AlphaQuant
Engineered for Alpha

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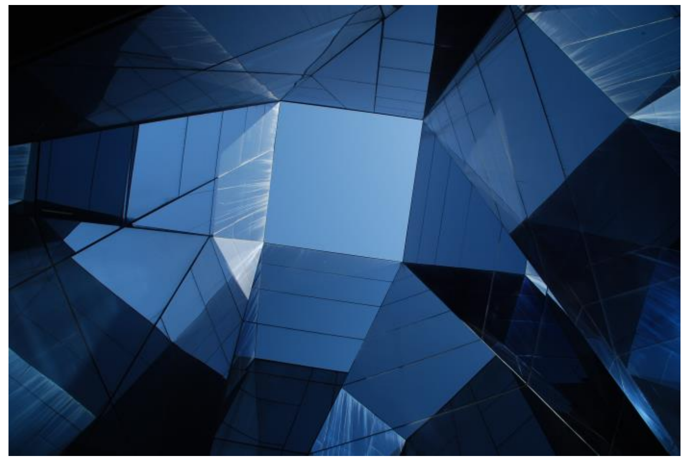
Quality Investing Strategy Framework

Executive Summary

- In equity investing "quality" is a subjective and therefore elusive concept. For example, some investors may deem high-quality a company with high growth rates; while others may identify quality with pricing power, predictable revenue and increasing profit margins.
- AQM believes that the definition of quality must meet two requirements: first, it has to be strictly related to shareholder value creation; second, its adoption in investing should result in superior portfolio performance. AQM finds that the Return on Invested Capital (ROIC) framework meets both requirements.
- A company's ROIC is the most effective way to measure value creation. ROIC measures the efficiency with which capital is employed and highlights a business's ability to create value from operations.
- ROIC is more comprehensive in evaluating a company's operating performance as compared to more commonly used return metrics like return on assets (ROA), and return on equity (ROE). These return metrics are distorted by items and financing decisions that do not influence true operating performance.
- AQM believes that companies that earn high returns on their invested capital usually possess a competitive advantage which allows them to stay ahead of competition.
- Despite premium valuation multiples, high quality stocks have historically outperformed. This may seem puzzling but AQM believes this outperformance of high quality stocks may be the result of investors underestimating these companies' earnings persistence and core operating profitability and a misplaced focus on short-term market and corporate events.



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What is Quality Investing?

In the corporate credit markets the concept of quality is clearly defined by a company's credit rating which quantifies its capacity to meet financial obligations. In equity investing "quality" is a more subjective and therefore elusive concept. For example, some may deem high-quality a company with high growth rates; while others may identify quality with pricing power, predictable revenue and earnings growth and stable or increasing profit margins.

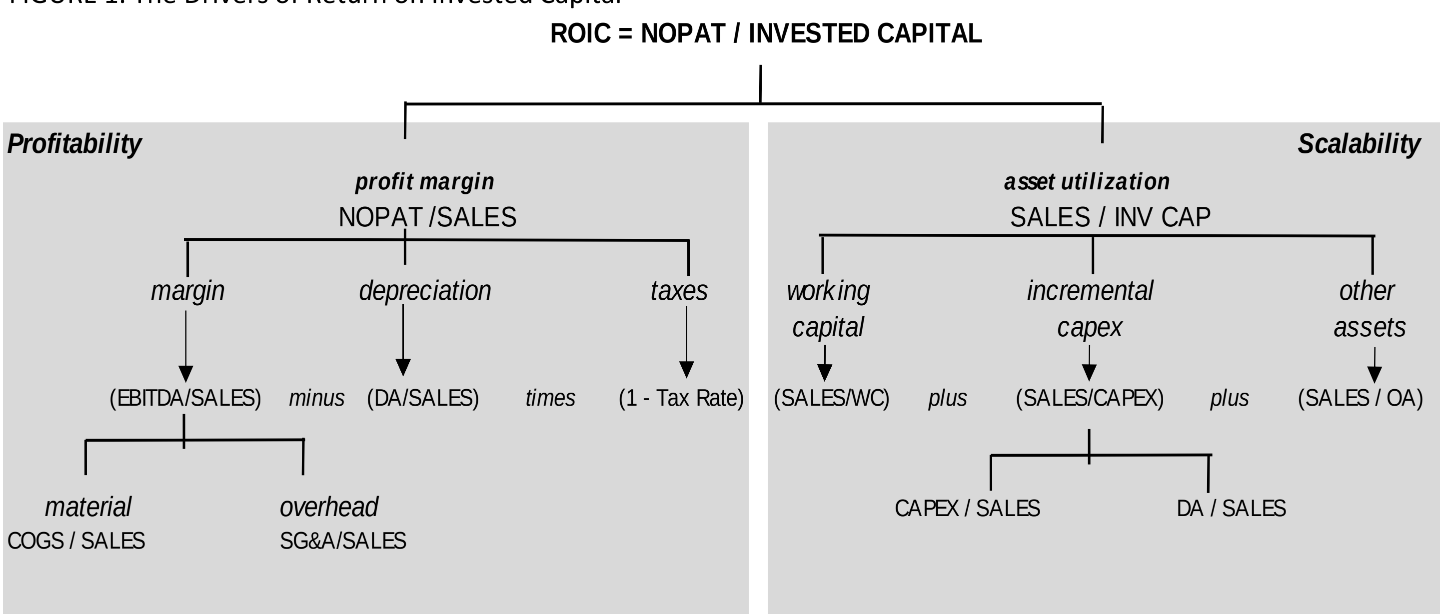
AQM believes that the definition of quality must meet two requirements: first, it has to be strictly related to shareholder value creation; second, its adoption in investing should result in superior portfolio performance. From a corporate standpoint, the ultimate goal of a firm is to create shareholder value. But how do we measure shareholder value creation?

AQM believes that a company's return on invested capital (ROIC) is the most effective way to measure value creation. ROIC is defined as the ratio between net operating profit after taxes (NOPAT) and invested capital. Simply speaking, ROIC is a measure of how much cash a company gets back for each dollar it invests in its business.

ROIC measures the efficiency with which capital is employed and highlights a business's ability to create value from operations. For evaluating operating performance, ROIC is more comprehensive to more commonly used return metrics like return on assets (ROA), and return on equity (ROE). These return metrics are distorted by items and financing decisions that do not influence true operating performance. For example ROA includes the income from, and capital invested in, items unrelated to core business activities. ROE is influenced by the company's capital structure as it can be artificially enhanced with the use of debt. Figure 1 illustrates ROIC in its main drivers: profitability and scalability. Wide profit margins are often the result of pricing power and industry dominance achieved through strong brand recognition or unique technology or business model. Companies with highly scalable business models have low fixed assets and are prime candidates for business expansion.

Thus a high ROIC could be driven by either wide profit margins or high asset utilization or a favorable combination of the two. In either case, companies that earn high returns on their invested capital usually possess a competitive advantage which allows them to stay ahead of competition. Factors determining the sustainability of the competitive advantage are the firm's own competencies and the degree of industry stability and predictability.

FIGURE 1. The Drivers of Return on Invested Capital

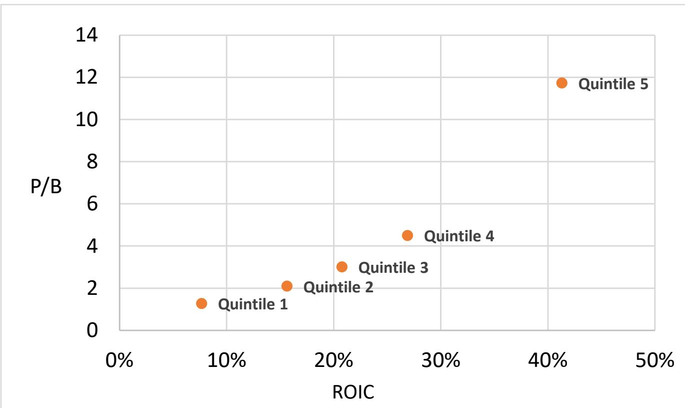


Source: Adapted from: Quantitative Equity Portfolio Management, Chapman & Hall

Designing a Quality Strategy

Quality investing is in many respects at the opposite spectrum of value investing. Value stocks often display negative business trends, low growth rates and deterioration of profitability. High quality companies, on the contrary, display strong profitability and growth rates and tend to trade at high market multiples. Figure 2 shows a clear positive relationship between ROIC and price-to-book ratio for stocks grouped by ROIC: greater profitability is reflected in higher market multiples.

Figure 2. Relationship Between Price-to-Book and ROIC



Source: Alpha Quant Models, FactSet. As of 6/30/2020. Quintile portfolios are based on ranking a universe of liquid, large- to mid-cap stocks on their ROIC. Quintile 5 is comprised of the top 20% of stocks based on ROIC.

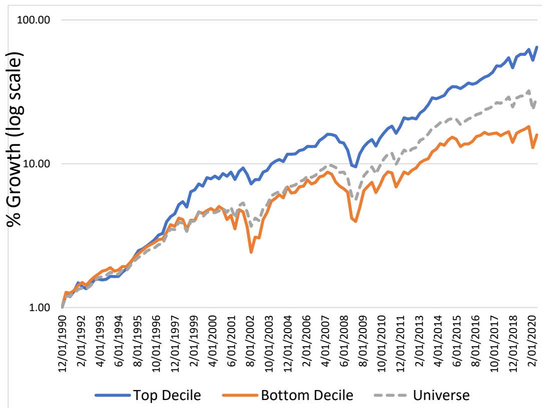
Figure 2 begs the legitimate question: why should we invest in high quality companies if their superior quality is already priced in the market? After all, despite the soundness of the ROIC framework, as stated before, an investment strategy's ultimate goal is to generate superior performance. To answer this question we recur to empirical analysis.

Figure 3 reports the results from a backtest conducted over the 1990-2020 period. Portfolios are formed based on ranking a universe of liquid, large- to mid-cap stocks on their ROIC. The Top (Bottom) 10% is comprised of the companies in the top (bottom) 10% by ROIC. Portfolios are equal-weighted and rebalanced on a quarterly frequency.

Results do not include impact of transaction costs or fees. Compounded average total returns are reported. The analysis shows that high quality stocks (Top 10%) earned an excess return of 3% per annum over the equal-weighted universe average. Conversely, low quality stocks (Bottom 10%) underperformed the universe average by 2.2% per annum over the same period. Chart is on a logarithmic scale to better represent exponential growth.

Despite premium valuation multiples, high quality stocks outperform. This may seem puzzling but we believe this outperformance of high quality stocks may be the result of investors underestimating these companies' earnings persistence and core operating profitability. Perhaps a misplaced short-term focus makes investors shift their attention towards short-lived corporate and market events and away from the fundamental drivers of long-term value creation.

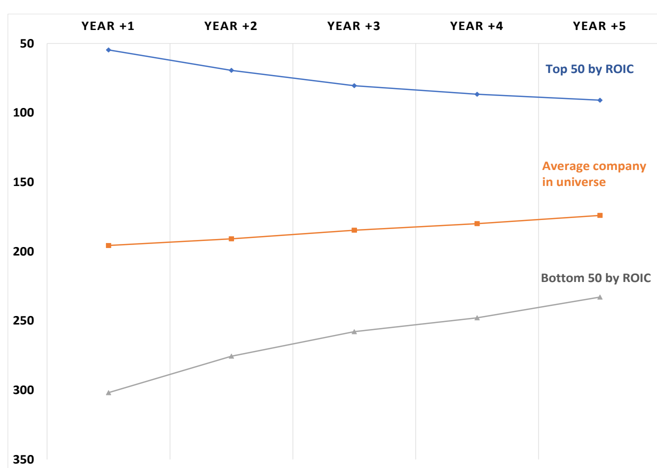
Figure 3. ROIC Factor (log scale)



Source: Alpha Quant Models, FactSet. As of 6/30/2020.

Figure 4 validates this thesis. While a slight degree of reversion to mean is apparent from the graph, companies with high ROIC tend to maintain their superior profitability over time. In fact, the average rank of the top 50 companies by ROIC remains in the top 100 five years after portfolio formation. This indicates that not only does a portfolio of high ROIC stocks outperform, but their persistent ROIC results in moderate portfolio turnover.

Figure 4. ROIC Persistence (1990-2020)



Source: Alpha Quant Models, FactSet. As of 6/30/2020.

Massimo Santicchia is a Co-Founder and Managing Member of Alpha Quant Models LLC. Massimo has over 20 years of investment experience including: CIO at Alpha Quant Advisors, CIO at Cypress Trust Company, and VP of Investment Strategy at S&P Investment Advisory Services LLC. His expertise encompasses fundamental, quantitative analysis, portfolio management and investment strategy development.

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