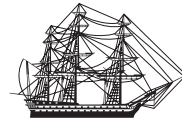


Vanguard's Investment Philosophy

We Believe #9

An investor should not expect future long-term returns to be significantly higher or lower than long-term historical returns for various asset classes and subclasses.



Vanguard[®]

Successful investment management companies base their business on a core investment philosophy, and Vanguard is no different. Although we offer many strategies with both internally and externally managed funds, common themes run through the investment advice we provide our clients. Indeed, these tenets have been a part of the company since our inception and are embedded in Vanguard's culture. We've distilled our philosophy into nine statements, the final one of which is presented here. For Vanguard, these nine statements represent both the past and the future—enduring principles that guide the investment decisions we help our clients make.

Vanguard believes that . . .

9. An investor should not expect future long-term returns to be significantly higher or lower than long-term historical returns for various asset classes and subclasses.

Although short-term investment returns are difficult to predict, long-term averages of historical returns are a reasonable basis for future expectations. To be sure, the historical record was generated during a wide variety of economic and political conditions, some of which may seem irrelevant for today's investor. However, careful academic research has shown that, despite periodic regime

changes in the U.S. economy and financial markets, broad sets of stocks and bonds have earned quite similar returns over various extremely long-term periods, as shown in Table 1, on page 2. Although some academics and practitioners dispute the relevance of these long-run averages, we have found no compelling reason to jettison the historical record in forming our long-run expectations.¹

¹ In any market, extreme, unexpected events can be so disruptive to financial markets that even long-term returns can diverge significantly from prior periods. For example, consider the impact of World War II on Germany and Japan. The relative stability of the U.S. political and economic environment in the past 200 years has resulted in similarity of returns over long periods. Internationally, this has not necessarily been the case.

Table 1. Historical real annual U.S. market returns

Updated through June 30, 2005	Compound returns	
	Stocks	Bonds
Long-term		
1802–2005	6.8%	3.5%
Major subperiods		
I. 1802–1870	7.0%	4.8%
II. 1871–1925	6.6%	3.7%
III. 1926–2005	6.7%	2.3%

Source: Jeremy J. Siegel, 2005, "Bull vs. Bear Debate" (update of results from *Stocks for the Long Run*), presented at Wharton School SIA Annual Meeting, Philadelphia, November 10.

Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.

Long-term historical patterns

Aggregate financial market performance is, ultimately, a reflection of the aggregate expected expansion or contraction of the economy. For stocks, returns are determined by inflation, the real risk-free rate, and the equity risk premium. During the 20th century, stocks produced an annualized total return of 10.37%. This return can be decomposed as follows: 3.08% inflation, 2.05% real risk-free rate, and 5.24% equity risk premium.² The inflation rate can be measured by changes in the U.S. Consumer Price Index (CPI). The real risk-free rate is typically represented by the income return of long-term U.S. Treasury securities. The equity risk premium, historically the largest component of the equity return, is the excess return (above the risk-free rate) that the equity market provides to compensate for market risk.

The forward-looking equity risk premium has been widely debated among academics and practitioners alike, many of whom predict that long-term forward-looking equity risk premiums will be well below historical rates, even as low as zero or negative. Smaller forward-looking premiums in the

United States have been attributed to expectations about productivity, technological change, and stock valuations (price/dividend ratio), among other factors, relative to the last century. As with stock returns as a whole, it is our view that there is no compelling reason to assume that future equity risk premiums will be significantly different from past premiums over long periods.

For corporate bonds, the return components are real interest rates, expected inflation, an inflation risk premium, a maturity risk premium, and a default risk premium. The first three components—real interest rates and the inflation-related variables—are simply those of a short-term U.S. Treasury security. The latter two are risk premiums to compensate for varying maturities and corporate credit risks. Longer-term maturities and bonds from higher-risk corporations typically command higher risk premiums. Corporate bonds, which have been less volatile than stocks, have historically returned 5.5% annually, before inflation.³ Cash, which includes short-term debt securities such as money market funds, bank savings accounts, short-term certificates of deposit (CDs), and U.S. Treasury bills, has been the least volatile investment. Cash has historically returned 3.84% annually before inflation.⁴

Short-term returns

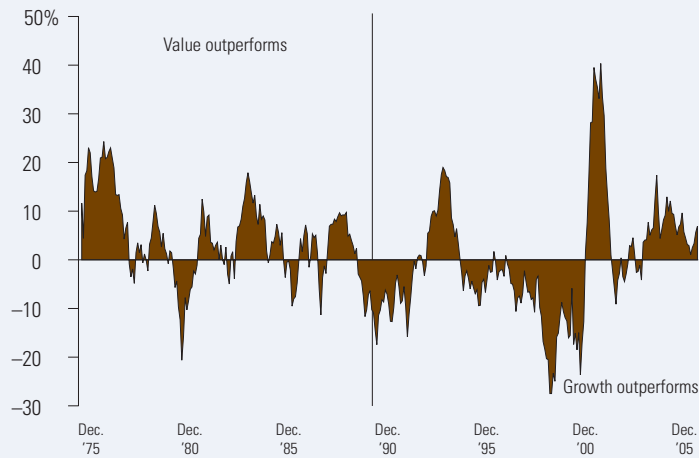
Tables 2 and 3, on page 3, indicate that these long-term returns may not necessarily be realized in any single period. The dispersion around the long-run average annual return distribution of the Standard & Poor's 500 Index is very wide, reflecting considerable volatility in stock-market returns. Although the average return for stocks is 10.3% from 1926 through 2005, less than 10% of the annual equity returns for this period have been between 8% and 12%. And because broad market returns move fairly independently from period to period, considerable time may elapse before a "normal year" is realized.

² Roger G. Ibbotson and Peng Chen, 2003, Long-Run Stock Returns: Participating in the Real Economy, *Financial Analysts Journal* 59 (1, Jan./Feb.): 88–98.

³ Sources: Calculations by Vanguard Investment Counseling & Research; returns based on Ibbotson Associates corporate bonds, 1926 through 1975; Lehman Brothers Aggregate Bond Index, 1976 through 2005.

⁴ Sources: Calculations by Vanguard Investment Counseling & Research; returns based on Citigroup 3-month U.S. Treasury Bill Index, 1926–2005.

Figure 1. Standard & Poor's 500/Citigroup Value Index versus Standard & Poor's 500/Citigroup Growth Index: 12-month rolling return differentials



Source: Vanguard Investment Counseling & Research.

Notes: Twelve-month rolling returns used for purposes of illustration. In reality, outperformance of growth versus value varies on a month-to-month basis. For periods ended December 1975 through December 1989, S&P 500/Citigroup Value Index outperformed S&P 500/Citigroup Growth Index 70% of the time. For periods ended January 1990 through December 2005, S&P 500/Citigroup Value Index outperformed S&P 500/Citigroup Growth Index 60% of the time. For periods ended December 1979 through December 2005, S&P 500/Citigroup Value Index outperformed S&P 500/Citigroup Growth Index 54% of the time.

Corporate bond returns have been lower and less volatile than equity returns. As with stocks, however, investors should not always expect to earn the average return over short periods, as demonstrated in Table 3. Annual nominal returns for bonds averaged 5.5% from 1926 through 2005. Real annual returns averaged 2.4% over the same period. Yet, there were negative one-year returns 16% of the time.

Equity sub-asset class returns

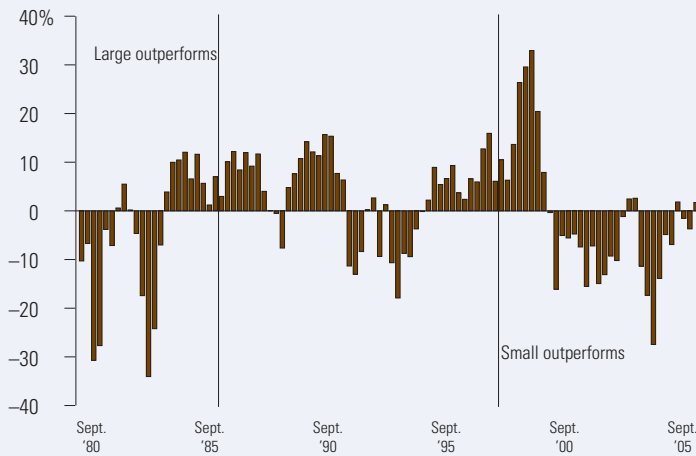
Just as the consistent risk–return relationships among asset classes can be expected to persist, the historical relationships among sub-asset classes are also a reasonable basis for long-term expectations. A sub-asset class such as small-cap stocks or large-cap value stocks may be thought of as providing exposure to a risk factor in an asset class—in these cases, the size and value risk factors. In the stock market, sub-asset class returns tend to be linked to economic cycles. Value stocks may be favored at one stage of an economic cycle, for example, while growth stocks might be favored at another, as illustrated in Figure 1.

Likewise, stocks of different market capitalizations may outperform over short periods. As Figure 2, on page 5, shows, a pattern of performance differentials between small-cap and larger stocks has emerged over various periods from 1980 to 2005.

Some practitioners and academics contend that, in the future, small-cap value stocks will provide investors with a better return than other market segments. However, small-cap value stocks have not consistently outperformed, and outperformance after costs has not been proven. (See Vanguard's "Debating the Small Cap Value Premium."⁵)

⁵ Vanguard, 2005, "Debating the Small Cap Value Premium," *Vanguard Group Investment Brief* (June).

Figure 2. Russell 1000 Index versus Russell 2000 Index:
Four-quarter rolling return differentials



Source: Vanguard Investment Counseling & Research.

Notes: For periods ended September 1980 through December 1985, Russell 1000 Index (largest 1,000 companies in Russell 3000 Index) and Russell 2000 Index (2,000 smallest companies in Russell 3000 Index) each outperformed 50% of the time. For periods ended March 1986 through December 1996, large outperformed small 73% of the time. For periods ended March 1997 through December 2005, small outperformed 58% of the time and large outperformed 42% of the time. For periods ended September 1980 through December 2005, large outperformed 57% of the time and small outperformed 43% of the time.

Conclusion

Although *past performance is not predictive of future performance*, historical returns over very long periods can serve as a key reference point in forming future return expectations. Although recent returns may influence decisions, a broadly diversified portfolio constructed with a focus on historical relationships, and with exposure to each market segment, stands a better chance of achieving long-term goals. A focus on the short-term performance of asset and sub-asset classes can lead to portfolios with risk-and-return profiles inconsistent with the optimal asset allocations for long-term goals. A more prudent approach is to make decisions with an emphasis on the asset-class returns that can be expected over decades, not over months or even years.



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