Guest Speaker Spotlight: Olivia Engel

The SMF was pleased to welcome Olivia Engel as a guest speaker on 29 October, 2020. Olivia is the Chief Investment Officer (CIO) of Active Quantitative Equity at State Street Global Advisors (SSGA), and an ANU alumnus. Olivia shared her insights into investing and provided an overview of SSGA's quantitative equities investing process, which her team is responsible for developing. She also oversees the portfolio management of equity accounts, including in the Asia Pacific. Olivia has had a long career in investment management, including as a Senior Portfolio Manager with the GMO and a Portfolio Manager with Commonwealth Investment Management.

Some of the key insights that Olivia shared with the SMF are summarised below, as well as the Q&A session that followed.

Industry Related

State Street Global Advisors

State Street Global Advisors (SSGA) is the asset management arm of State Street Corporation and the world's third largest asset manager, with US$3.47 trillion worth of assets under management. SSGA manages a wide variety of assets including global equities, fixed income, currency, cash, multi-asset class investments, and alternative investments. Separate teams within the equities division cover different types of investing, including index or passive, growth-oriented fundamental, deep value fundamental, and quantitative. This diversity of investment style often leads to interesting discussions on stocks, and is part of SSGA's stimulating office culture.

Quantitative Investing

Olivia described some characteristics of the quantitative investing approach and highlighted similarities and differences versus fundamental investing.

1. Active – Similar to fundamental investing, quantitative investing is an active investment style with the aim of outperforming the benchmark index.

2. Objective – The objective and systematic nature of this investment style helps quantitative managers to reduce the impact of subjective biases in selecting stocks. A strict buy and sell discipline can be easily defined in quantitative investing, which leads to the process itself automatically rebalancing the portfolio to capture the best opportunities.

3. Wide Breadth – Quantitative portfolios are typically comprised of more than 100 companies. Compared to fundamental managers that aim to pick a smaller number of stocks, this wide breadth of stocks allows the portfolio to be focused on systematic exposures rather than idiosyncratic risk arising from individual stocks. Quantitative managers target a profitable "win rate" across many positions, rather than absolute accuracy on every single stock they hold.

Compared to a fundamental manager, a quantitative manager may not have deep knowledge of one stock, but they can comment on the aggregate characteristics of the portfolio.

Investment Process in the Active Quantitative Equities Team

Quantitative investing can be described as combining a range of quantitative signals to predict returns for specific companies, sectors or market characteristics. SSGA focuses on three pillars when selecting companies to add to the portfolio: Quality, Value, and Market Sentiment. The team assesses thousands of companies against the three pillars using specific metrics. These signals are subsequently combined to construct the portfolio by balancing expected return as predicted using the combined signals, risk control and transaction costs.

Quality

Quality metrics include balance sheet quality, earnings quality, or other data that suggests strong long-term sustainability. While most attributes can be captured through various financial ratios, SSGA utilises tailored metrics specific to industries or businesses for more complex valuations. For instance, where biotech companies are in the early research and development (R&D) stages without any earnings, SSGA may base their valuation on the number of drugs currently researched and their respective risk adjusted earning potential.

Value

Since SSGA quantitative equity portfolios are fully invested at all times, the team is concerned with a company's relative value rather than absolute value, i.e. value compared to other stocks. SSGA combines various pricing ratios with other metrics specific to a company's industry to determine its value. For example, for a technology company, the team might assess value by measuring the amount of capitalised R&D expenditure; while for banks they may extract information from regulatory filings in addition to pricing ratios. In some cases, simple metrics like price-earnings ratio or price-book ratio can still be useful to assess relative values.

Market Sentiment

Market sentiment helps the team to gauge which stock prices might rise in the near term. SSGA draws on various behavioural finance theories; and measures market sentiment through signals such as price movements, changes in earnings forecasts and long and short positions of hedge funds. In recent years, SSGA has begun examining the flow-on effects of supply chain linkages, and performing natural language processing on conference calls to identify positive and negative language, using rules that are either pre-defined or machine learnt.

Q&A

1. Is quantitative investing a more value-oriented approach or a growth-oriented approach?

A quantitative manager can decide the extent to which they pursue a value or growth strategy. The former would consider fundamentals and the price paid, whereas the latter might focus on indicators of growth potential and momentum. SSGA's Active Quantitative Equities team aims to be a neutral-style quantitative fund that finds the best balance of value and growth, although the balance will shift through time. This neutral positioning allows SSGA to further diversify idiosyncratic and sector specific risk, while retaining the control to position the fund to take advantage of market mispricing.

2. What are the underlying risks a quantitative fund faces? And how does the rebalancing process take place considering transaction costs?

Regarding portfolio optimisation, there are three inputs taken into consideration: expected return, expected volatility and transaction costs. Expected returns are forecast based on a combination of indicators, as described earlier. We utilise standard risk models like Barra and Axioma as well as our in-house models to capture risks and correlations. The team also uses a non-linear model to calculate expected transaction costs so that they can be traded off against expected returns. These three inputs go into our tailored portfolio construction algorithm which maximises return, minimises risk and minimises transaction costs in order to identify the optimal portfolio. This optimisation is performed daily, with our current portfolio being compared to the optimal portfolio, while factoring in constraints such as industry, sector, country, region and alternate risks. The team controls exposure to characteristics (e.g. leverage) to ensure the portfolio is not dominated by any single characteristic.

3. Do quantitative fund managers have a defined investment horizon?

Every quantitative manager has a different investing style. In terms of the time horizon, some quantitative funds are forecasting returns over minutes or days, turning over the portfolio about 1000 percent every year. Other quantitative managers forecast over years. SSGA's forecast horizon is 9 to 12 months, with portfolio turnover being about 100 percent a year.

4. Can you describe how the research process takes place before new ideas are applied to the portfolio?

For a new idea to be deployed in our quantitative model, it has to have a strong fundamental hypothesis about why it should work. Also, incremental changes are made to the model on a regular basis, rather than aiming to add ideas that would be a dominant driver. To test whether a hypothesis is correct, the team undertakes a research experiment involving back testing coupled with an out-of-sample dataset that is independent from the learning and research step. Before it is deployed into the portfolio, the team go through a governance process to minimise errors, including having a technical committee review the hypothesis. After an idea is applied within the portfolio, ongoing monitoring continues to ensure that it is working as expected.

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