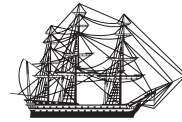


Vanguard's Investment Philosophy

We Believe #8

Market-timing and performance-chasing are losing strategies.



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 eighth 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 . . .

8. Market-timing and performance-chasing are losing strategies.

The appeal of market-timing—altering a portfolio's asset allocation in response to short-term market developments—is strong. Successfully buying low and then selling high at precisely the right moments promises exceptional rewards. However, the opportunities that are clear in retrospect are rarely visible in prospect. Empirical evidence has repeatedly shown that the likelihood of success is remote. In fact, aggressive market-timing strategies can have a potentially devastating impact on long-run portfolio performance.

Similarly, the tendency for investors to chase performance by buying an investment simply because its price is rising has proved to be a poor long-term strategy. Indeed, asset-allocation decisions based on such so-called momentum strategies have empirically underperformed portfolios that are constructed through careful strategic asset allocation. The following sections explore market-timing and performance-chasing, reviewing both the theoretical and empirical weaknesses of these strategies.

Market-timing strategies

A successful market-timing strategy requires an investor to know—before the fact—when to buy and sell an investment or fund. The most popular market-timing strategies include:

- **Asset-class rotation**—selecting the optimal moment to switch among asset classes (stocks, bonds, and cash), with a particular emphasis on downside risk control by drastically increasing cash holdings in anticipation of market declines.
- **Style rotation**—selecting the optimal moment to alter investment styles, such as a shift from growth to value investing.
- **Sector rotation**—selecting the optimal moment to switch among industries in the economy.
- **Individual security rotation**—selecting the optimal moment to sell or buy specific stocks or fixed income securities.

Strong appeal

In the most dramatic example of market-timing—wholesale *asset-class rotation*—an investor monitors quantitative real-time trading signals, based perhaps on macroeconomic forecasts or moving averages in recent benchmark prices, to determine when to be fully invested in either a risky asset (stocks) or a risk-free asset (cash).

Market-timing strategies seem so compelling because an analysis of past returns indicates that their potential rewards can be substantial. Indeed, Bauer and Dahlquist (2001)¹ calculated that perfectly switching an initial investment of \$10,000 between small-capitalization stocks and cash (U.S. Treasury bills) every month between 1990 and 1999 would have resulted in terminal portfolio wealth of more than \$170,000 *after transaction costs*, a compound annual return of 33%. A buy-and-hold approach to small-cap stocks would have produced terminal portfolio wealth of just \$35,000, a compound annual return of about 10%. In another example, Kao and Shumaker (1999)² argued that an investor could have

doubled the total return of a buy-and-hold strategy by switching among investment styles such as growth and value at the optimal moments.

Weak results

Empirical research, however, has repeatedly shown that while a minority of fund managers may possess a superior ability in selecting undervalued securities, *the average professional investor has persistently demonstrated an inability to time the market*. The timing patterns that are obvious in the historical data provide no help in developing future timing strategies.

Table 1 lists a variety of empirical studies that have found no evidence of the average investor's ability to successfully and consistently time the market. In a seminal study, Treynor and Mazuy (1966)³ found significant market-timing ability in only 1 of 57 mutual funds; and in another mutual fund study, Hendricksson and Merton (1981)⁴ documented positive ability in only 3 of 116 mutual funds.

Table 1. Well-known empirical studies documenting unprofitability of market-timing strategy, on average

Authors (year)	Group that FAILS to successfully time the market, on average
Treynor and Mazuy (1966)	Mutual funds
Hendricksson and Merton (1981)	Mutual funds
Kon (1983)	Mutual funds
Chang and Lewellen (1984)	Mutual funds
Becker et al. (1998)	Asset allocation funds
Coggin and Hunter (1993)	Equity pension funds
Barber and Odean (2000)	Investment clubs
Graham and Harvey (1996, 1997)	Investment newsletters
Chance and Hemler (2001)	Professional market-timers

Source: Vanguard Investment Counseling & Research.

1 Richard Bauer, Jr., and Julie R. Dahlquist, 2001, Market Timing and Roulette Wheels, *Financial Analysts Journal* 57 (1, Jan./Feb.): 28–40.

2 D.L. Kao and R. D. Shumaker, 1999, Equity Style Timing, *Financial Analysts Journal* 55:37–48.

3 J.L. Treynor and K. Mazuy, 1966, Can mutual funds outguess the market? *Harvard Business Review* 44:131–36.

4 Roy D. Henriksson and Robert C. Merton., 1981, On Market Timing and Investment Performance. II. Statistical Procedures for Evaluating Forecasting Skills, *Journal of Business* 54 (4, Oct.): 513–33.

**Table 2. Returns of Standard & Poor's 500 Index:
Fifteen years ended December 31, 2005**

Annualized return

	15 years	10 years	5 Years	3 Years	1 Year
S&P 500 Index	11.5%	9.1%	0.5%	14.4%	4.9%
S&P 500 without 10 best days	8.1%	4.1%	-8.0%	5.0%	-9.3%
S&P 500 without 10 worst days	15.3%	14.6%	8.6%	23.9%	20.6%

Source: Vanguard Investment Counseling & Research.

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.

As Table 1 indicates, the failure of market-timing strategies has not been limited to mutual funds. Investment newsletters, pension funds, investment clubs, and professional market-timers have also failed to demonstrate consistent success with market-timing strategies.

Why is success so elusive? In a word, uncertainty. In reasonably efficient financial markets, the short-term direction of security prices is close to random. In addition, prices can change abruptly, and the cost of mistiming a market move can be disastrous.

Consider the returns of a broad index of U.S. stocks such as the Standard & Poor's 500 Index, as displayed in Table 2. Over the 15-year period through 2005, a buy-and-hold investor in the S&P 500 would have realized an average annual return of approximately 11.5%. By contrast, an unlucky market-timer who missed only the market's ten best days during that 15-year period would have earned an average annual return of just 8.1%.

Performance-chasing

Many investors also appear to chase performance, as documented by Chevalier and Ellison in a 1997 study showing that flows into and out of mutual funds are related to previous measures of excess returns.⁵

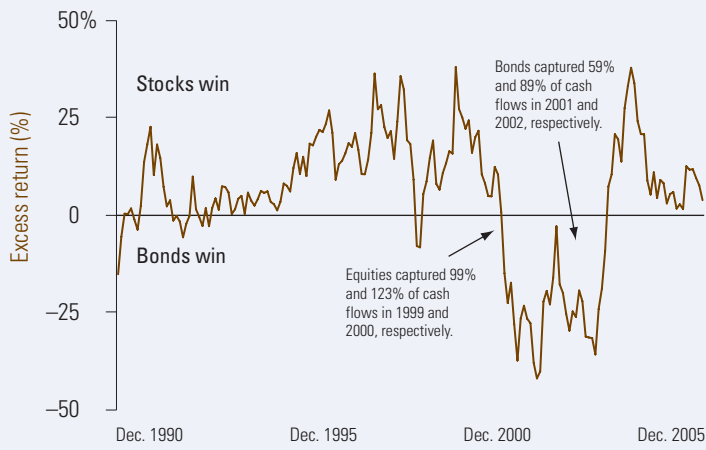
Because investment returns tend to revert toward a long-term mean over time, however, performance-chasing can be hazardous. The greatest

inflow into a given mutual fund typically occurs immediately *after* it has generated above-average performance and immediately *before* it starts to underperform.

Figure 1 (page 4) shows that at the end of 1999, the Dow Jones Wilshire 5000 Index had returned more than 20% for five consecutive years—the first such streak in history. At the same time, the second-worst bond market in history occurred in 1999. Investors responded by chasing performance. In 1999 and 2000, stock funds captured 99% and 123% of mutual fund cash flows, respectively. (A figure of more than 100% implies that investors are selling bond or balanced funds to buy stock funds.) As it often does, performance-chasing led investors to buy high and sell low. From December 1999 through September 2002, bonds outperformed stocks by a cumulative margin of more than 70 percentage points.

⁵ Judith Chevalier and Glenn Ellison, 1997, Risk taking by mutual funds as a response to incentives, *Journal of Political Economy* 105: 1167–1200.

Figure 1. Dow Jones Wilshire 5000 Composite Index versus Lehman Brothers Aggregate Bond Index: Rolling 12-month excess returns, 1990 through 2005



Source: Vanguard Investment Counseling & Research.

Conclusion

Empirical evidence and practical experience demonstrate that investment strategies based on market-timing and performance-chasing (or momentum) rarely deliver long-term success.



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