QUALITY AS AN INVESTMENT CRITERION

We believe that quality is a very important factor in portfolio management, but that it is fundamentally different from other investment criteria as it impacts not just return but risk as well. Equity portfolios, which are biased towards certain factors, have historically delivered high risk-adjusted returns. So-called 'smart beta' strategies typically utilize objective rules-based portfolio selection criteria in an attempt to exploit these factors. An investment factor that is increasingly mentioned is quality. At Crawford Investment Counsel, there has always been a strong quality bias and preference for dividend-paying companies. This, in turn, has contributed to our search for a more predictable pattern of earnings, dividends, and returns.

In the lexicon of finance, quality means something quite different than in everyday usage. In finance, a firm is considered to be of high quality if its earnings and dividends exhibit an unusual level of consistency and growth through time. We don't need to delve into financial theory to see why quality, as it is defined here, carries such significance for money managers. When you buy a stock, you are purchasing the right to a share of the stream of earnings and dividends that company generates. It is our belief the more predictable future earnings are, the more accurately one can forecast the returns that accrue to shareholders. A consistent and growing dividend over time is a demonstration of a company's ability to generate an earnings stream and is the key indicator of quality, in our opinion.

> *The acid test of whether true earning power is increasing is the ability of corporations to provide a stream of dividends whose growth will keep up with inflation[1].* -- Burton Malkiel

Many investment managers' goal is to provide better-than-market returns. While high quality companies have attractive investment attributes, providing above-market results is not the key value proposition associated with these stocks. Rather, the primary advantages of high quality stocks are the combination of return and risk reduction they

In our view, quality is important not because it increases expected return, but because it reduces estimation risk.

bring to the portfolio and that they can be expected to act in a more predictable manner than low quality stocks.

Quality, as an investing concept, is more broadly appreciated for fixed income assets than equity assets. U.S. Treasury bonds are high quality because the U.S. government has consistently made good on its obligation to bondholders. High yield bonds are, by definition, lower quality. The yields on this class of debt are generally higher because of the default rate among issuers. These differences in quality have implications beyond looking at historical returns. In fact, a focus on historical returns entirely misses the point. High quality matters most in the context of looking forward. For example with U.S. Treasury bonds, investors can typically predict the returns they will receive over time, and with high yield bonds future returns are more uncertain or volatile. Note, however, that quality and volatility are not synonymous. High quality investments may be volatile. Long-term U.S. Treasury bond indexes can be volatile, even though they are high quality. The same applies to equities.

In most cases, high quality companies allow investors to predict future earnings and dividends with a greater level of confidence than is possible with low quality companies. High quality companies may exhibit substantial price variability over time (volatility), but their long-term prospects can be more predictable than those of low quality firms. Generally speaking, it will be much harder to predict the future earnings and dividends of a company that is in distress than one that is a stable, consistent dividend payer. The dividend and earnings streams for the distressed firm are typically more volatile, reflecting the variability of the underlying business fundamentals, than is the case with a stable company. A portfolio of lower quality stocks may well outperform the stock market over a period of time, but the likelihood of outperformance is highly uncertain, particularly on a sustainable basis.

Measures of Quality for Equities

There are two well-known, commercially available quantitative measures of quality that help to identify quality companies: S&P Quality Ratings and Russell Stability Indices. These rankings are a starting point in the process of finding companies with the most attractive balance of business consistency through time. Crawford Investment Counsel has found that dividend history is one indicator of quality, and while the commercially available quality measures don't utilize this exact methodology, we all get to a similar subset of consistent and more predictable companies.

S&P Quality Ranking

The Standard and Poors' Earnings and Dividends Ranking System, otherwise known as the S&P Quality ranking, is the oldest and best known screen for quality, having been initiated in 1956[2]. Stocks with the highest growth and consistency of earnings and dividends over the trailing ten year period are rated 'A+.' Below this tier, stocks are assigned A, A-, B+, B, B-, C, and D in accordance with what S&P considers to be "quality." High quality stocks typically have a number of notable differences from low quality stocks, which may include lower-than-average beta[3] and higher-than-average dividend yields[4].

Russell Stability Indexes

Russell[5] also provides a quality measure which categorizes stocks and portfolios on the basis of 'stability.' The companies Russell deems most stable are referred to as defensive and the less stable firms are referred to as dynamic. The defensive companies have a history of consistent and stable growth, while the dynamic companies are generally more cyclical and prone to sudden changes through time, typically driven by changes in the economic environment. Russell suggests that the spectrum from defensive (high quality earnings) to dynamic (lower quality earnings) should be considered an investment factor in addition to value vs. growth and small capitalization vs. large capitalization. In Russell's definition, it is quite clear that quality is essentially synonymous with consistency, predictability, and below-average economic sensitivity.

Russell equates stability to four variables[6]:

1. Debt-to-equity (as measure of leverage)

2. Earnings variability

3. Return on assets

4. Return volatility (equal weights given to trailing 12-month and 60-month volatility)

The first three of these are weighted equally, and contribute half of the stability score. Return volatility contributes half of the total stability score. The relevance of each of these terms to the predictability of a company's future earnings is clear. Low debt, low earnings variability, high return on assets, and low volatility all suggest that the future earnings of a firm tend to be more predictable.

Dividend History

Crawford Investment Counsel relies on a company's dividend history as an indicator of quality. Companies that pay dividends, and especially those that can increase dividends consistently over time, generally have businesses which are less cyclical, more predictable, and tend to be financially sound. At Crawford Investment Counsel, we believe that dividend history and quality are inexorably linked.

Quality and Historical Returns

Both Russell's and S&P's research suggest that high quality stocks go through periods of out-performance and under-performance as compared to low quality stocks and the market as a whole. There are times when the consensus of the market is to discount consistent and predictable results in favor of the potential for rapid, albeit hard to predict, growth (e.g. lower quality). Similarly, there are times when investors are willing to pay a premium for a more consistent earnings stream.

S&P's analysis[7] of the period from 1997 to 2010 shows that high quality stocks out-performed low quality stocks by an average 1.2% per quarter during down markets but tended to under-perform by -0.75% per quarter in rising markets. Similarly, high quality stocks tended to out-perform low quality stocks by 2.2% per quarter when market volatility was rising but under-perform by -0.86% when market volatility was falling. If history serves as an indicator, volatility tends to rise when investors become more uncertain with regard to future economic outcomes. This is what one would expect.

Over the past ten years, the Russell 1000 Defensive Index has had average annual returns that are 30 basis points per year lower than those of the Russell 1000 Dynamic Index[8]. Russell has not published any long-term historical analysis that suggests that portfolios formed on the basis of the Defensive Index have a persistent return advantage or disadvantage relative to the Dynamic Index. Similarly, Russell's back-tested results suggest that the Dynamic Index and Defensive Index have performed well in different economic conditions.

In our experience at Crawford Investment Counsel, the

performance of high quality stocks may vary due to a range of factors, but high quality tends to provide competitive returns over a full market cycle. Furthermore, these returns have historically exhibited lower volatility than the market as a whole, resulting in an efficient balance of risk and return for longer-term investors. Investors must understand, however, that a high quality portfolio's investment results may diverge from those of the broad market over shorter periods of time.

Why Focus on High Quality?

If the key value proposition of high quality stocks is not, necessarily, to always provide more return than the market as a whole, why might investors choose to invest largely or exclusively in high quality companies? We believe the answer to this question lies in understanding the distinction between looking at historical returns and establishing expectations for future returns. Investors selecting between investment alternatives must develop estimates of the future returns and risk levels associated with these alternatives. These estimates are, of course, fraught with uncertainty. In academic research over the past decade, there is an emergent understanding that the uncertainty in these estimates is itself a form of risk[9].

The uncertainty that investors face in trying to predict the future expected return of an asset or portfolio is referred to as *estimation risk*[10]. It is our belief that high quality stocks should have lower estimation risk as it relates to their future returns. This means that we can confidently design portfolios that we believe will meet our specific risk and return objectives. In addition, in our view the dividend component of return raises the predictability, and quality, of the return estimate.

To better understand estimation risk, let's consider the example of the small-capitalization premium. Over long historical periods, smaller company stocks have out-performed the broader market[11]. Will small-capitalization stocks out-perform in the future? We believe this is the question that really matters. The fact that historically small-capitalization stocks have out-performed over long periods of time may or may not have any relevance to the future. The historical small-capitalization return premium in no way guarantees that there will be a small-capitalization premium going forward. This problem applies to all investment factors. In our view quality is important not because it increases expected return, but because it reduces estimation risk. Also, this benefit is a more permanent feature of high quality portfolios.

The research identifying estimation risk[12] received numerous awards in academic finance when published in 2011. This work demonstrated that an investment with more estimation risk should be treated differently than one with less estimation risk. This uncertainty is not captured in traditional risk measures such as beta and volatility. Because quality provides measures of the predictability of a stock's future dividend yield and dividend growth rate, investing in high quality stocks reduces estimation risk associated with predicting future returns.

The primary value in selecting stocks based on quality is that they are usually more predictable. Gordon's equation[13,14], a form of the dividend discount model, states that the expected return on a stock (in the absence of changes in valuation such as rising or falling P/E ratio) is simply expressed as the sum of the current dividend yield added to the dividend growth rate[15]:

Expected Return = Dividend Yield + Dividend Growth Rate

Gordon's equation assumes that investors, in aggregate, are willing to pay a certain amount (the stock price) for the current dividend paid out by a firm. If the dividend is increased, the price of the stock should increase proportionately. In the short term, changes in the valuation of the stock—changes in the P/E, P/B, or dividend yield due to changes in the stock price beyond any corresponding change to the dividend—can have a substantial influence on return. This component of return is inherently unpredictable, however. Trying to time investments based on short-term changes in price that are not linked to fundamentals is largely indistinguishable from speculation.

Predicting Future Dividends and Returns

Returning to the Gordon equation, if the dividend and its growth through time can be predicted, we have most of what is required to estimate return. We assert that high quality stocks are those for which the dividend stream is highly predictable. In fact, we can demonstrate that for the most part quality and predictability go hand in hand. To state this slightly differently, higher-quality stocks should have lower estimation risk for their future returns than lower-quality stocks.

Predicting future dividends, given the historical track record, can be quite straightforward—depending upon the stability of the historical record. Using a statistical forecast model to replicate a component of the stock selection criteria at Crawford Investment Counsel, we believe that we can test the ability to predict the next year's dividend, given past dividends. We can then also quantify the error in the

estimate for the dividend and for the dividend growth rate. Using these errors, we can stress test the Gordon equation and this is where we will see the effect of quality. Higher quality stocks allow for better forecasts of the dividend and the dividend growth rate. Better forecasts of these terms then allow for the selection of securities that we believe may have more predictable results.

In our view three key components to selecting dividend stocks are current dividend yield, dividend growth rate, and quality. The goal at Crawford Investment Counsel is to balance these considerations in managing a portfolio. A quality-weighted version of the Gordon equation can be used to build portfolios for which there is a reasonable expectation of higher returns. A company with a history of increased dividends and a high quality earnings and cash flow stream is likely to maintain and raise its dividend consistently. When the dividend yield on such a firm is high because the market is discounting the growth prospects, the quality-weighted Gordon equation is likely to suggest high future returns. This approach favors high quality dividend stocks when their prices have been driven down due to recent unfavorable events or news. These short-term disruptions often create the types of investment opportunities that Crawford Investment Counsel seeks.

Summary

Quality, as an investment theme, is receiving a considerable amount of attention. It is important to understand that high quality equities are not always the highest return choice, for the same reason that high quality bonds may have an expected return that is less than low quality bonds. There will be time periods when high quality stocks deliver higher average return than low quality stocks, but there are clearly different parts of the business cycle that favor each. Simply selecting equities only on the basis of their having a high quality ranking from S&P is not an ideal strategy.

The quantitative metrics for distinguishing between high and low quality companies, such as the S&P Quality Ranking and the Russell Stability Indexes, are helpful as an indicator of predictability of the expected future dividend stream. We believe the historical dividend record provides deep insight, but is insufficient by itself to determine quality. Using these metrics as a starting point, it is possible to create projections of expected return that are appropriately discounted for estimation risk (see Appendix).

We focus on quality as an important component of the long-term investment process because higher-quality stocks are likely to have less estimation risk in their returns. Although high quality stocks can range from low volatility to high volatility, a portfolio selection process with a preference for quality will tend to have lower volatility than a similar portfolio strategy without a quality bias. Our goal is to identify high quality stocks that we believe have attractive dividend growth histories, potential for future growth, and attractive current dividend yields. The key challenge is to distinguish between high quality companies with robust, long-term growth prospects (our target market) from those which have historically had high growth but for which we have low confidence in the company's ability to maintain that growth. We believe the best conditions for purchasing high quality stocks are when short-term interruptions in the long-term growth trajectory drive prices down to a point where these stocks can be purchased at a discount, which corresponds to elevated dividend yield. Legendary value investor Benjamin Graham[16] reputedly said that in the short term, markets behave like a voting machine, but that in the long term, they behave like a weighing machine. A long and consistent dividend history provides confidence that we may have an accurate 'weighing machine' which can identify opportunities in the short-term ups and downs of market sentiment.

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Quality as an Investment Criterion
Examples

Appendix

Example 1: Chevron (CVX)

Chevron has a current dividend yield of 3.48% and an S&P Quality rank of A+. The annual dividend stream provided by Chevron is exceedingly smooth over the past ten years. Using a simple extrapolation, we have developed a quantitative forecast for the dividend over the next 12-month period. The forecasted values for the annual dividend (Forecast) are quite accurate in our view, with an average error of less than 4.1% of the dividend. With the current dividend of $4.07, the expected error in the forecast for next year is approximately plus or minus $0.17.
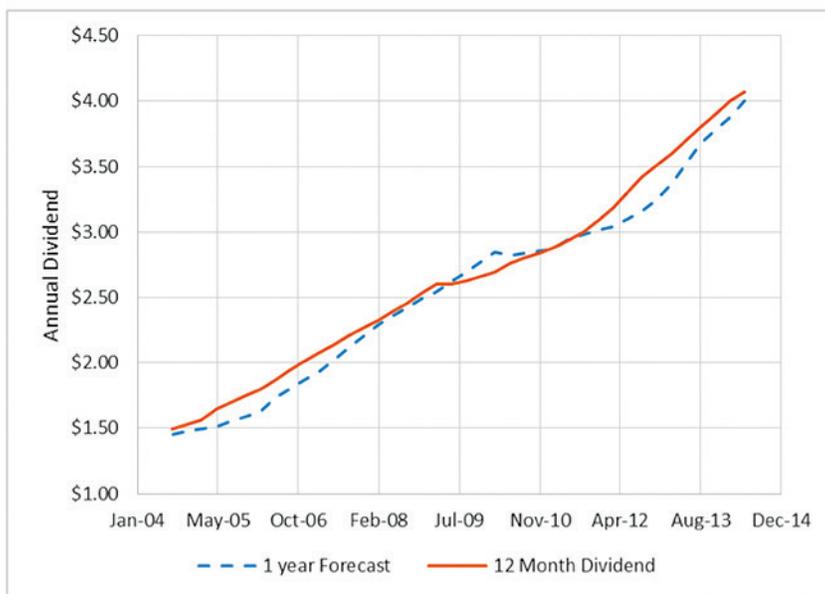
Forecasted vs. realized annual dividend for CVX[17]

The trailing ten-year dividend growth rate for CVX is 10.5% per year. The historical error associated with forecasting the dividend growth rate is 2.2%. To account for the historical estimation error in the dividend growth rate, we reduce our expected dividend growth rate by this amount, so that our estimated dividend growth rate is 8.3%.

With expected dividend yield of 3.7% for next year, the Gordon equation, with the reduction in dividend growth to reflect uncertainty, gives an expected rate of return of 12.0% (8.3% uncertainty - discounted dividend growth + 3.7% expected dividend yield). Over the past 10 years, the annualized total return on CVX is 12.8%[18].

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[17] Chart and chart calculations by Geoff Considine of Quantext, 2014.

[18] Chevron Corp. Morningstar.com. Web. 4 September 2014. <http://performance.morningstar.com/stock/performance-return.action?t=CVX&region=usa&culture=en-US>

Example 2: American Express (AXP)

American Express has a current dividend yield of 1.1% and an S&P Quality rank of B+. An examination of the historical dividend record, along with the statistical dividend forecast, shows how quality and predictability are related. Because AXP transitioned from regularly raising their dividends to a constant payout during the financial crisis, it has been more difficult for a statistical model to predict the dividend. For the years following the company's decision not to raise the dividend, a forecast based on previous trends projects some increase in the dividend. As the period of time with no dividend increase gets longer, the forecast for the dividend slowly declines. When the dividend resumes its upward trend, the forecast undershoots.
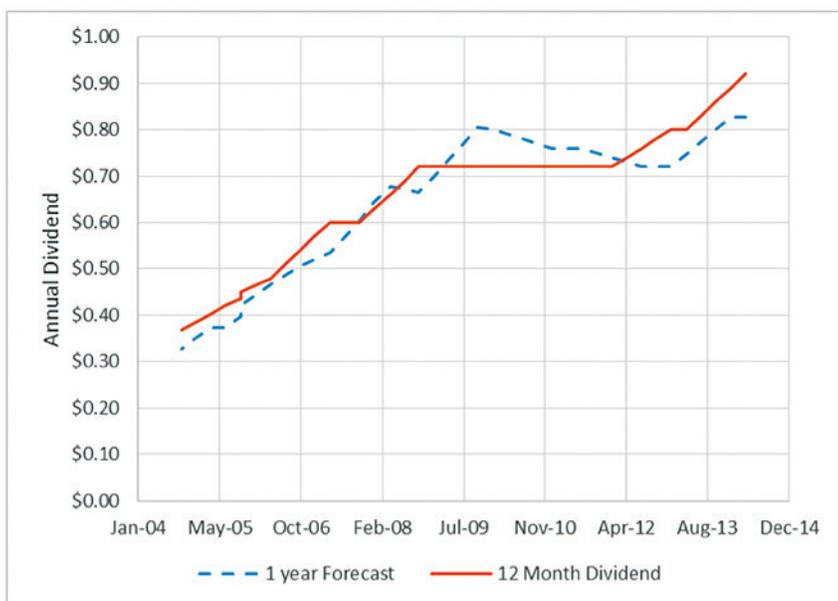
Forecasted vs. realized annual dividend for AXP[19]

While the dividend forecast model shown here is but one among many possible models, the behavior of AXP's dividend will make it harder for any forecast model because the company has been less consistent with regard to the dividend policy.

The forecasted dividend yield for the next year is 1.2%. The estimated dividend growth rate is 9.6%, based on the last ten years. The uncertainty in the estimated dividend growth rate is 3.7% and this is due to the somewhat inconsistent pattern of dividend increases. The Gordon equation then puts the baseline expected return for AXP at 9.6% (dividend growth) + 1.2% (dividend yield) = 10.8%. Accounting for the uncertainty in the dividend growth rate going forward, our estimate for the dividend growth rate is 5.9% (9.6% - 3.7% estimated error), for a total expected return of 7.1%. The trailing ten-year annualized return for AXP is 8.2%, falling between the baseline expected return and the conservative expected return which accounts for uncertainty in the outlook.

By discounting the historical dividend growth rate on the basis of predictability, we can see why quality matters. AXP's lower level of consistency manifests itself in more estimation error in the dividend growth rate, as compared to CVX. With both higher quality and a higher current dividend yield, CVX is expected to generate a markedly higher return than AXP, even though the dividend growth rates for these two stocks are quite similar. Gordon's equation and other dividend discount models for future return are likely to provide better estimates of future return if expected dividend growth rates are reduced to reflect estimation error.

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[19] Chart and chart calculations by Geoff Considine of Quantext, 2014.