

OMAM (UK) quantitative strategies

Update

Quantitative strategies have lived through a tumultuous time over the last few years. Although performance was difficult until the summer of 2009, the underlying causes of this negative performance has varied over different sub-periods. The presence of derisking in equity markets and its negative impact on value returns was most felt in 2008. 2009 saw a market environment very toxic to medium term (12 month) price momentum strategies.

The market has stabilised over the last 10 months and returns to our quantitative strategies have significantly improved. However, OMAM (UK) Quantitative Strategies Team has made significant improvements to both the integrity and performance of the models used in both stock selection and portfolio construction over this period. We begin 2010 with both improving market environments and significantly better tools at our disposal, giving us confidence in positive outcomes for client portfolios in the medium term.

As a reminder, the issues we have dealt with can be best described as:

High correlation of quantitative strategy returns

- Similar bets across different strategies
 - Implementation of innovative factor and weighting research
 - All quant funds are no longer the same

Value performance

- Value overplayed by quant investors
 - Crowded value trade no longer an issue as capital left the space
- Cyclical of returns not captured in non-dynamic models
 - Implementation of dynamic models using a short list of stringently tested model factors

Momentum performance

- Aggressive underperformance during changes in market dynamics
 - Momentum investment fundamentally rethought

Correlation and volatility changes

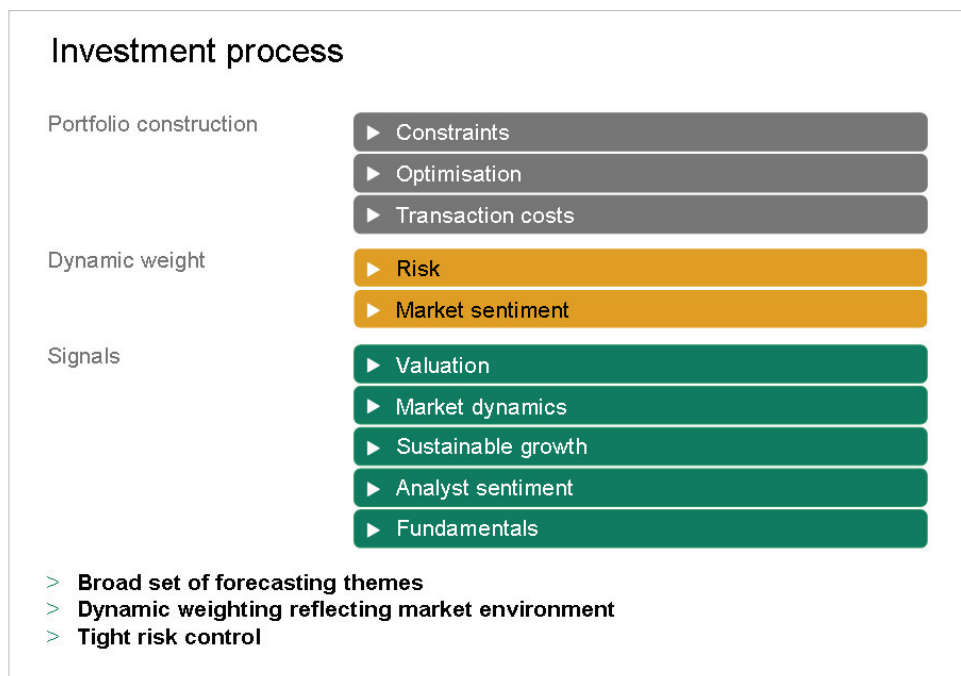
- Changes in market structure not well managed using older monthly risk models
 - More responsive risk management and drawdown minimisation tools implemented

Fast information flow

- Slow trading frequency hampering efficient information incorporation
 - Daily estimation and event-driven trading implemented
 - Dynamic models for both risk and returns that respond to new market information quickly

OMAM (UK) quantitative strategies investment process

The process currently utilised by the OMAM (UK) Quantitative Strategies Team can be illustrated by the chart below:



This process is generic to all portfolios run by the team, being robust to both global and regional portfolios and within the long only and market neutral space.

The overall process is now described in three phases.

1. Signals

This is the core of the return forecasting model. As in the past, OMAM (UK) Quantitative Strategies Team looks for biases in markets that are globally consistent and persist through time. The themes capture behavioural and structural anomalies which can lead to stocks trading away from fundamental pricing and attempt to arbitrage these anomalies by predicting future price movements.

The signals are grouped into buckets, as described below.

Valuation

The well known anomaly that cheap stocks outperform over extended time periods continues to be an important part of the return forecasting model. The returns to value are now explicitly seen as cyclical, with a measure of balance sheet quality held in the fundamentals bucket mixed with the signal dependant on perceived risk appetite within markets. The measure of valuation uses two dividend discount models and looks to exploit the trade off between value and growth characteristics at a stock level.

Market dynamics

Market dynamics contains the forecasting signals which utilise price momentum. The price information utilised in the return forecasting signals, as with all our signals, is well grounded in academic literature. The signal incorporates measures of both industry and stock momentum and deals with volatility and changes in the macro environment.

Sustainable growth

This bucket contains our growth factors. The signal incorporates pure measures of growth at the stock level together with information which measures the likelihood of these growth characteristics continuing in the future. This allows the separation of hype growth from that which is more likely to repeat, something the market does not do efficiently.

Analyst sentiment

The analyst sentiment signal looks to exploit slow information diffusion into stock prices. The signal uses changes in analyst revisions but also deals with staleness of information and conservatism both at the market level (the difference between upgrades and downgrades) and at the company level (some stocks are more impacted by changes in earnings estimates, mainly due to aggressive accounting).

Fundamentals

Within the fundamentals bucket we include the investments signal which looks to capture management quality by identifying over-investment. The bucket also includes the measure of balance sheet quality used in mitigating downside risk when investing in our valuation factor (discussed in more detail in the valuation signal above).

2. Dynamic weight

The amount of each factor we incorporate into the models starts from the expected power of that factor relative to the others utilised. We use a long term payback as the best forecast of how any one factor will perform in the coming period. We then use additional information to move away from these weights when the shorter term outlook requires it.

Market sentiment

This bucket mainly includes the measure of market risk appetite used in deciding the composition of valuation vs. balance sheet quality. As discussed above, it is important to recognise periods in market returns when exposure to value as a theme will not be rewarded.

Risk

The risk model used in portfolio construction contains all the factors we utilise in the return forecasting model (along with many other measures found useful to forecast portfolio risk). Factors with higher risk will have lower exposure than indicated by the return forecasting weighting scheme. This varies through time and is more dynamic than the long term returns used in the weighting scheme.

3. Portfolio construction

Portfolio construction is an integral part of the overall quantitative process used by the team. Optimisation is at the heart of the process, allowing the best portfolio to be built given the information known at the time. The return forecasting model, risk model and transaction cost model are used, together with constraints on the resultant portfolio. This leads to robust and efficient portfolios with maximum return expectation and strong risk management.

Page 3 of 4

Constraints

The optimisation process uses a number of constraints (e.g. maximum stock positions, net sector positions etc). The constraints are used to manage risk by diversifying the portfolio away from, for example, stock specific risk. The constraints are also used to ensure efficient exposure of the factors from the return forecasting model described above.

Optimisation

Portfolio construction uses mean-variance optimisation, again looking for the most robust portfolio given the information available to us at the time. This is an industry standard tool and uses the idea of trading off the maximum expected profit from a portfolio for a given level of risk.

Transaction costs

A measure of the cost of trading is calculated for each of the stocks available in the universe. It is important to understand the likely cost of taking a position in an individual stock. This is then traded off against our expected return and the risk of the position.

Conclusion

The period between summer 2007 and summer 2009 has been difficult for quantitative processes. There are a growing number of data points that suggest this period has ended and the medium term will be more conducive for factor models in general. However, simple value and momentum strategies are likely to continue to struggle without the addition of measures capable of dealing with non-normal periods.

As we enter this extended period of market behaviour which we expect to be conducive to quantitative strategies, the novel proprietary return forecasting and risk management techniques described above further increase our confidence that we are well prepared to add significant incremental performance to portfolios in the medium term.

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