

Schroders QEP

Why Quality stocks offer higher return and lower risk

For many years, investors thought of “Growth” investing as the natural complement to Value based investment strategies. However, disappointment with the diversification properties of Growth and the failure to identify a sustainable return premium attached to Growth stocks has more recently revived interest in the concept of Quality as both a stand-alone strategy and one that is highly diversifying with Value.

The Schroders QEP Global Equity Team has been studying the merits of investing in Quality for almost two decades and has offered a stand-alone Global Quality strategy since 2007. The strategy invests in financially strong companies that have a demonstrated record of generating superior and stable profitability. We believe that Quality is a more systematic and predictable investment approach than typical growth investing as it explicitly avoids the disappointment that is often associated with more glamorous stocks.

More specifically, our analysis suggests that Quality companies generate a return premium in excess of the market over time with lower risk whilst we also observe that this return is accentuated when risk aversion is high or rising. Historically, many of these periods have often been associated with Value strategies underperforming, meaning that Quality also appears to offer significant strategic diversification to Value approaches.

The complementary role of Value and Quality does not appear to be spurious. We observe that higher quality companies have very different characteristics to Value stocks which are often less profitable, more cyclical and exhibit weaker balance sheets. Philosophically, it is also possible to argue that high quality companies are complementary to Value in the sense investors fail to incorporate the persistence of the positive attributes of quality companies into the future, particularly their profitability, whereas the opposite is often true for stocks with weaker fundamentals (which creates the value opportunity). The complementary nature of Value and Quality enables investors to construct a more balanced equity portfolio which is more likely to perform across a broad range of market environments.

In this paper, we highlight how higher Quality companies typically offer higher returns to investors which we believe is at least in part linked to the observation that they are more likely to experience favourable corporate events. We also show that Quality companies are able to sustain elevated profitability levels relative to the wider market for protracted periods which does not appear to be fully valued, thereby creating a justification for the Quality premium. In contrast, investors actually tend to overpay for “Growth”, either as part of a lottery effect or because they get sucked into glamour trades which leads to the outperformance of the “slow and steady” companies where strong fundamentals are not fully priced.

What is a Quality company?

Quality companies have higher profitability with a record of stable business performance over time and have the financial strength to be able to invest for the long term. The best performing quality stocks are also those that have good track records of returning surplus cashflows to shareholders. More specifically, we capture Quality with the following three key characteristics:

- **Profitability** – Rates of returns - particularly return on equity, cash flow generation and the margins of the business – which measure the ability of the company to generate profits from its assets.
- **Stability** – Whilst profitability is a significant driver of relative stock returns over time it can be enhanced by focusing upon companies with more stable fundamentals. We analyse the growth of dividends, stability of cash flows, earnings and sales over time which helps to avoid temporarily cyclically strong companies which

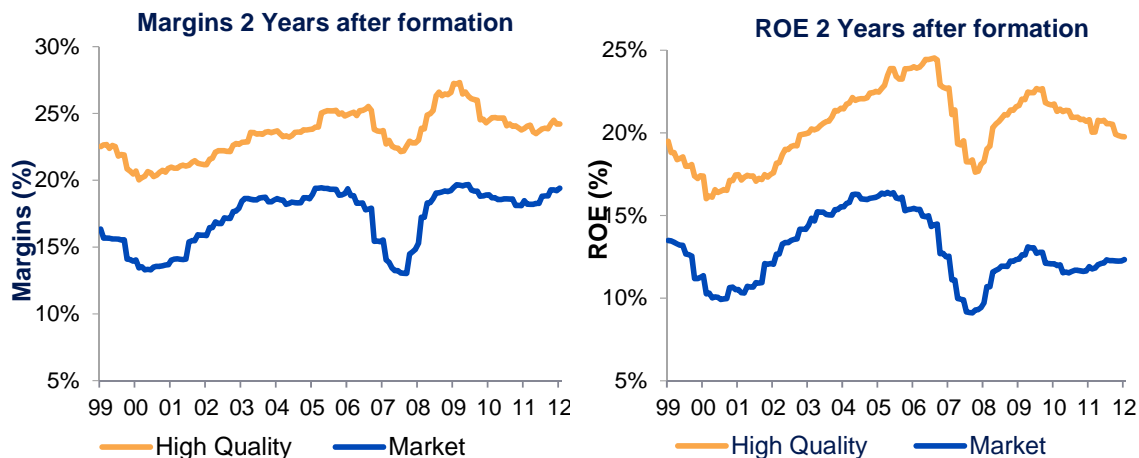
may easily be mistaken for sustainable growth. Moreover, by analysing a variety of largely discretionary items (e.g. accounting accruals, capital expenditure, the change in shares, the ratio of investment to assets and recent asset growth to name a few) we can also capture how management is expanding the business and its sustainability, as well as flagging potential operational risks.

- **Financial Strength** – Whilst some debt is fine, it is also important to distinguish between those companies that are expanding via excessive financial leverage. Companies with modest leverage and ample ability to service that debt are more likely to be masters of their own destiny. Thus Quality companies have appropriate leverage given the investment cycle, cyclical nature of cash flows and opportunities to invest in high returning investments.

Why invest in Quality stocks?

Management teams in Quality companies tend to be more shareholder friendly and are aware of the dangers of overinvesting which contributes to the greater persistence of higher profitability into the future. In figure 1 we highlight that Quality companies continue to enjoy both higher return on equity (ROE) and profit margins than the wider market for at least two years after we initially identified them as being higher Quality. We believe this persistence in Quality company's fundamentals is part of the reason why Quality companies deliver future outperformance. In short, many investors do not expect Quality companies to sustain their strong profitability and ability to generate consistent cash-flows that are subsequently re-invested in the business or distributed to shareholders.

Figure 1: Quality companies still have higher ROE and margins two years after being designated as high quality



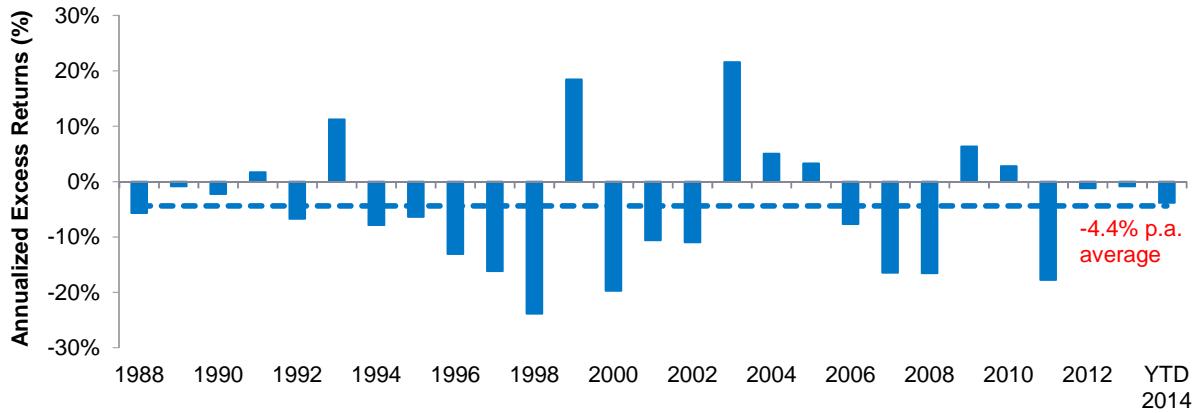
Source: Schroders, MSCI 1999-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

The corollary to this is that investors who chase the 'glamour' stocks that appear to offer future growth but ultimately disappoint are prone to losses. Investors take on this risk for the chance of extremely high payoff (which is known as the lottery effect) often by paying well above the appropriate valuation.

Figure 2 helps to demonstrate the consequence of disappointing investors by simply plotting the performance of companies posting negative earnings. This suggests that loss making companies underperform the market by more than 4% on an annualised basis and only outperform during periods when the market is extremely risk seeking (e.g. 1999 and 2003)¹.

¹ This argument is also related to articles that highlight companies with lower volatility earn higher returns over time such as Ang, Hodrick, Xing and Zhang, (2006) & Ang, Hodrick, Xing and Zhang, (2009).

Figure 2: Lossmaking companies consistently disappoint the market, which investors systematically overpay for.

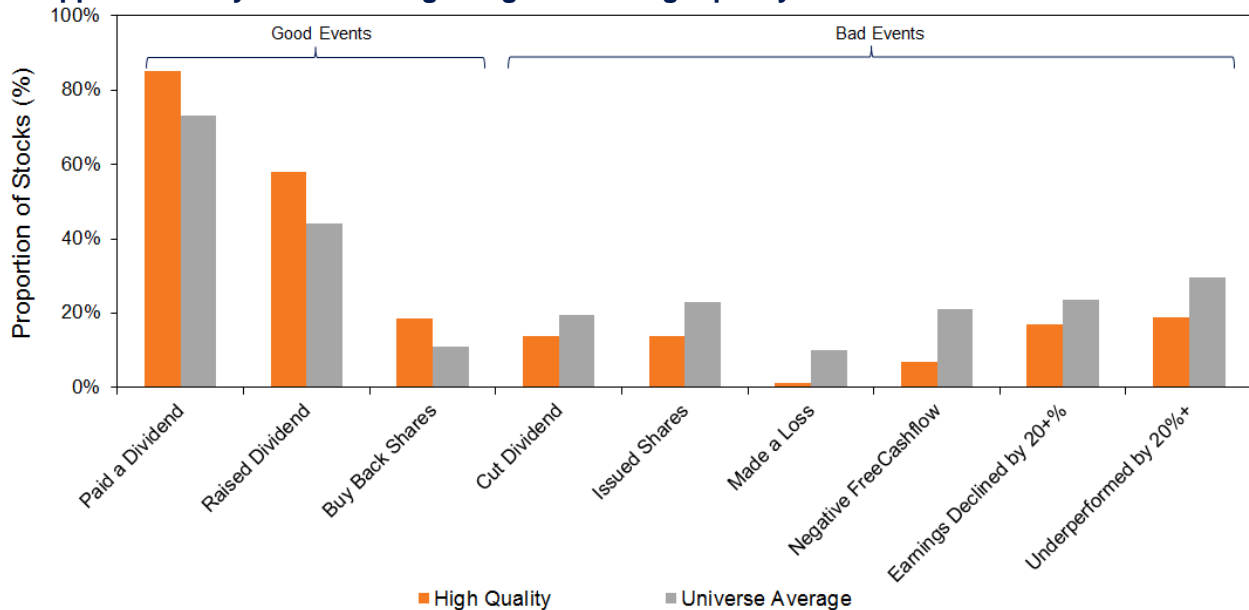


Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

As higher quality companies tend by definition to be more cash generative, we also observe that they are able to sustain higher dividend growth and more easily service their debts. Importantly, these favourable characteristics persist several years after portfolio formation. This allows Quality companies to continue to reinvest into projects that deliver substantial returns allowing them to grow more sustainably than other companies.

Shareholders are ultimately rewarded with higher cash-flows because not only are the initial earnings higher, Quality companies have continued to maintain a higher earnings trajectory. This can be seen by such companies being more likely to pay and raise their dividends than the market whilst experiencing fewer negative events such as large share issues, making a loss or substantially underperforming their peer group (see Figure 3).

Figure 3: Quality companies give shareholders consistent ‘good news’ and are less likely to disappoint in the year after being designated as high quality

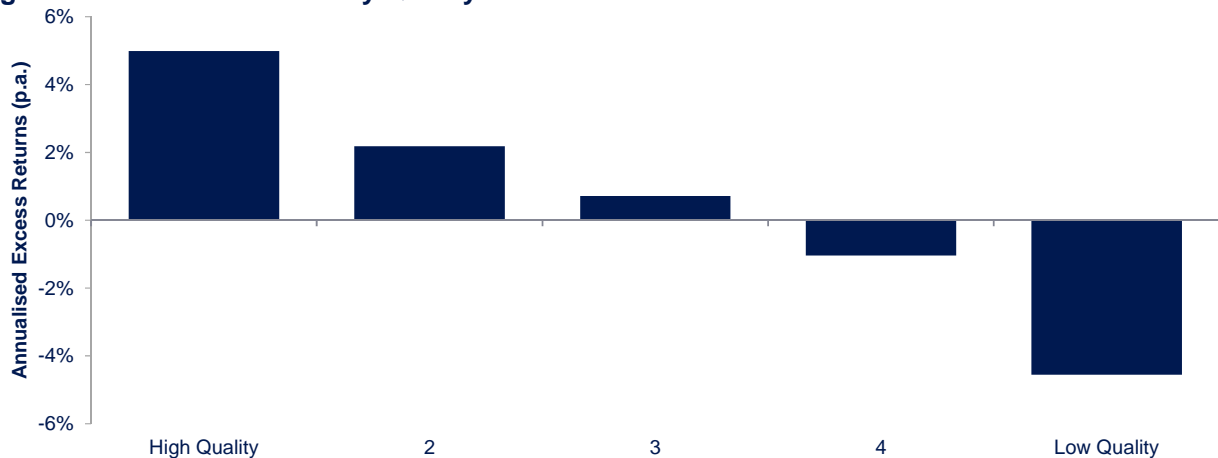


Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

Quality companies produce higher returns

As our analysis has highlighted Quality companies tend to maintain their competitive position allowing them to generate positive news which is subsequently rewarded by the market. Conversely, investors also benefit by avoiding lower quality stocks, particularly the more glamorous ones, which generally disappoint. The resulting Quality “premium” is demonstrated in Figure 4 which plots the high excess returns that can accrue from investing in high quality companies whilst simultaneously avoiding lower quality companies.

Figure 4: Historical Returns by Quality cohort



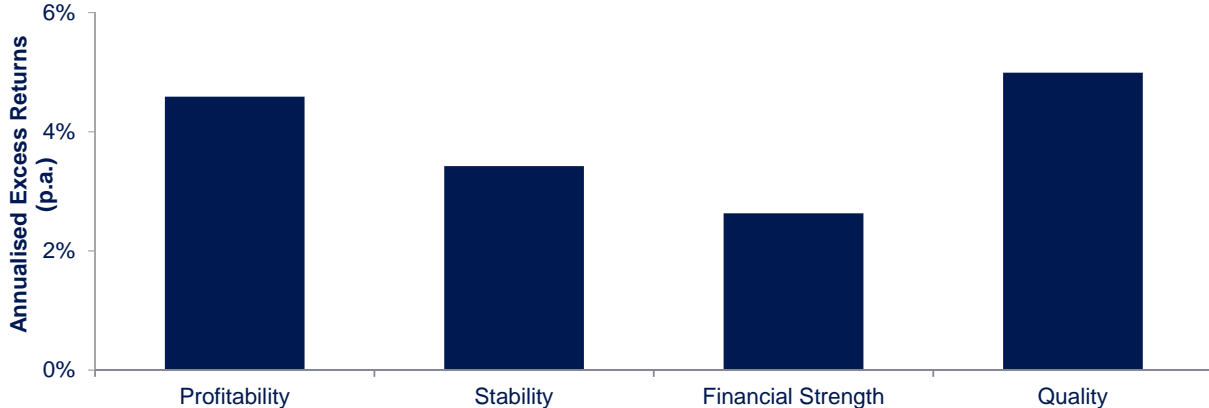
Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

Looking at the different dimensions of Quality in isolation (Figure 5), Profitability is the highest returning and most consistent single company characteristic whilst Stability, and Financial Strength can be more episodic in nature. For example, the market rewards high Stability during economic downturns or periods of rising risk aversion which partially reverts as markets recover. Financial Strength is very highly prized during economic downturns (i.e. it is lower beta) when the ability to service debt and cash management is particularly pertinent.

We believe that Quality is multi-faceted and it is important to look at a wide number of terms under the general dimensions of Profitability, Stability and Financial Strength. Importantly, these elements of Quality can be found in every sector and industry in both developed and emerging markets. Within the QEP Global Equities team, we monitor more than 60 individual inputs before making a final assessment of the underlying quality of a company. In particular, there are strong synergies between the various dimensions of Quality which results in more consistent performance profile during the course of an investment cycle.



Figure 5: Quality investing is multi-faceted and using all the characteristics together leads to a more consistent approach.

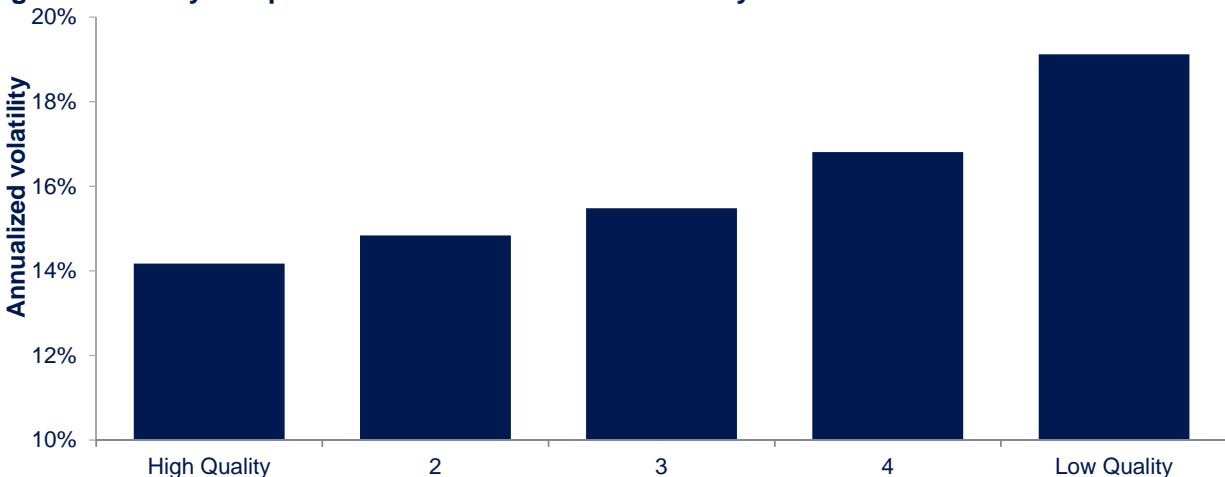


Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

Quality stocks are also lower risk

Our research into the effectiveness of investing in Quality companies suggests that it would have outperformed the MSCI World Index in 18 out of the past 22 years. Interestingly, this outperformance is not associated with higher risk. In fact the opposite is true as investing in quality companies leads to a strategy with lower absolute volatility. Importantly, this is different from pursuing a “low volatility” strategy in its own right, given it is the causality of higher quality leading to lower volatility characteristics that matters. As depicted in Figure 6, this creates a very attractive risk-return profile for a Quality strategy. As well as being desirable in its own right, lower absolute volatility also generates benefits when compounding returns over multiple time periods simply because there is a lower risk of loss in any single period.

Figure 6: Quality companies tend to exhibit lower volatility than the market



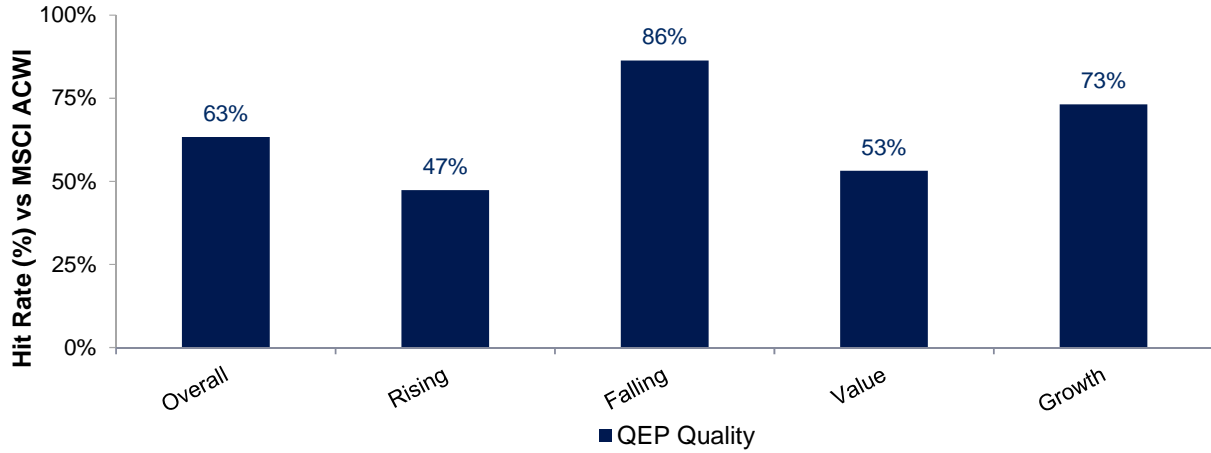
Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

This behaviour of Quality investing leads to more consistent performance across different investment environments. Figure 7 illustrates this point by highlighting the hit rate of a Quality strategy when markets are rising and falling and when Value or Growth stocks are leading. This demonstrates that a Quality strategy outperforms the market in two months out of three, but strongly leads the market when it is falling. Critically, and unlike most investment strategies, there is a skew to performance as it does not give back this outperformance when markets are rising. In addition, Quality once again appears to be a complement to Value strategies. First,



they deliver excess returns through the investment cycle, unlike Growth strategies. Second, Quality companies generate market like performance when Value stocks are leading, but outperform three-quarters of the time when Growth stocks lead.

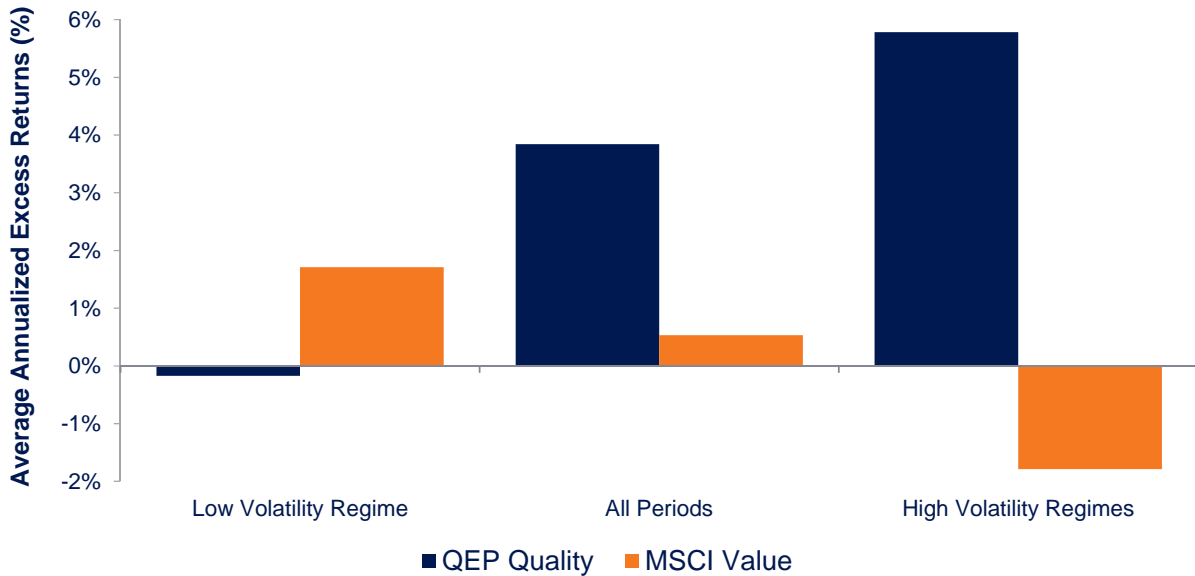
Figure 7: Quality companies deliver consistent performance in different market environments



Source: Schroders, MSCI 2000-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

The innate characteristics of high quality companies naturally lead to a strategy that exhibits a lower beta than the broader equity market. One way of illustrating this point is to consider the performance of such stocks during periods of high and low market volatility. Figure 8 clearly shows that Quality performs well during more volatile market environments, particularly when compared to Value based approaches.

Figure 8: Quality companies deliver consistent performance in different market environments



Source: Schroders, MSCI 1988-June 2014. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed.

Conclusions

Quality is a fundamentally based investment strategy that selects companies with sustainable business performance while excluding companies that are likely to disappoint. Our research suggests that such companies attract a return premium to the market which is particularly prized during times of market stress. Such a strategy offers a more systematic and sustainable form of growth investing as shareholders are rewarded over time via higher cashflows whilst we would also note the lower incidence of unfavourable events such as making a loss or cutting a dividend which are often penalised by investors, particularly for repeat offenders. Quality also leads to a portfolio with lower beta and volatility than the market. The end result is an attractive strategy in its own right but one that also provides significant strategic diversification from Value based approaches thereby providing the building blocks to outperform across a wide array of market environments.

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Appendix

Disclosure details of figures and models

Figures 1: Source Schroders, MSCI, Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$1Billion of historic equivalent are ranked by a Global Quality Rank with High Quality and being the top 20% of the respective ranks. We then calculate the Return on Equity and Margins of this High Quality group 24 months after we designated the stock as high quality.

Figure 2: Source Schroders, MSCI, 1988-June 2014. All returns are in USD (gross) based on QEP Market Impact Weights (MIW) and portfolios are rebalanced monthly. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion of historic equivalent are sorted into cash flow negative and cash flow positive stocks. All Stocks that are cash flow negative are rebalanced at month end and Market Impact Weighted returns are calculated with transaction costs taken into account relative to all stocks in the Mega to Small Universe. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.

Figure 3: Source Schroders, MSCI, 1988-June 2014. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion or historic equivalent are ranked by a Global Quality Rank with High Quality Strategy being the top 20% of the respective ranks. Over the next 12 months we then count the number of times a stock in the respective universe had the defined event occur and compare it against the universe average.

Figures 4: Source Schroders, MSCI, 1988-June 2014. All returns are in USD (gross) based on QEP Market Impact Weights (MIW) and portfolios are rebalanced monthly. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion or historic equivalent are ranked by a Global Quality Rank and broken into 5 buckets. Stocks are rebalanced at month end and returns are calculated with transaction costs taken into account. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.

Figures 5: Source Schroders, MSCI, 1988-June 2014. All returns are in USD (gross) based on QEP Market Impact Weights (MIW) and portfolios are rebalanced monthly. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion or historic equivalent are ranked by a Global Quality Rank, Profitability Rank, Stability Rank and Financial Strength Rank and broken into 5 buckets. We report only the performance to the top 20% of the respective ranks. Stocks are rebalanced at month end and returns are calculated with transaction costs taken into account. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.

Figures 6: Source Schroders, MSCI, 1988-June 2014. All returns are in USD (gross) based on QEP Market Impact Weights (MIW) and portfolios are rebalanced monthly. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion or historic equivalent are ranked by a Global Quality Rank and broken into 5 buckets. Stocks are rebalanced at month end and returns are calculated with transaction costs taken into account. Realized volatility is then calculated as the standard deviation of returns of the different quality buckets. Performance shown represents past performance. Past performance is no guarantee of future results and current performance may be higher or lower than the performance shown.

Figures 7: Source Schroders, MSCI, 1988-June 2014. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion of historic equivalent are ranked by a Global Quality Rank. Stocks are selected from the top 1/3rd of the rank Stocks are rebalanced at month end with returns calculated taking into account transaction costs creating a simulated Portfolio series. Performance in market environments (rising, falling, value, growth, large and small) defined using MSCI indices. Hit rate is calculated using monthly returns. The value of your investment can go down as well as up and is not guaranteed.

Figures 8: Source Schroders, MSCI, 1988-June 2014. Each month all stocks in the Global Mega to Small universe, which covers stocks that had Market Capitalization of US\$0.5Billion of historic equivalent are ranked by a Global Quality Rank. Stocks are selected from the top 1/3rd of the rank Stocks are rebalanced at month end with returns calculated taking into account transaction costs creating a simulated Portfolio series. Average returns of this series and the MSCI Value & MSCI World index during different periods of volatility are then calculated and excess annualised returns are calculated. High Volatility are periods that are associated with being in the historic top 1/3 of volatility and falling markets, low volatility are periods that are in the bottom top 1/3 of historic volatility and associated with rising markets. All periods is the average return each month since 1988.

The performance presented in this presentation includes back-tested performance. The cumulative returns are thus hypothetical rather than actual. There can be no assurance that this performance could actually have been achieved using

tools and data available at the time. The back-tests are calculated monthly using the top 20% of the respective ranks. These ranks are the result of ranking each stock within the relevant universe on a proprietary selection of factors (QEP Global Quality Rank, Profitability Rank, Stability Rank and Financial Strength Rank). The rankings are calculated using company information available each month, thus eliminating any 'look-ahead' bias. Model results are based on the QEP universe of mega to small cap stocks subject to minimum liquidity criteria covering over 12,000 stocks across more than 40 countries, including both developed and emerging markets. Stocks are rebalanced at month-end using closing price. There could be no assurance that any transactions actually performed in a managed portfolio could have been executed at the times or prices used for the purpose of calculating the performance in the model. No allowance was made in the model portfolio for advisory fees.

The ranks are constructed by ranking all stocks within the relevant universe comprising a selection of back-tested quality terms (profitability, e.g. return on equity, stability, e.g. sales stability, and financial strength, e.g. debt to market cap). The final construction of the rank is done using a QEP proprietary weighting scheme that assumes, for the purpose of this illustration, that the weight scheme would have used the data historically in the same manner as the current systems do today.

The actual performance of managed accounts is also impacted by non-quantitative factors, such as additional stock selection and risk management activities of the portfolio management team. These factors cannot be modelled predictably and were not used in preparing the underlying quantitative model or the simulated results. The model portfolio results are hypothetical results. They do not represent an attempt to show actual performance. They are used only to illustrate the impact of a quantitative model. They cannot be used to reflect actual or expected managed portfolio returns. Past performance is no guarantee of future results. The value of an investment can go down as well as up and is not guaranteed.



Appendix: Literature Review and References

The idea of Quality investing is not new. In fact Benjamin Graham, who is primarily associated with value investing, as long ago as the 1930s also highlighted the importance of understanding the Quality of a firm as much as the price paid for it. Perhaps surprisingly, the evidence of successfully targeting Quality companies to the advantage of investors and research into why Quality works has been a far more recent advance.

'It is far better to buy a wonderful company at a fair price than a fair company at a wonderful price.'
— Warren Buffett, 1989.

More than 4 decades ago Miller and Modigliani (1961) highlighted the "Essence of growth in short is not expansion but the existence of opportunities to invest ... funds at higher than 'normal' rates of returns". This suggested that a growth style investing should not be about finding companies that are growing rapidly but, as the Buffet quote suggests, is more about finding companies that produce high rates of returns *that will persist into the future*.

Research subsequent to Miller and Modigliani did highlight the importance of earnings in predicting future returns and the persistence in Earnings (Ball & Brown 1968). From a practitioner point of view this result may not have been surprising, given that Standard & Poor had been running a Quality Rankings Index since approximately 1956. This index captures both the growth and stability of earnings and dividends with the highest scoring stocks being classified as High Quality Ranking stocks and stocks are essentially equal weighted. Even though the Ball & Brown paper was extremely important in the accounting academic literature much of the subsequent work failed to research what attributes help to sustain above average returns on capital. Instead, the research focused on the valuation aspect of the result (e.g. Ball 1978, Fama & French 1992 and reference therein).

The quality and sustainability of earnings really started to develop further in Sloan (1996) which highlighted that higher quality earnings, in particular the cash flow component of earnings, were more persistent and subsequently lead to higher returns. The timing of this work was important. Subsequent accounting scandals (Enron, Worldcom) highlighted the importance of understanding the quality of earnings.

Piotroski (2000) was one of the first academic studies that looked at multiple² economic intuitive variables that attempted to find stocks that were more likely to sustain performance into the future. The *F-score* can be thought of as measuring current profitability (and growth), the improvement of the companies operating efficiency, and improvements in financial strength. Piotroski study highlighted those stocks with high *F-score*'s (high quality stocks) did lead to higher returns. He suggested that this was related to the market under-reacting to the persistence in the subsequent performance of these higher quality stocks.

The idea of targeting 'wonderful' companies, as Warren Buffet alluded to in 1989³, wasn't new but the Technology bubble and bust really drove investors to take a fresh look at this idea. These early investors wanted to invest in companies that offered diversity to Value strategies but still provided a positive excess return (unlike traditional growth indexes). This led to the development of several Quality strategies (such as Schroders QEP Quality and GMO Quality fund, although the latter excluded financials) whose purpose was to target stocks that were profitable, stable, with lower financial leverage. These Strategies also avoided the more glamorous parts of the market which were regularly overvalued while also finding companies that maintained their competitive advantage (GMO 2004 & 2012).

Asness, Frazzini and Pedersen (2013) more formally test the proposition that Quality companies persist into the future longer than expected. They highlight that Quality stocks maintain their Quality characteristics for several years after first being designated as Quality. In addition, these stocks are not priced at significantly higher premiums to the market. Thus, this leads to the performance of Quality as the market is discounting the likelihood that Quality will persist as long as it does (Quality does not revert to the mean as quickly as expected). Further, they suggest that by avoiding stocks that have a small chance of extreme performance, which the

² There were numerous other academic studies that preceded Piotroski e.g. Ou and Penman (1989), but these studies focused on predicting next year's earnings using complex statistical relationships. In contrast, the purpose of Piotroski's paper was to use economic intuitive variables that should help you find companies that are more likely to sustain performance.

³ In fact a recent paper (Frazzini et al (2013)) suggests that much of Warren Buffet's returns could be replicated by focusing on higher quality stocks that are also low beta and that are cheap.

market overpays for (the lottery effect), also adds to the performance of Quality. These ideas have spawned the investment industry to create investment products based on the ideas of Quality and numerous studies confirming these earlier results (MFS (2013), Northern Trust (2013), SSGA (2014), S&P (2014), MSCI (2013), and DFA to name but a few).

The weight of evidence that quality companies outperformed the market, even after taking into account valuations (Novy-Marx 2013, Ball et al 2014), recently led Fama & French (2014) to re-examine their famous three factor model and augment the empirical model with two additional Quality terms. These additional factors are added to explain the growing list of Quality 'anomalies' that the original three factor model couldn't explain. This paper highlights that Quality terms⁴ are important in explaining the cross-section of US stock returns. In fact, the paper suggests that Quality subsumes the value effect in explaining US stock returns.

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⁴ Fama & French use two simple proxies for profitability and growth of investments,

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