Insights

Introduction to Quantitative Investing

Quantitative approaches offer a data-driven approach for investing that can identify opportunities and manage risk in ways traditional analysis might not. The advantages of quantitative approaches are evident – the ability to process large volumes of data, reduced human biases (e.g. impact of emotional and psychological biases on investment decisions) and the facilitation of quantifiable risk management, just to name a few.

Quantitative Investing vs Quantitative Trading

Quantitative strategies can be viewed using different dichotomies, one straightforward way is by classifying between quantitative trading or quantitative investing strategies. Quantitative trading strategy tends to have much higher turnover frequency (e.g. high-frequency trading strategies) than their investing counterparts, but both groups of strategies can be adopted by different groups of investors. An example of quantitative investing strategy which is similar to the principles which we adopt for our long-term bottom-up investing strategy, can be quantified by factor-based investing.

Quantitative-driven Investing: Factor-based Investing

Factor investing is an investment approach that seeks to capture specific risk factors or characteristics historically associated with higher returns. It involves targeting quantifiable attributes or 'factors' that can explain differences in stock returns. Common factors include the following:

- Size (small vs large cap),
- Value (cheap vs expensive stocks),
- Momentum (stocks that are trending),
- Quality (stocks of companies with robust financial health), and
- Low volatility (stocks with low price fluctuations)

Factor-based strategies can be adopted in several ways, including:

- Performance attribution - Analyzing the sources of a portfolio's performance to understand which factors contributed to returns. This helps in refining the investment models and strategies over time.
- Enhanced stock selection - Analyze historical data and identify stocks that are likely to outperform the market or a specific benchmark. Factors considered might include earnings growth, price momentum, valuation metrics, and risk factors.

Think of enhanced stock selection as a quantitative way of doing bottom-up fundamental stock-picks. However, instead of focusing solely on the companies, our conviction lies with these factors, which are some of the attributes we consider in our long-only investment portfolio.

Quantitative-driven Investing vs Traditional Bottom-up Investing

Quantitative-driven investing, exemplified by factor investing, diverges from traditional bottom-up approaches. Human limitations, like attention span and biases, often hinder investment success, while a data-driven systematic method transcends these constraints, enabling a broader analysis scope and uncovering overlooked opportunities. Nonetheless, traditional bottom-up investing offers strengths that quantitative strategies may overlook. Human analysts excel in incorporating qualitative insights and quickly adapting to new information, traits that quantitative models may struggle to replicate. Integrating these approaches can yield a comprehensive investment strategy.

Here in AGT Partners, we employ quantitative-driven investing strategies alongside our traditional bottom-up investing and tactical trading approaches. We recognise the strengths and limitations of each investing approaches, as well as the potential synergies across these different strategies and we believe that the whole is greater than the sum of the parts. By combing the systematic and data-driven nature of quantitative strategies with the qualitative insights and adaptability of traditional approaches, we aim to achieve a balanced and comprehensive investment approach that maximises returns while managing risks effectively.

For the remaining part of this insights, let us delve into some of these factors and their underlying characteristics. Quality, Value and Momentum factors are among the attributes we consider in our quantitative strategies, as well as in our other strategies.

QUALITY FACTOR

Quality companies are characterised by their strong financial strength, sustainable growth prospects, effective management, and, most importantly, the presence of robust competitive advantages (or wide competitive moats) such as strong branding, network effect, scale advantage), which would allow them to fend off potential competition or even capture higher market share. Compared to other risk factors, the definition of the Quality factor tends to vary significantly among investors, reflecting the diverse perspectives and criteria used to assess the qualitative aspects of a good company. That being said, here are some common metrics:

Revenue Growth

Economic Rationale

Revenue growth is a fundamental metric often evaluated by investors, with a common rule-of-thumb being 20% per annum. However, this seemingly straightforward metric encompasses vital information for assessing a company's quality. High and sustained revenue growth suggests economic moats, strong market positions, and adaptability to changing consumer preferences. It reflects the relevance of a company's products and services to customers, serving as a primary measure of competitive advantage. Sustained revenue growth may also hint at scalability and investment in future growth prospects, such as product development and market expansion. While revenue growth is crucial, it should be complemented by other factors to fully evaluate a company's quality. Analyzing drivers behind revenue growth, such as volume versus price, provides valuable insights into market dynamics and brand value. For instance, volume-driven growth could indicate robust demand, while price-driven growth might suggest strong brand value or pricing power.

Consider this metric as the ‘first’ level measure of competitive advantage.

Debt-to-Equity

Economic Rationale

Conservative capital structure is what we are looking out for with this metrics and the focus here is on safety. Excessive leverage may jeopardise a company's ability to service its debt and ultimately lead to financial distress. Additionally, for cash-generative companies that we tend to favor more, these companies should be able to tap on its cash flow and balance to fund projects effectively.

ROIC / ROE

Economic Rationale

Competitive advantages, superior capital management, superior operating efficiency, asset intensity and revenue growth, all these traits can be assessed by this single metric, which some investors may consider as the single most important metric for evaluating the quality of a company. Short-term high ROIC/ROE might alert investors to potential change in fundamentals and outlook, but sustainably high ROIC/ROE is the trait that we prioritise on as it signifies stability in the business and consistent long-term performance. The overarching rule-of-thumb is to look for companies with consistently high and improving values over time.

This seemingly comprehensive metric can be dissected into its several key components using the Dupont formula for more granular understanding.

Operating Profit Margin (Operating efficiency) – Competitive advantages mainly come in two types, pricing power (e.g. branding, network effect, superior product, patents) or cost advantages (e.g. scale), which can be measured by the level and consistency of its margins.

Average invested capital turnover (Capital Efficiency) – This component measures how effectively a company utilises its invested capital to generate revenue. Quality companies typically have a high turnover of invested capital, indicating efficient utilisation of resources and effective asset management. They generate higher revenue for each dollar of invested capital, which reflects operational efficiency as well.

One noteworthy point is the natural trade-off between growth and ROIC. Companies pursuing aggressive revenue growth, in its attempt to grow market share and scale, may exhibit low levels of or even negative ROIC. Hence, whether looking at ROIC is appropriate would also depend on what stage of growth the company-in-question is in.

While ROIC in itself may not explicitly detail the specifics of a company's reinvestment strategies, it serves as a valuable metric for investors to evaluate the effectiveness of the company's reinvestment strategies. A high ROIC, exceeding the company's cost of capital, may imply efficient reinvestment and value creation, and this makes for a stronger case to reinvest funds back into the business, instead of distributing back to shareholders. By reinvesting earnings into the business, the company can finance growth initiatives, such as R&D, expansion projects, appropriate acquisitions, or marketing efforts, that have the potential to generate higher returns and create long-term shareholder value.

VALUE FACTOR

Economic Rationale

As what the late Charlie Munger says, “no companies are worth infinite prices”. As much as we are open to paying high valuations for quality companies, at the end of the day, we have to be rational and mindful of the prices that we are paying for investment. In this regard, the Value factor guides this principle and helps ensure that we do not overpay for companies that we consider to be good businesses. Common metrics include P/B, P/E and P/CF ratios.

MOMENTUM FACTOR

Economic Rationale

The Momentum factor focuses on the trend or direction of a stock’s price movement over a specific period. Stocks exhibiting positive momentum tend to continue their upward trajectory, while those with negative momentum may continue to decline. Momentum investors capitalize on this phenomenon by buying stocks that have shown recent price strength and selling those that have exhibited weakness.

Momentum is classically measured by looking at the 12m price performance of an asset, excluding the most recent month, which is done to avoid short-term reversals. Several theories have been proposed to explain the momentum effect, including: 1) behavioral explanations, 2) risk-based explanations and 3) the idea of information cascade.

1. Behavioral explanation: Investors may underreact to new information due to anchoring bias or overreact due to herding behavior, leading to trends continuing as prices adjust gradually to new information.
2. Risk-based explanations: Some argue that momentum profits are compensation for bearing some risk that is not captured by traditional models, although identifying this specific risk has been challenging.
3. Information cascade: As investors observe the buying behavior of others and the resulting price movements, they may follow suit, believing that others have access to superior information.

Although the implementation of the momentum factor is rather simplistic, its effectiveness as a standalone factor is the most robust and lucrative historically, as illustrated by the chart below:

Bloomberg data – Global long-short factor return post Great Financial Crisis.

<u>Summary</u>

In summary, quantitative investing approaches provide a data-driven framework for investment decisions, offering distinct advantages such as processing vast amounts of data and mitigating human biases. When integrated with traditional investing approaches, these strategies offer synergies within the broader investment portfolio. Here at AGT Partners, we leverage these synergies to enhance our investment strategy, combining quantitative-driven techniques with traditional approaches to optimize portfolio performance within the broader investment portfolio.

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