Active Equity Management: Examining the Differences Between Fundamental and Quantitative Strategies

Vanguard Investment Counseling & Research

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Executive summary

- Active management offers the potential to outperform a market or market segment, as measured by an index benchmark.
- Strategies for active equity management can be characterized as either fundamental or quantitative. Fundamental strategies may result in portfolios with risk characteristics that differ markedly from those of the benchmark, while quantitative strategies tend to result in more benchmark-oriented portfolios.
- Although the processes employed by fundamental and quantitative managers in selecting stocks differ, both types of strategy can add value if delivered effectively.

A comparison of fundamental and quantitative strategies

Any investment strategy other than "pure indexing"—that is, in which there is some degree of choice behind stock selection and risk exposure—is considered active equity management. Such strategies are classified as either fundamental (often tabbed "traditional") or quantitative. All active managers attempt to outperform a market or market segment, as measured by an index benchmark. However, the way fundamental and quantitative managers choose stocks is quite different.

Figure 1 lists the different types of equity strategies (including both fundamental and quantitative) and illustrates how their returns should theoretically compare with the returns of the resulting portfolios' benchmarks. The x-axis represents the expected tracking error (that is, the variability of excess returns) versus the benchmark, while the y-axis represents the potential excess returns versus the benchmark. It should be noted that simply because a portfolio seeks greater outperformance, there is no guarantee that it will actually achieve this success. Also note that although quantitative funds can be calibrated with varying degrees of risk control, most are more tightly risk-controlled to their benchmarks than fundamental funds.

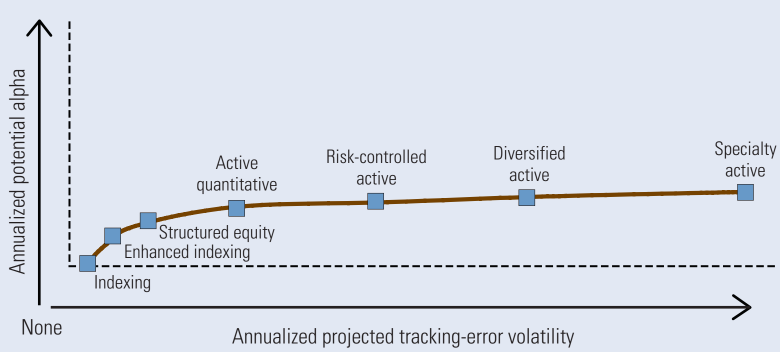
Table 1 on page 3 drills down further into the differences between strategies. Of particular note is the white column labeled "Potential Differentiation From Benchmark," which details why a strategy's return might differ from the benchmark's return. These key factors behind expected tracking error are:

Security. The degree to which the proportions of stocks held in a portfolio may differ from those in the benchmark. For example, a manager following an active quantitative strategy may allocate 5% of the fund to a specific stock when the index weighting is 4%. A specialty active fund with the same benchmark may not hold the stock.

Industry. The degree to which the industry or sector weightings in a portfolio may differ from those in the benchmark. For example, a manager may allocate 37% to the technology sector when the index weighting is 25%.

Size/Style. The degree to which a manager may emphasize capitalization (large-, mid-, or small-cap) or style (growth or value) compared with the benchmark. For example, a manager may tilt the portfolio toward growth stocks if he or she believes the market will favor this style in the future.

Figure 1. The spectrum of investment vehicles



Source: Vanguard Investment Counseling & Research.

Table 1. Differentiating equity strategies

Strategy	Stock-selection technique	Target market	Potential differentiation from benchmark		Expected tracking error per year[1]	Representative Vanguard offering
Indexing	Replication or sampling	Any	Security: Industry: Size/Style: Timing:	None None None None	0.2%	500 Index Fund
Structured equity (enhanced indexing)	Quantitative ranking	Any	Security: Industry: Size/Style: Timing:	Limited None None None	1%–2%	Structured Large-Cap Equity Fund
Highly risk-controlled active	Quantitative ranking	Any	Security: Industry: Size/Style: Timing:	Moderate Limited None None	2%–3%	Growth and Income Fund
Active quantitative	Quantitative ranking	Any	Security: Industry: Size/Style: Timing:	Moderate Moderate Limited None	3%–4%	Strategic Equity Fund
Diversified active	Fundamental ranking	Any	Security: Industry: Size/Style: Timing:	Unconstrained Unconstrained Moderate None/Limited	3%–4%	Morgan™ Growth Fund
Specialty active	Fundamental ranking	Any	Security: Industry: Size/Style: Timing:	Unconstrained Unconstrained Unconstrained Unconstrained	4% or more	Capital Opportunity Fund

Source: Vanguard Investment Counseling & Research.

Timing. The degree to which a manager may shift among the three factors cited above. For example, a manager may engage in a "sector rotation" strategy, whereby the manager overweights sectors he or she believes will outperform for a finite period of time and/or underweights sectors he or she believes will underperform.

Quantitative management

Quantitative equity managers attempt to rank stocks on the likelihood of excess returns against the benchmark, typically considering financial ratios, technical indicators, and analysts' earning projections. In building their portfolios, managers typically follow a four-step process: (1) select a benchmark, (2) define the risk factors that best characterize the fluctuations in the returns of the benchmark, such as size or style, (3) rank securities within industries, and (4) form a portfolio that matches the risk factors of the benchmark from the sample of highly ranked securities. In practice, this amounts to many small over- and underweightings of individual securities versus the benchmark.

1 Tracking error can be highly influenced by aggregate volatility in the market. In a more volatile market, expected tracking error would be larger, but the relationships would likely be the same. Note that expected tracking error does not reflect tracking error of representative offering.

Managers may use as few as three to as many as ten risk-factor models to rank stocks, typically focusing on value-biased factors. Three common models are:

Valuation. This model seeks to identify stocks based on attractive valuation characteristics relative to peers, and typically points to beaten-down stocks that are currently "out of favor" but have higher expected returns than those stocks currently "in favor."

Sentiment. This model seeks to identify attractive securities through momentum variables. It is based on the theory that the market overreacts in the short term to both positive and negative news about a stock, but underreacts to long-term fundamental changes in the underlying company's business. A related model examines "herding" behavior among analysts and investors.

Earnings prospects. This model seeks to identify stocks with improving fundamental prospects based on changes in balance-sheet data. It is based on the theory that the market tends to be slow in identifying changes in underlying business activity and their effects on future earnings prospects.

Active quantitative strategies have been gaining traction among large institutional investors. In a survey of institutional index managers, *Pensions & Investments* found that quantitative strategies grew by almost 15% in six months, from $391.5 billion as of June 30, 2006, to $449.5 billion by December 31.

Fundamental management

Fundamental equity managers choose stocks based on either a top-down or bottom-up approach. In a top-down approach, the manager begins with an assessment of the economy. The manager next determines which industries should outperform, then identifies companies within those industries that should do best. In a bottom-up approach, the manager begins with individual stocks that he or she anticipates will perform well, combining them to form the portfolio.

In either case, fundamental managers tend to use both qualitative judgment and quantitative tools. For example, a manager will use qualitative techniques to assess a company's management capability, business strategy, and industry standing. The same manager may also use quantitative tools to assess the company's debt/equity ratio, gross margins, asset turnover, return on equity, and expected growth rate. In addition, the manager may use a dividend discount model or free cash-flow model to estimate the company's value.

Vanguard's view

Because markets are not perfectly efficient, there are opportunities for outperformance. As a result, both active fundamental and quantitative equity management can add value if delivered effectively. Success requires talented managers and discipline in cost and execution. Investors must decide what combination of risk control and opportunity they want.

In choosing between strategies or funds, investors should weigh (1) their belief in a manager's ability to outperform (that is, in a manager's ability to possess distinctive information) and (2) the degree to which they are able and willing to tolerate variability in returns relative to the benchmark.

Note: All investing is subject to risk. Active management may involve significantly more manager risk than index management.

Additional reading

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Vanguard Investment
Counseling & Research

P.O. Box 2600
Valley Forge, PA 19482-2600

Connect with Vanguard® > advisors.vanguard.com > 800-997-2798

Vanguard Investment Counseling & Research

Ellen Rinaldi, J.D., LL.M./Principal/Department Head

John Ameriks, Ph.D./Principal
Joseph H. Davis, Ph.D./Principal
Francis M. Kinniry Jr., CFA/Principal

Frank J. Ambrosio, CFA
Donald G. Bennyhoff, CFA
Maria Bruno, CFP®
Scott J. Donaldson, CFA, CFP
Michael Hess
Julian Jackson
Colleen M. Jaconetti, CFP, CPA
Kushal Kshirsagar, Ph.D.
Karin Peterson LaBarge, Ph.D.
Christopher B. Philips, CFA
Glenn Sheay, CFA
Kimberly A. Stockton
Yesim Tokat, Ph.D.
David J. Walker, CFA

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