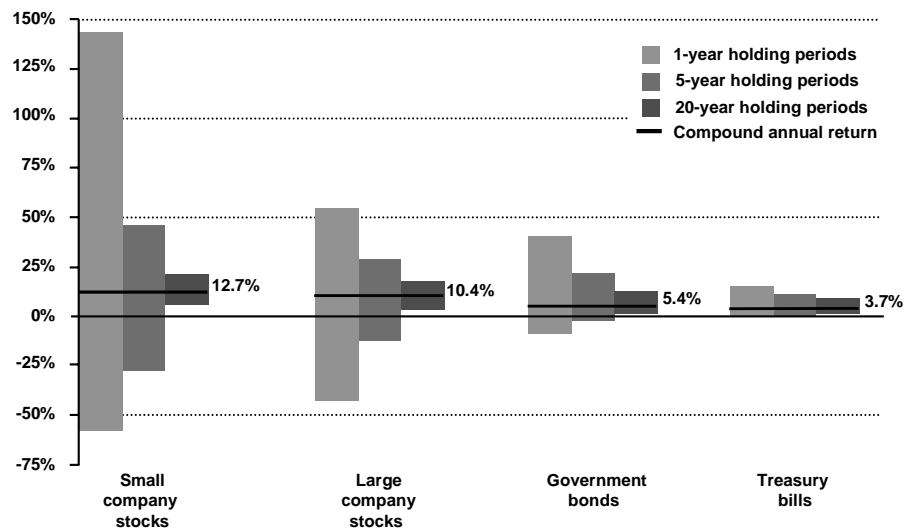
Although long-term investors know that it is better to buy-and-hold than to try timing the market, there are times when selling and taking losses may be worthwhile. In the image above, an investor enjoys a taxable gain of \$5,000 from an investment and suffers a loss of \$3,000 from another investment. If the investor did not sell the loser, the tax liability on the gain of \$5,000 would be \$750. If the loser was sold, the investment loss of \$3,000 would lower the taxable gain to \$2,000, thereby reducing the tax liability from \$750 to \$300.

This strategy can help investors lower their tax bill while still sticking to their asset allocation policy. For instance, if an investor suffers losses from a current large-cap stock fund, they can sell it at a loss to offset other capital gains they may have and then reinvest the money in another large-cap stock fund to maintain the asset allocation. Federal tax laws allow capital gains to be offset with realized capital losses, dollar for dollar. If losses exceed gains, ordinary income can be reduced by up to \$3,000 in any given year. Any amount over the allowed limit can be carried over from year-to-year indefinitely. This allows investors to manage their yearly taxes and keep their asset allocation on track.

The information presented herein is for illustrative purposes only and not indicative of any investment. This tax reduction method does not guarantee a profit. The example assumes a capital gains tax rate of 15% and does not account for any federal or state income taxes that may apply. Tax laws prohibit claiming tax losses for repurchasing essentially the same security within 30 days from when it was sold. Trading costs from buying or selling securities are not included in the example and may be incurred. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

**Reduction of risk over time**

1926–2003



Each bar shows the range of compound annual returns for each asset class over the period 1926–2003.

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**Reduction of risk over time 1926–2003**

One of the main factors you should consider when investing is the amount of risk, or volatility, you are prepared to assume. However, recognize that the range of returns appears less volatile with longer holding periods.

Over the long term, periods of high returns tend to offset periods of low returns. With the passage of time, these offsetting periods result in the dispersion of returns gravitating or converging toward the average. In other words, while returns may fluctuate widely from year to year, holding the asset for longer periods of time results in apparent decreased volatility.

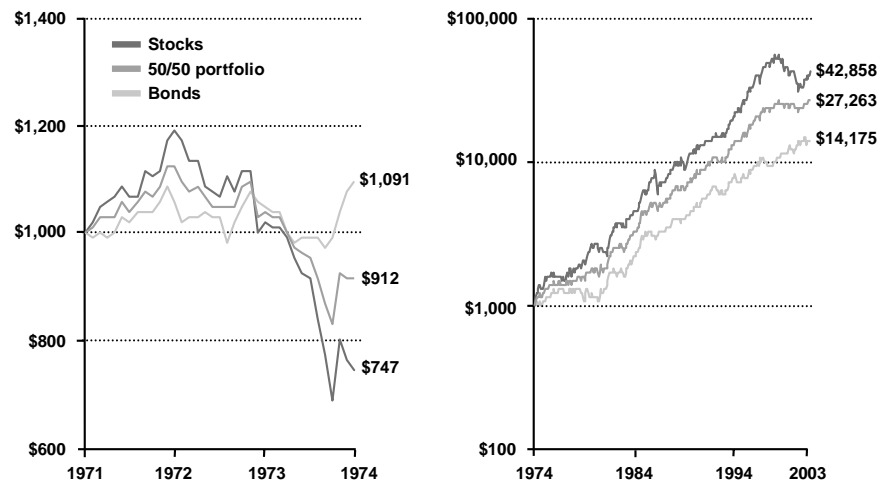
This graph illustrates the range of compound annual returns for stocks, bonds, and cash over 1-, 5-, and 20-year holding periods. On an annual basis since 1926, the returns of large company stocks have ranged from a high of 54% to a low of –43%. For longer holding periods of five or 20 years, however, the picture changes. The average returns range from 29% to –12% over five-year periods, and between 18% and 3% over 20-year periods. During the worst 20-year holding period for stocks since 1926, stocks still posted a positive 20-year compound annual return.

Although stockholders can expect more short-term volatility, the risk of holding stocks appears to diminish with time.

The information presented herein is for illustrative purposes only and not indicative of any investment. The data assumes reinvestment of all income and does not account for taxes or transaction costs. Each bar shows the range of compound annual returns for each asset class over 1-, 5-, and 20-year holding periods over the time frame 1926–2003. The average return represents a compound annual return over the period 1926–2003. Government bonds and Treasury bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Returns and principal invested in stocks are not guaranteed. Capital gains and dividends received may be taxed in the year received. Large company stocks provide ownership in corporations that intend to provide growth and/or current income. Small company stocks provide ownership in corporations that intend to seek high levels of growth. Small company stocks are more volatile than large company stocks and are subject to significant price fluctuations, business risks, and are thinly traded. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

Source: Small Company Stocks—represented by the fifth capitalization quintile of stocks on the NYSE for 1926–1981 and the performance of the Dimensional Fund Advisors, Inc. (DFA) U.S. Micro Cap Portfolio thereafter; Large Company Stocks—Standard & Poor's 500®, which is an unmanaged group of securities and considered to be representative of the stock market in general; Government Bonds—20-year U.S. Government Bond; Treasury Bills—30-day U.S. Treasury Bill.

## Can you stay on track?



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### Can you stay on track?

It's easy to follow a long-term strategy during good times; the hard part is sticking with it through the bad times.

What should you do if you are a long-term investor sitting in the midst of a bear market? If you are holding a well-diversified portfolio, the answer is simple—continue to stay the course. This image illustrates the hypothetical growth of stocks, bonds, and an equally diversified portfolio over short- and long-term time periods.

The graph on the left illustrates the performance of the assets during one of the worst three-year time periods in recent history. As illustrated, the significance of holding a diversified portfolio is most apparent in a bear market. Although the diversified portfolio still lost more than bonds in the short run, it did not withstand as great a loss as stocks. Over the long term, however, the picture changes.

The graph on the right illustrates the performance of the assets over the long run: year-end 1974 to year-end 2003. By continuing to hold the all-stock portfolio past 1974 (over the full time period), one would have experienced the highest ending wealth value of the assets shown. However, it is important to understand that this greater wealth was achieved with considerable volatility—which is indicated in the short-term period (the left chart).

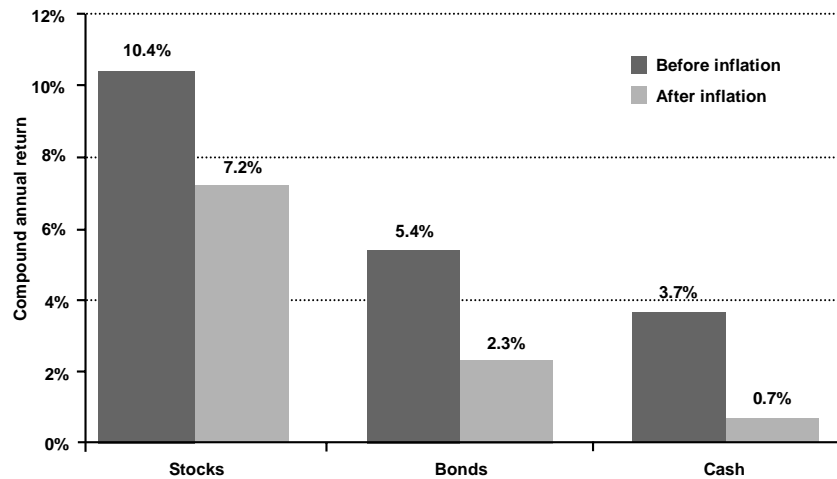
While the more volatile single asset is likely to outperform the less volatile diversified portfolio over the long run, the main point to understand is that by maintaining a well-diversified portfolio, you are managing risk, not trying to escape it.

The information presented herein is for illustrative purposes only and not indicative of any investment. The data assumes reinvestment of income and does not account for taxes or transaction costs. Diversification does not eliminate the risk of experiencing investment losses. Government bonds and Treasury bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. U.S. government bonds may be exempt from state taxes, and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government. Stocks are not guaranteed and have been more volatile than bonds. Stocks provide ownership in corporations that intend to provide growth and/or current income. Capital gains and dividends received may be taxed in the year received. An investment cannot be made directly in an index. Past performance is no guarantee of future results.

Source: Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and is considered to be representative of the stock market in general; Bonds—20-year U.S. Government Bond.

## Returns before and after inflation

1926–2003



Assumes reinvestment of income and no transaction costs or taxes.

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### Returns before and after Inflation 1926–2003

Comparing the returns of different asset classes both before and after inflation is helpful in understanding why it is so important to consider inflation when making long-term investment decisions.

This image illustrates the compound annual returns of three asset classes before and after considering the effects of inflation. Over the past 78 years, inflation has dramatically reduced the returns of stocks, bonds, and cash.

The blue bars represent the nominal, or unadjusted, returns of each asset class. Nominal returns do not consider inflation. It is often the rate of return that you might think of when discussing the returns on investments.

The yellow bars illustrate the real, or inflation-adjusted, returns of each asset class. Real returns reflect purchasing power. For example, if you invested in cash equivalents in 1926, the money you earned over the period provided you with very little purchasing power today.

Notice that cash and bonds, after adjusting for inflation, barely kept pace with the rise in prices over the past 78 years.

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Source: Stocks—Standard & Poor's 500<sup>®</sup>, which is an unmanaged group of securities and is considered to be representative of the stock market in general; Bonds—20-year U.S. Government Bond; Cash—U.S. 30-day Treasury Bill; Inflation—Consumer Price Index.