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The Intersection of High Quality and Cheap Valuation

Academics and practitioners alike have accepted valuation as a factor that can help to predict potential stock outperformance over the long term. The concept of quality, however, has been less appreciated. We demonstrate that quality—defined as a high return on assets (ROA)—has a number of compelling attributes.[1] We also explore the intersection of valuation and quality to highlight that a portfolio of stocks with a combination of these factors may lead to a better outcome for investors.

Valuation's long-term outperformance

That valuation may help to predict long-term investment performance has been widely documented, and "cheaper" stocks have been shown to outperform more expensive stocks for a variety of structural reasons. Simply put, growth stocks get a disproportionate share of attention from investors, while value stocks are inexpensive because they are generally out of favor or overlooked. Because investors tend to expect little from value stocks, those that manage to meet or exceed such depressed expectations have generally outperformed the market over time. Conversely, growth stocks may underperform when they fall short or only meet heightened expectations.

During the past 25 years, stocks in the lowest valuation decile of the Russell 1000® Index by price-to-earnings—or P/E—have delivered over 400 basis points of average annual outperformance relative to the broad market (see Exhibit 4, page 4, and Methodology, page 5).[2] On a cumulative basis from December 1987 through June 2013, $100 invested in a hypothetical equal-weighted portfolio of stocks in the cheapest decile would have been worth 2.5 times the same $100 invested in a hypothetical equal-weighted portfolio of stocks in the broad market.

Typical performance analysis uses a fixed start date and either a single fixed end date or a series of rolling end dates. To better understand the experiences of different investors—whose horizons likely have different starting points—we consider how a value-oriented U.S. equity strategy would have performed from various start dates over the past 25 years through one shared end date. Precisely, we represent the long-term track record of valuation by plotting the relative performance of stocks in the lowest and highest deciles from different dates starting in December 1987 through June 2013 (see Exhibit 1, page 2). The shaded periods above (or below) the horizontal midpoint indicate start dates for investment periods during which the cheapest decile outperformed (or underperformed) the most expensive decile.

The market goes through cycles, with performance leadership alternating between value and growth stocks. Yet during more than 80% of the periods we observed, investing in value stocks delivered outperformance. As the start dates approached the common end date and the investment horizons got shorter, the shifts in market leadership accelerated—we suspect the "noise" in the market exerted more influence in the short term. But over all investment horizons starting before September 2004 and ending in June 2013, investing in value stocks outperformed. It is important to note that this analysis indicates how *frequently* a value investor would have outperformed, but says nothing about the *magnitude* of that outperformance.
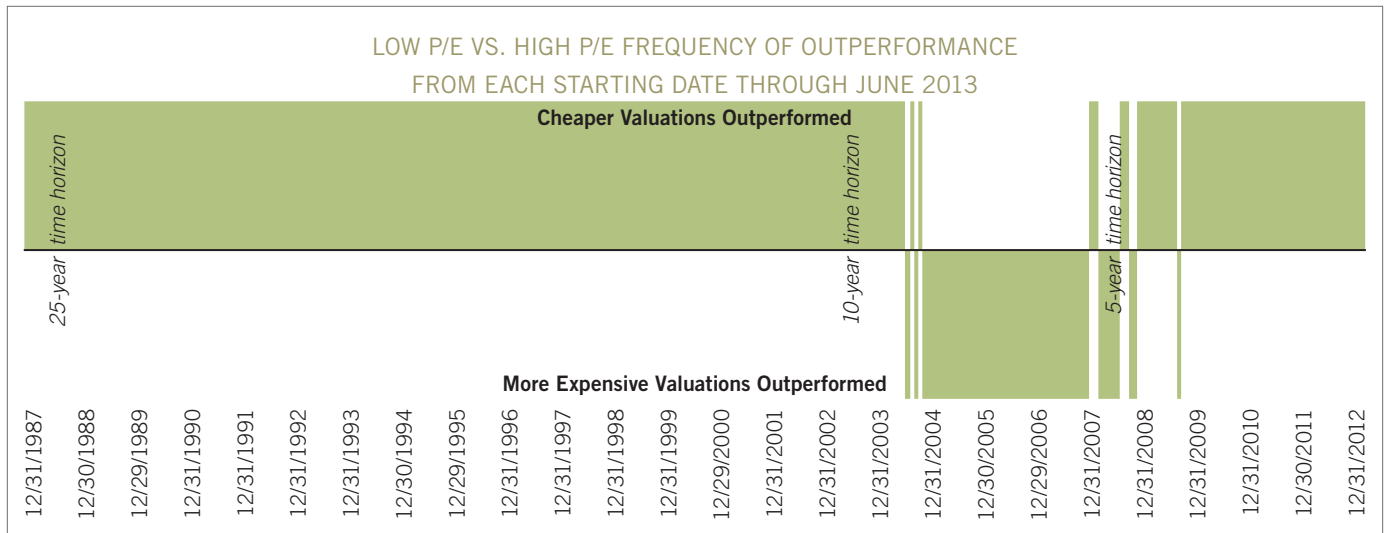
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KEY TAKEAWAYS

- While valuation has long been recognized as a signal of potential future outper-formance, quality is a less widely understood factor with compelling attributes.

- Quality has been persistent, so companies with records of steady profitability are more likely to be profitable in the future.

- Quality stocks have tended to be less volatile, which has helped to preserve inves-tors' wealth through smaller drawdowns.

- Quality has contributed to the long-term compounding of a company's capital.

- Pairing high quality with low valuation has histori-cally resulted in hypotheti-cal portfolios that have outperformed the market, experienced less dramatic drawdowns in periods of financial stress, and exhib-ited superior risk-adjusted returns.

Fidelity INVESTMENTS®

EXHIBIT 1: During four-fifths of all periods starting in December 1987 through June 2013, investing in value stocks outperformed.

LOW P/E VS. HIGH P/E FREQUENCY OF OUTPERFORMANCE
FROM EACH STARTING DATE THROUGH JUNE 2013

Cheaper Valuations Outperformed

25-year time horizon   *10-year time horizon*   *5-year time horizon*

More Expensive Valuations Outperformed

12/31/1987 12/30/1988 12/29/1989 12/31/1990 12/31/1991 12/31/1992 12/31/1993 12/31/1994 12/29/1995 12/31/1996 12/31/1997 12/31/1998 12/31/1999 12/29/2000 12/31/2001 12/31/2002 12/31/2003 12/31/2004 12/30/2005 12/29/2006 12/31/2007 12/31/2008 12/31/2009 12/31/2010 12/30/2011 12/31/2012
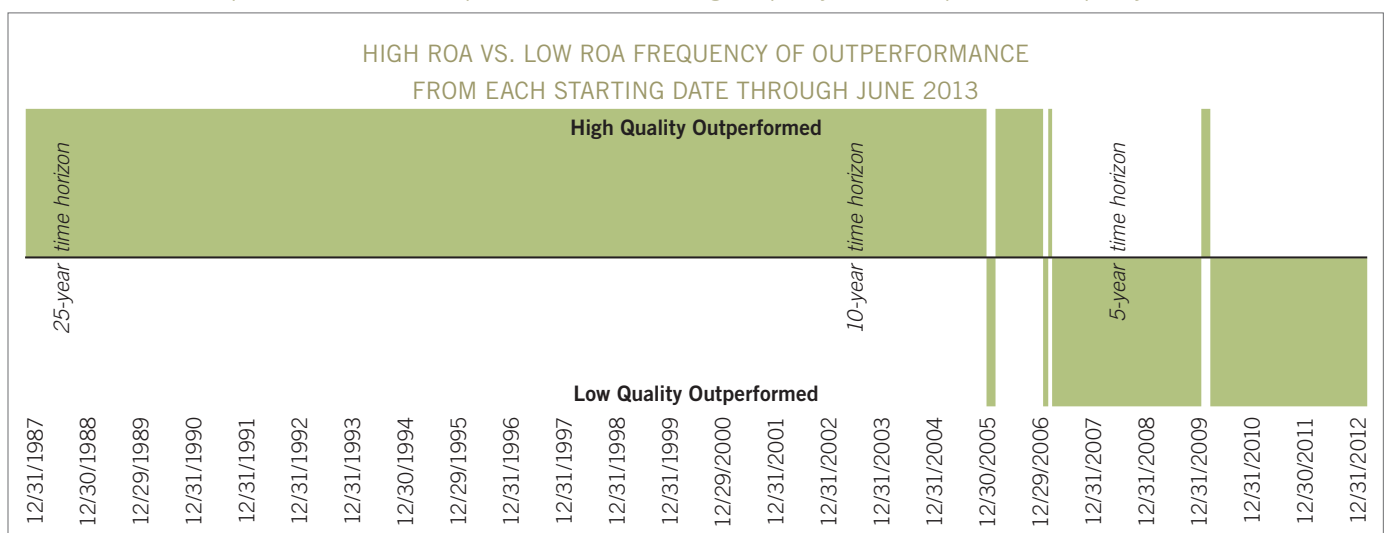
Past performance is no guarantee of future results. This chart comparing the top decile to the bottom decile of Russell 1000 stocks by P/E, and indicating which performed better for each monthly starting date from December 1987 through June 2013, is for illustrative purposes only and does not represent actual or future performance of any investment option. Source: FactSet, Thomson Reuters IBES, Fidelity Investments.

Quality's compelling long-term attributes

Though less widely followed, quality is quite distinct from valuation and is a compelling factor in its own right. Among the different ways to assess the quality of a company, the most common measures include return on invested capital (ROIC), return on equity (ROE), and return on assets (ROA).[3] Regardless of the metric used, the essence of a high quality–oriented investment approach is a preference for superior business models that consistently generate profits that are higher than a company's cost of capital.

We use ROA to assess quality because this measure rewards high return companies and penalizes excessive leverage.[4] As above, we evaluate how a quality-oriented U.S. equity strategy would have performed over the past 25 years by plotting the relative performance of the highest and lowest deciles (see Exhibit 2, below). The shaded periods above (or below) the horizontal midpoint indicate start dates for investment periods during which the highest quality decile outperformed (or underperformed) the lowest quality decile.

EXHIBIT 2: In three-quarters of investment periods we observed, higher quality stocks outpaced lower quality stocks.

HIGH ROA VS. LOW ROA FREQUENCY OF OUTPERFORMANCE
FROM EACH STARTING DATE THROUGH JUNE 2013

High Quality Outperformed

25-year time horizon   *10-year time horizon*   *5-year time horizon*

Low Quality Outperformed

12/31/1987 12/30/1988 12/29/1989 12/31/1990 12/31/1991 12/31/1992 12/31/1993 12/30/1994 12/29/1995 12/31/1996 12/31/1997 12/31/1998 12/31/1999 12/29/2000 12/31/2001 12/31/2002 12/31/2003 12/31/2004 12/30/2005 12/29/2006 12/31/2007 12/31/2008 12/31/2009 12/31/2010 12/30/2011 12/31/2012

Past performance is no guarantee of future results. This chart comparing the top decile to the bottom decile of Russell 1000 stocks by ROA, and indicating which performed better for each monthly starting date from December 1987 through June 2013, is for illustrative purposes only and does not represent actual or future performance of any investment option. Source: FactSet, S&P Capital IQ/Compustat, Fidelity Investments.

EXHIBIT 3: Stocks starting in the highest ROA quintiles have stayed in the highest ROA quintiles for the next five years.

ROA PROGRESSION BY ROA QUINTILE
MEDIAN ROA IN THE RUSSELL 1000
1987–2012
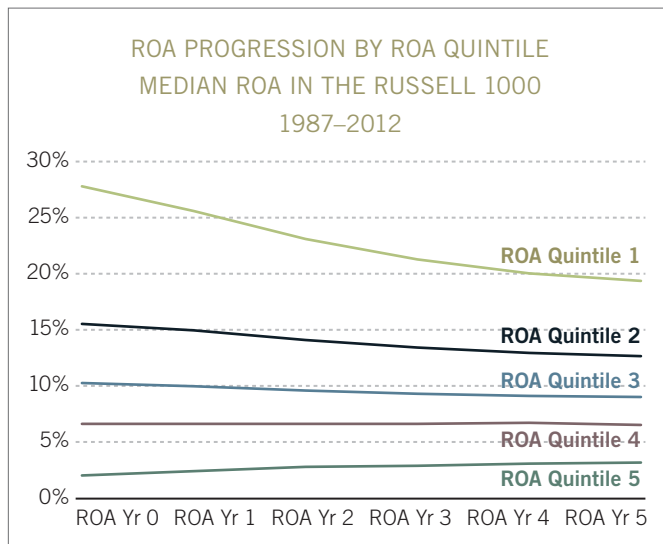
Methodology note: No stock performance is used in this analysis. At each year end from 1987 to 2007, Russell 1000 stocks are grouped into quintiles based on the last fiscal year ROA. Over the next five fiscal years, the median ROA is calculated across the stocks in each quintile. The averages for each year's progression over the 21 overlapping years since 1987 are shown. Source: FactSet, S&P Capital IQ/Compustat, Fidelity Investments.

Volatility and Risk Measures		
	Standard Deviation	Maximum Drawdown
High Quality	17.7%	−54%
Low Quality	23.7%	−74%

Past performance is no guarantee of future results. This chart is for illustrative purposes only and does not represent actual or future performance of any investment option. Volatility is measured by the standard deviation of monthly returns from December 1987 through June 2013, which is multiplied by the square root of 12 to annualize. Standard deviation shows how much variation there is from the average (mean or expected value). Maximum drawdown is the worst peak-to-trough decline in total return since the hypothetical portfolio's inception in 1987. Source: FactSet, Thomson Reuters IBES, S&P Capital IQ/Compustat, Fidelity Investments.

We observe that during more than 75% of periods ending in June 2013—and in all periods starting before 2006—investing in high quality would have outperformed investing in low quality. Again, this analysis focuses on the frequency rather than the magnitude.

Beyond the relatively consistent outperformance that an investment approach focused on high quality has delivered over the longer term, quality has a number of other compelling characteristics:

Quality persists
Over time, positive investment attributes often go back to the average—and negative attributes tend to become less negative. However, this typical mean-reverting nature has been less pronounced among high quality stocks. When we analyze the ROA progression of Russell 1000 stocks over rolling five-year periods since 1987, we observe that the ROA of those initially identified in the highest quintile has generally been greater than 25% (see Exhibit 3, above). While there has been some decay in ROA during the subsequent five years, companies starting as high quality have exhibited much higher ROA than their peers in the lower quintiles. Conversely, companies starting as low quality have been unable to catch up to their high quality peers over time.

Quality stocks are less volatile
As demonstrated above, high quality companies generally sustain their high ROA over time. Underlying competitive advantages—including brand recognition and intellectual capital, among others—enable these high ROA companies to weather the inevitable cyclical downturns in the economy better than their low ROA peers. This competitive or economic moat generally translates into less volatile earnings, margins, and revenue growth.[5] Consequently, as reported in the table above, high quality companies have exhibited lower volatility and suffered smaller drawdowns in periods of economic and financial distress than low quality companies.[6]
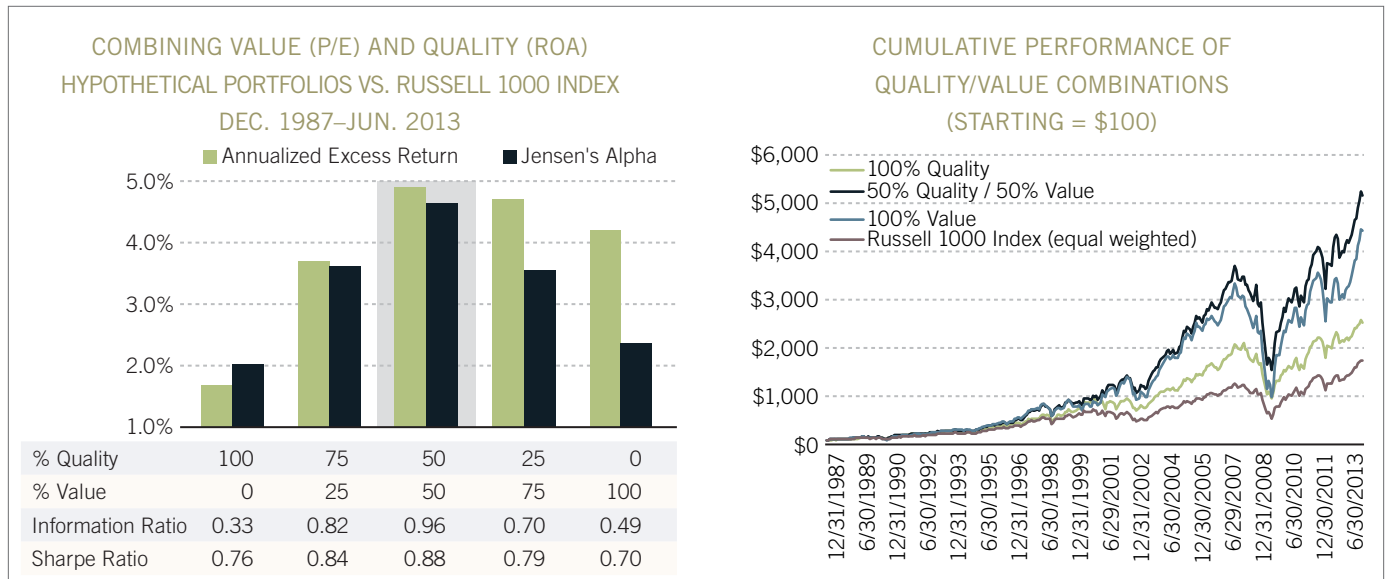
Quality contributes to long-term compounding of capital
The goal of any management team is to invest in projects that earn more than its company's weighted average cost of capital (WACC)—to do otherwise would destroy shareholder value over time.[7] A company that can successfully and consistently invest in high return projects will be more likely to deliver a steady stream of growing cash flows to its investors. Moreover, a high quality company—with a demonstrated history of high ROA—generally has better opportunities to invest incremental future cash flows than an average or low quality company. As we have seen, many of the same characteristics that gave a high quality company its historical competitive advantage tend to persist through time. Essentially, the compounding of capital over long periods at above-market rates of return has been a fundamental advantage for high quality companies and their investors.

A complementary combination
High quality companies are often not the cheapest companies, and many cheap companies might not be high quality. Looking again at the frequency of outperformance, we can see that either cheap valuation or high quality prevailed during most periods—even in the shorter term (Exhibits 1 and 2). This suggests that one factor worked when the other did not, and that a portfolio of stocks meeting both criteria may thus have the potential to provide better performance. Our historical analysis of hypothetical portfolios with various weights on our quality and value factors demonstrates how powerful this combination has been over a long-term horizon (see Exhibit 4 left, page 4). During the past 25 years, combining high quality and low valuation delivered better returns relative to the benchmark equal-weighted Russell 1000 Index and more positive Jensen's alpha than cheap or high quality stocks on their own.[8]

EXHIBIT 4: A portfolio combining high quality and cheap valuation may have the potential to deliver long-term outperformance.

COMBINING VALUE (P/E) AND QUALITY (ROA) HYPOTHETICAL PORTFOLIOS VS. RUSSELL 1000 INDEX DEC. 1987–JUN. 2013

■ Annualized Excess Return   ■ Jensen's Alpha

% Quality	100	75	50	25	0
% Value	0	25	50	75	100
Information Ratio	0.33	0.82	0.96	0.70	0.49
Sharpe Ratio	0.76	0.84	0.88	0.79	0.70

CUMULATIVE PERFORMANCE OF QUALITY/VALUE COMBINATIONS (STARTING = $100)

— 100% Quality
— 50% Quality / 50% Value
— 100% Value
— Russell 1000 Index (equal weighted)

Past performance is no guarantee of future results. These charts are for illustrative purposes only and do not represent actual or future performance of any investment option. Monthly data from December 1987 through June 2013. Information ratio compares portfolio returns above the benchmark to the volatility of those returns. Sharpe ratio compares portfolio returns above the risk-free rate to overall portfolio volatility. Higher information and Sharpe ratios are better. See Methodology on page 5. Source: FactSet, Thomson Reuters IBES, S&P Capital IQ/Compustat, Fidelity Investments.

Investment implications

While value stocks are cheap based on measures such as current earnings or assets, quality stocks can be considered cheap based on their expected potential for future profitability. In that way, the two factors are complementary, not redundant. On a cumulative basis from December 1987 through June 2013, a hypothetical portfolio that combines quality and valuation delivered slightly better returns than a pure valuation-oriented strategy (see Exhibit 4 right, above). And adding the important consideration of volatility, the combination portfolio truly distinguished itself with materially superior risk-adjusted returns. Investors who focus on value or quality alone may find that their portfolios perform well, but they may also be leaving something on the table by not considering both factors at the same time.

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Vice President, Senior Investment Writer Jennifer Carter, CFA provided editorial direction.

Methodology

Unless otherwise indicated, the following methodology was used for the quantitative analysis:

Time period
December 31, 1987–June 30, 2013

Universe
Russell 1000 Index

Data sources
FactSet for security prices and returns, Thomson Reuters IBES for EPS estimates to calculate P/E, S&P Capital IQ/Compustat for financial statement data to calculate ROA, and Russell Investments for index constituents. Performance data sourced from and calculated by FactSet's AT3 backtesting application.

Factor definitions
P/E = Stock price divided by IBES next 12-month mean earnings per share estimate.
ROA = Trailing 12-month operating income divided by average assets excluding cash. Combination factors group each factor into percentiles, and then multiply these percentiles by the weights on the factors.

Hypothetical portfolio construction methodology

All portfolios and benchmarks are equal weighted for the purpose of calculating returns. Unless otherwise noted, stocks are grouped equally into 10 deciles, and only results from the top and bottom deciles are used in this analysis. All deciles are sector neutral, meaning that stocks are ranked within Global Industry Classification Standard (GICS®) sectors for each factor. As a result, the sector weights within each decile are similar to the sector weights of the benchmark. All portfolios and benchmarks are rebalanced monthly, and monthly buy-and-hold returns are used in all calculations. Returns include reinvestment of capital gains and dividends, if any, but do not reflect any fees or expenses. To reduce the effect of outliers and data errors, monthly returns are capped at the 2nd and 99th percentiles—i.e., the top (and bottom) 1% of each month's returns are set to the largest (and smallest) returns of the remaining 98%.

Techniques to overcome look-ahead and survivorship biases
Historical Russell 1000 constituents are retrieved at the beginning of each month and thus include nonsurviving companies that no longer exist today. All Compustat financial data are lagged by 45 days to allow for the normal procedure of reporting results with some delay after quarter end—e.g., financial statements for the March 31, 2010 period are not used in this analysis until the May 31, 2010 period.

Endnotes
[1] ROA, or return on assets, is the percentage amount calculated by dividing net income into total assets, which shows how profitable a company's assets are in generating revenue.

[2] A basis point is 1/100th of a percentage point.

[3] ROIC, or return on invested capital, is the percentage amount earned on a company's total capital, calculated by dividing total capital into earnings before interest, taxes, or dividends are paid. ROE, or return on equity, is net income before extraordinary items available to common shareholders, divided by average common shareholders' equity.

[4] Leverage is the ratio of net debt to market capitalization.

[5] Economic moat was coined and popularized by Warren Buffett and can now refer to a proprietary Morningstar rating intended to reflect a company's advantages over its competitors.

[6] Drawdown is defined as the worst peak-to-trough decline in total return.

[7] WACC, or weighted average cost of capital, is the average rate that a company expects to pay holders of common and preferred stock, debt, and other securities to finance its assets. As WACC increases, risk increases and valuation decreases.

[8] Jensen's alpha = portfolio return – [risk-free rate + portfolio beta * (market return – risk-free rate)]. It measures the so-called abnormal return of a portfolio over the theoretical expected return, given the realized beta or market sensitivity of the portfolio.

Index definitions
The Russell 1000® Index measures the performance of the large cap segment of the U.S. equity universe. It includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership, and represents approximately 92% of the U.S. equity market. The Russell 1000 Index is constructed to provide a comprehensive and unbiased barometer for the large cap segment and is completely re-constituted annually to ensure that new and growing equities are reflected.

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