

Is High Quality Always Better?

An Analysis of Quality Rank Indices

- In most fields of human enterprise, high quality is viewed in a more favorable light than low quality. Should that view be true for common stocks as well, or is the story less straightforward?
- For more than 50 years, the investment community has used Standard & Poor's Earnings and Dividend Rankings, commonly known as Quality Rankings, to determine the quality of common stocks. These rankings reflect the variability of the growth and stability of a company's earnings and dividends.
- In this paper, we explore the relationship between high and low quality stocks in various market environments using the S&P 500[®] High Quality Rankings Index and the S&P 500 Low Quality Rankings Index, indices which provide exposure to S&P 500 constituents with above and below average rankings, respectively.
- The quality premium, or difference in return of high quality versus low quality, is positive in down markets. This validates the commonly held belief that high quality provides a cushion in market downturns. Conversely, in up markets the quality premium turns negative.
- The quality premium is a function of risk aversion, credit spread, and changes in the slope of the yield curve. During periods of high volatility, widening credit spread, and steepening yield curve, the quality premium tends to be positive. Conversely, in periods of declining risk, narrowing credit spreads, and flattening yield curves, the quality premium tends to be negative.
- In this paper, we suggest viewing quality in the same light as style, size, and sector exposures or, in other words, as subject to rotations in various market environments.

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**S&P
INDICES**

Introduction

In almost all fields of human endeavor, high quality is viewed in a more favorable light than low quality. Should that view also hold true for stocks? Since 1956, Standard & Poor's has provided Earnings and Dividend Rankings, also known as Quality Rankings, on common stocks. The rankings reflect the variability in growth and stability of a company's earnings and dividends. To generate the rankings, a computerized scoring system computes scores based on the company's earnings and dividend per share growth over the most recent ten years. The basic scores are then adjusted by a set of predetermined modifiers to account for change in the rate of growth, stability within long-term trend, and cyclical. Adjusted scores for earnings and dividends are finally combined to yield a final ranking.

Table 1: Quality Rankings Classifications

Description	S&P Ranking
Highest	A+
High	A
Above Average	A-
Average	B+
Below Average	B
Lower	B-
Lowest	C
In Reorganization	D
Liquidation	LIQ

Source: Standard & Poor's.

In this paper, we first highlight the various ways that Quality Rankings are used in investment processes and academic studies. Our next section focuses on the variation in style, sector, and size exposures of high and low quality stocks as measured by the S&P 500 High Quality Rankings Index and S&P 500 Low Quality Rankings Index, indices providing exposure to S&P 500 constituents with above average and below average rankings, respectively. Our findings suggest that quality can be viewed in the same light as style, size, and sector exposures or, in other words, as subject to rotations in various market environments. We then explore the relationship between high and low quality stocks in various market environments finding that quality moves in cycles based on market conditions. Quality premium, measured as the difference in returns between high and low quality stocks, is found to be a function of risk aversion, credit spread, and changes in the slope of the yield curve.

Investment and Academic Use of Quality

A measure of quality can possess a number of qualitative and quantitative properties. Bernstein (2005) outlines the requisite properties that objective measures of quality should possess. The five criteria are:

1. **Numeric:** The measure of quality should be consistent and numeric.
2. **Systematic:** The measure should be calculated the same way for all securities regardless of their industry classification.
3. **Transparency:** The measure should be simple and intuitive for an investor to understand.
4. **Verifiable:** The measure should have a significant history so that it can be tested under different economic and investment environments.
5. **Free:** The data should not cost more than an average database subscription cost.

Due to their combination of extensive history, quantitatively driven process, and accessibility, Quality Rankings have gained acceptance in the market as a measure of quality. Quality Rankings are frequently used by pension funds and trusts with fiduciary duties that are required by law to make prudent investments, and therefore, invest only in securities with a ranking of A- or above. Because rankings are readily available in financial databases such as Compustat, active managers frequently incorporate Quality Rankings in their investment process to define quality.

The effect of quality on stock returns has been studied and debated by many academics. Previous academic studies have found that the Quality Rankings can be used as a proxy for risk as there is a close relationship between a stock's ranking and its beta. Haugen (1979), Muller, Fielitz and Greene (1983), and Muller and Fielitz (1987) find that Quality Rankings are closely related to stock's beta and the standard deviation of returns. Felton, Liu and Hearth (1994) conclude that stock rankings are a good measure of risk both before and after ranking changes, and suggest that investors may be able to use ranking changes in order to adjust portfolio risks.

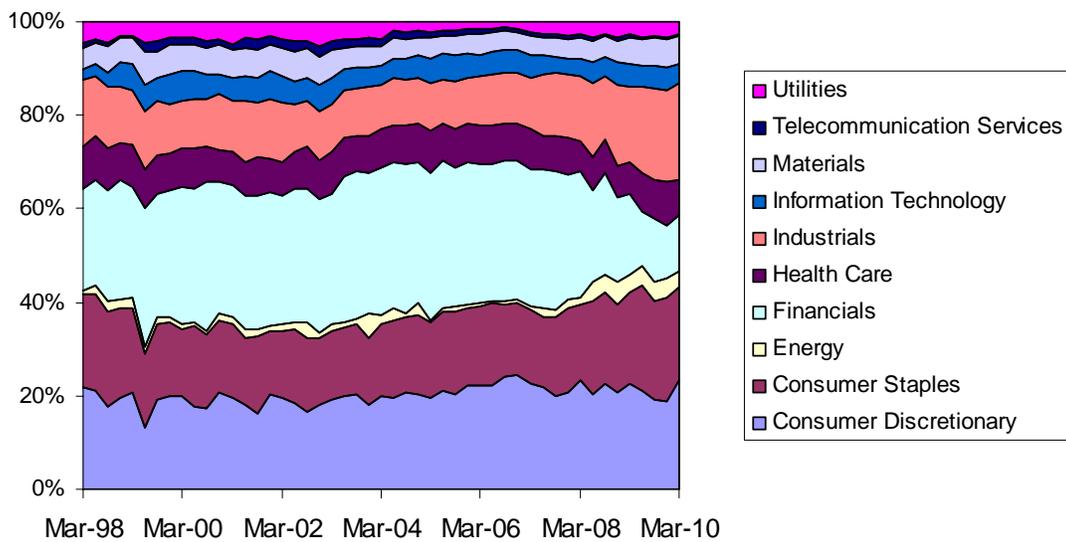
Quality Exposures

Throughout time, high and low quality stocks have displayed distinctive characteristics with respect to style, size, and sector. Therefore, quality rotation is an alternative means to capture simultaneous exposure to the aforementioned characteristics.

I. Sector Exposure

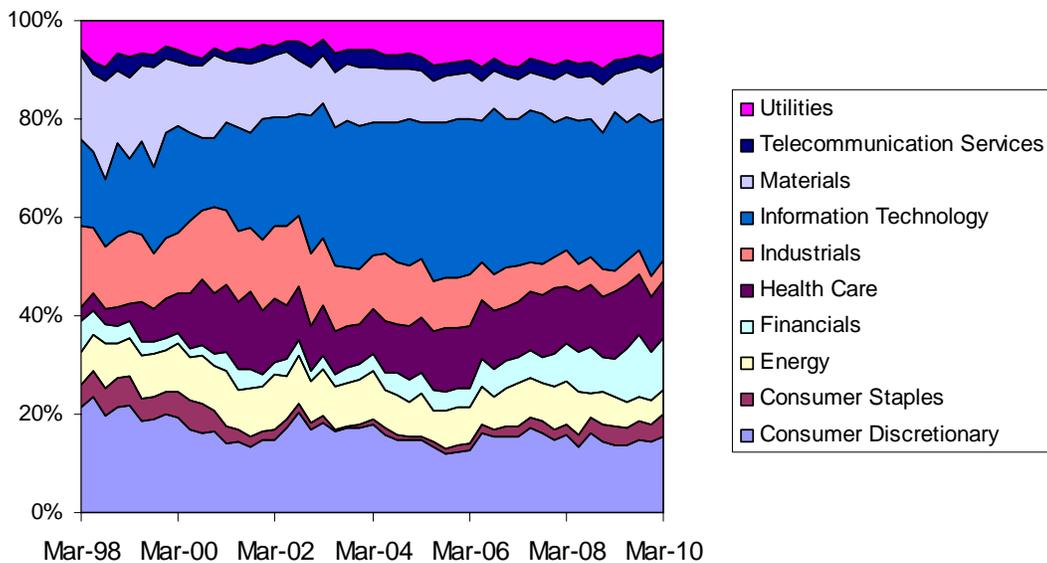
The level of concentration of high and low quality companies in certain sectors is found to be consistent over time. While some sectors have a high percentage of either high or low quality companies, other sectors maintain a healthy mix of stocks in both quality levels. The Consumer Staples and Financials sectors have the highest percentage of high quality stocks both historically and currently. On the other hand, Information Technology, Materials, Energy, and Utilities sectors have shown varying degrees of concentration in low quality companies. Consumer Discretionary and Health Care sectors appear to be split almost evenly between high and low quality companies. Exhibits 2 and 3 illustrate the differences in sector exposure of high and low quality stocks over the 13-year period beginning March 1998.

Exhibit 2: High Quality – Sector Exposure



Source: Standard & Poor's. Data as of each calendar quarter end from 1998 – 2010. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

Exhibit 3: Low Quality– Sector Exposure

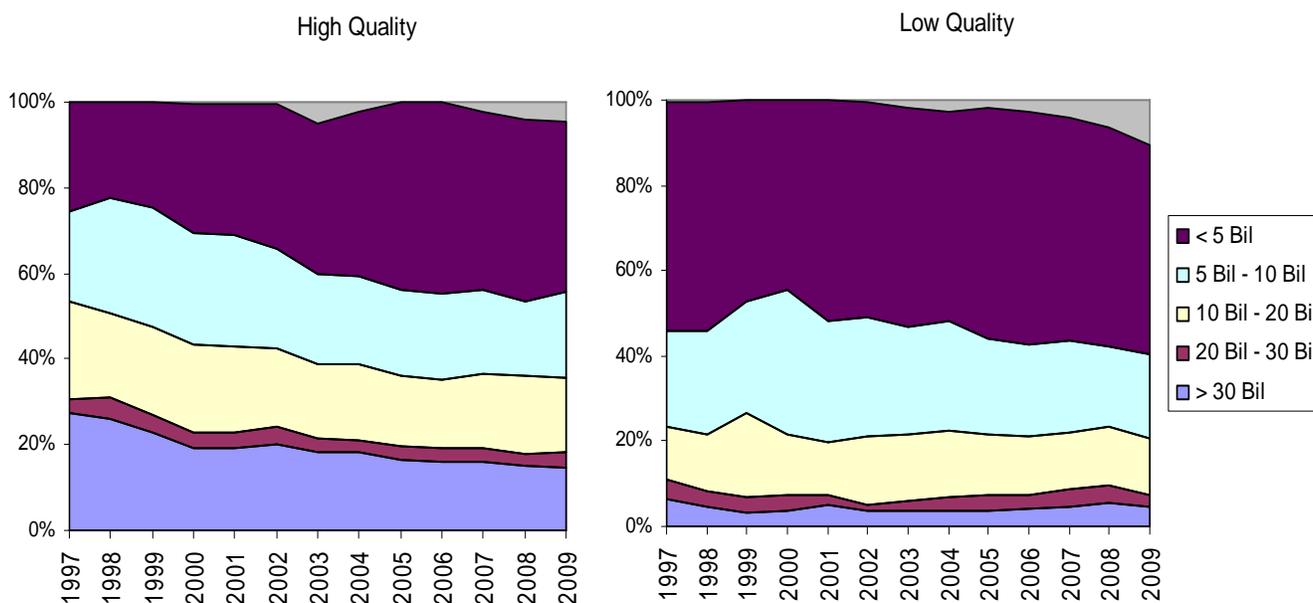


Source: Standard & Poor's. Data as of each calendar quarter end from 1998 – 2010. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

II. Size Exposure

Exhibit 4 illustrates the historical size exposure of high quality and low quality stocks. We break down size exposure into five groups – those with market capitalization of i) US\$ 30 billion and above, ii) US\$ 20-30 billion, iii) US\$ 10-20 billion, iv) US\$ 5-10 billion, and v) US\$ 5 billion or less. Over the last 13 years, more than 50% of low quality stocks have resided in the smaller cap range, with less than 5% found in the mega-cap group. On the other hand, approximately 25% - 35% of high quality stocks reside in the mega-cap group, while 5% - 8% are classified as smaller cap securities. As such, high and low quality stocks have markedly different size exposure.

Exhibit 4: Size Exposure of High and Low Quality

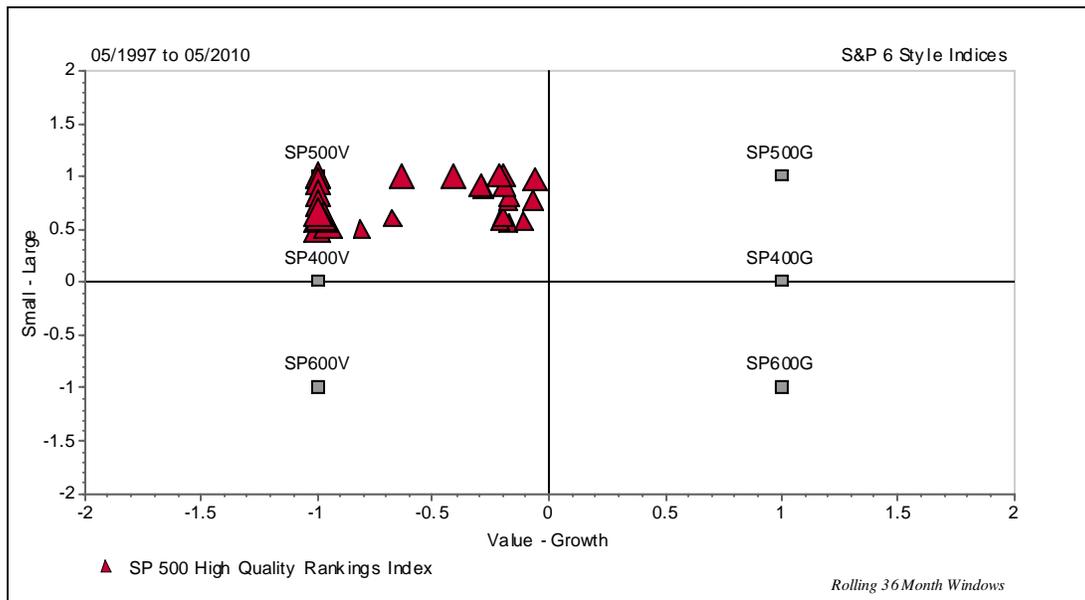


Source: Standard & Poor's. Data as of December 31 of each year from 1997-2009. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

III. Style Exposure

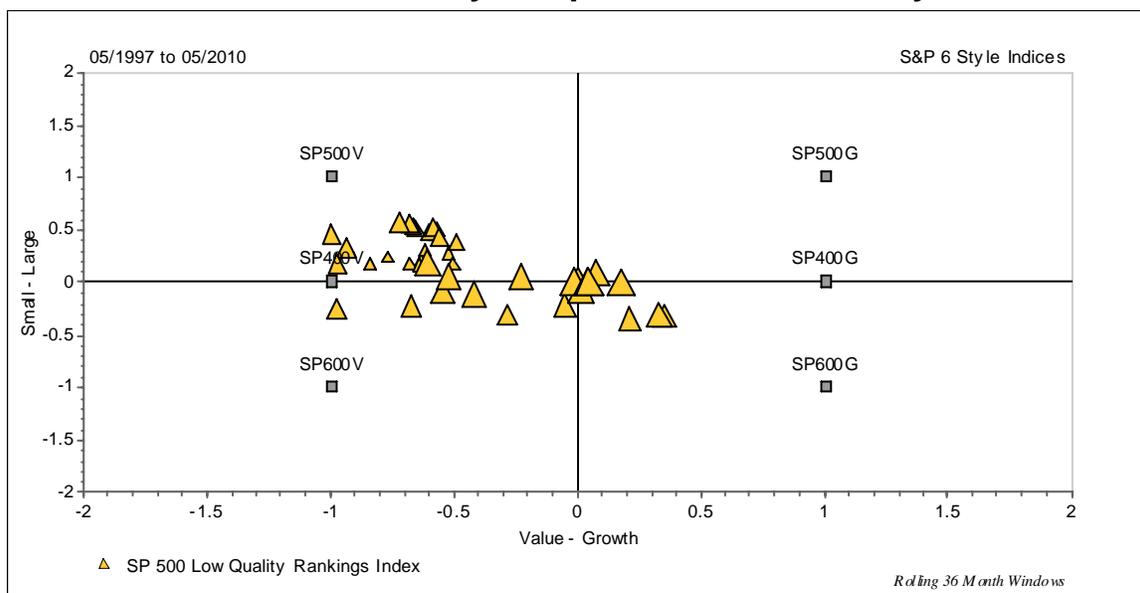
The historical size exposure of high and low quality stocks tells us that a significant portion of high quality stocks tends to be large-cap, while low quality stocks maintain a consistent mid-cap size exposure. The style analysis of the two S&P 500 Quality Rankings Indices confirms the above finding and also provides insight into where quality lies with respect to style exposure. Comparing the historical 36-month rolling returns to the S&P Style Set, we find that while the returns of high quality stocks have been closely related to those of the S&P 500 historically, they have been moving closer to S&P 500 Value returns. However, the change in style exposure we witness in high quality stocks is somewhat less pronounced than the change in style exposure for low quality stocks. Low quality stocks have displayed a significant style drift, with their returns showing close relationships within all three mid-cap spaces of growth, core, and value. Exhibits 5 and 6 demonstrate the historical style exposure of the two indices.

Exhibit 5: Historical Style Exposure of High Quality Stocks



Source: Standard & Poor's, FactSet. Data from 05/31/1997 – 05/31/2010 on a rolling 36 month basis. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

Exhibit 6: Historical Style Exposure of Low Quality Stocks



Source: Standard & Poor's, FactSet. Data from 05/31/1997 – 05/31/2009 on a rolling 36 month basis. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

Quality Premium Under Various Market Regimes

It is commonly believed that high quality stocks act as cushion during market downturns, thereby providing downside protection. High quality stocks' earnings are less variable than those of low quality stocks, and are therefore better able to weather market turmoil. If this thesis is correct, then one should find that quality premium, which measures the excess returns of high quality stocks over low quality

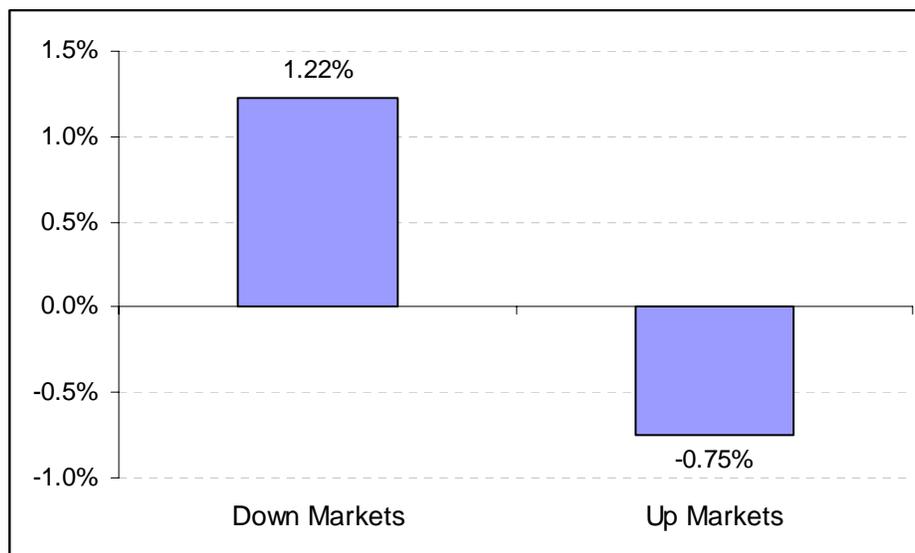
stocks, should be positive during less favorable or deteriorating market conditions. The following section examines quality premium under four investment scenarios:

1. Declining equity market
2. Deteriorating credit market
3. Rising volatility
4. Rising interest rates

I. Bull Versus Bear Markets

Using average quarterly quality premium, we find that quality premium is positive during down markets and turns negative in up markets. We define an up market as a time period of one or more calendar quarters during which market returns are positive, as measured by the returns of the S&P 500. A down market is defined as a time period of one or more calendar quarters during which market returns are negative. As shown in Exhibit 11, the average quarterly premium is 1.22% during the down markets and -0.75% during the up markets.

Exhibit 11: Quality Premium During Down Markets and Up Markets



Source: Standard & Poor's. Data from 05/31/1997-05/31/2010 on a quarterly basis. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

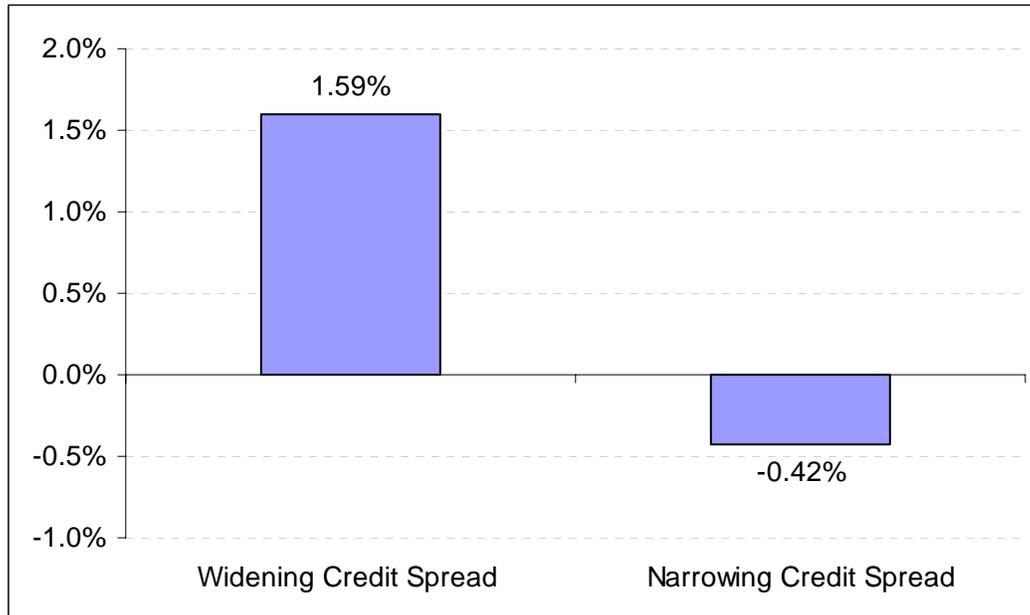
II. Credit Spread

Credit spread is commonly used to gauge conditions in the credit market. The spread is usually measured as the spread between Treasury and non-Treasury securities with the same maturity. Widening of the spread indicates deteriorating conditions in the credit market, while the narrowing of the spread signals improving conditions.

We use the quarterly spread between the yields on the 10-Year Treasury and the Barclays Capital U.S. Aggregate Credit – Corporate Investment Grade Index to measure credit spread. We consider credit spread to have widened when it increases by more than 175 basis points and consider it to have narrowed when it decreases by more than 175 basis points. Exhibit 7 shows the average quarterly performance of quality premium during periods of widening and narrowing credit spreads. On average,

quality premium stands around 1.59% when credit spread widens and declines to -0.42% when credit spread tightens.

Exhibit 7: Average Quarterly Quality Premium & Credit Environments



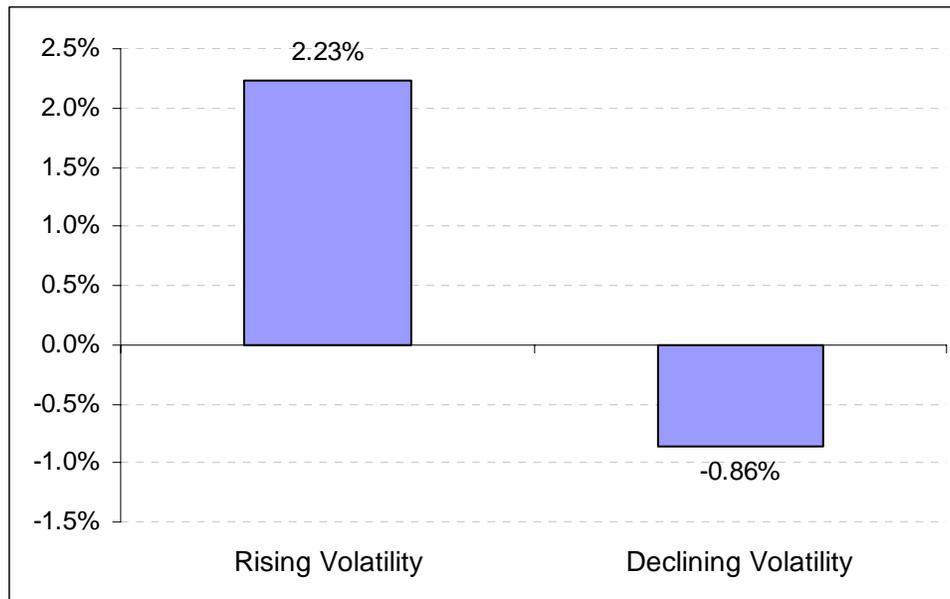
Source: Standard & Poor's. Quarterly data from May 31, 1997 – May 31, 2010. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

III. Volatility

The CBOE Market Volatility Index[®] (VIX[®])¹ is a widely recognized measure of market expectation of near-term volatility in the stock market as reflected in stock index option prices. Also known as an investor fear gauge, large spikes in VIX levels are associated with fear and turmoil in the equity market while low changes in the index level are associated with market confidence.

We use the quarterly changes in VIX to isolate the periods in which VIX has increased or decreased by greater, less than, or equal to five percent. As shown in Exhibit 8, we find that on average the quarterly quality premium is 2.23% for periods of increasing market volatility, while the premium is -0.86% when volatility declines.

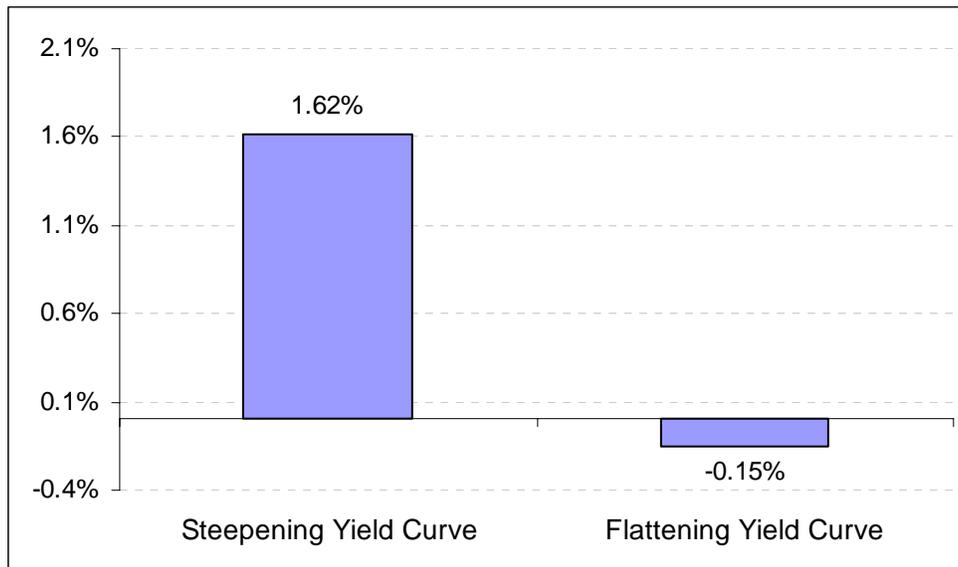
¹ The VIX[®] methodology is the property of the Chicago Board Options Exchange ("CBOE").

Exhibit 8: Average Quarterly Quality Premium & Market Volatility

Source: Standard & Poor's. Quarterly data from May 31, 1997 – May 31, 2010. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

IV. Interest Rate Environment

The amount of quality premium that investors can expect in a given interest rate environment depends on the steepness, or slope, of the yield curve. The slope of the yield curve is measured by the difference between long- and short-term Treasury yields. There is no industry-wide accepted definition for the maturity of the long end and the short end of the yield curve. We define the slope as the difference between the yield on a 2-Year Treasury and the yield on a 20-Year Treasury. The difference is calculated on a quarterly basis. Any increase in the slope of more than 50 basis points is considered a steepening of the curve, and any decline in the slope of more than 50 basis points is considered a flattening of the curve. As shown in Exhibit 9, quality premium is higher for those periods in which the yield curve is steepening, producing an average premium of 1.62%. In periods of flat yield curve, average quality premium declines modestly to about -0.15%.

Exhibit 9: Average Quarterly Quality Premium & Interest Rate Environments

Source: Standard & Poor's. Data from 05/31/1997-05/31/2010. For additional index related disclosures, please refer to the Performance Disclosures section of the paper.

Conclusion

Quality Rankings, instituted in order to identify stocks which provide stable earnings and dividend growth, are widely used to define quality. We find that quality, much like other investment factors, moves in cycles subject to market conditions. Due to different style, size, and sector exposures, high and low quality cycles also translate into simultaneous rotations of those three exposures. We also find that quality premium, measured as the difference in returns of high quality versus low quality, is a function of risk aversion, credit spread, and changes in the slope of the yield curve. During periods of high volatility, widening credit spread, and a steepening yield curve, the quality premium tends to be higher. This discovery further confirms the commonly held belief that quality provides cushion during market downturns. Similarly, our analysis shows that quality premium is positive during down markets and turns negative in up markets.

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Performance Disclosure

The S&P 500 High Quality Rankings Index and the S&P 500 Low Quality Rankings Index are a composite index. Indexes are not collective investment funds and are unmanaged. It is not possible to invest directly in an S&P index. Past performance of an index is no indication of future results.

The inception date for the S&P 500 High and Low Quality Rankings Indices is May 24, 2010 at the market close. This Index had not been in existence prior to that date. The base date, the date when the index history begins, is April 17, 1997 after the market close. The backtest period used in this presentation begins April 17, 1997 at the market close and ends May 24, 2010 at the market close. The actual performance period shown begins May 24, 2010 at the market close and ends May 31, 2010 at the market close. The Index employs a two step quality driven-weighting scheme. The first step is the selection of the companies while the second is the weighting of the index constituents.

Prospective application of the methodology used to construct the S&P 500 High and Low Quality Rankings Indices may not result in performance commensurate with the backtest returns shown. The backtest period does not necessarily correspond to the entire available history of the index. Please refer to the methodology paper for the index, available at www.standardandpoors.com for more details about the index, including the manner in which it is rebalanced, and the timing of such rebalancing, criteria for additions and deletions and index calculation. The index is rules based, although the Index Committee reserves the right to exercise discretion, when necessary.

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