Quantitative strategies model update

March 2010

Quantitative strategies, March 2010

Changes to price momentum strategies

Changes to the price momentum factors

As discussed in a previous briefing note, the momentum factors used in the return forecasting model have been changed to bring them in line with the current understanding of momentum performance in periods of changes of market direction. The introduction of the new structure gives increased confidence in future performance given the diversifying nature of the new signal.

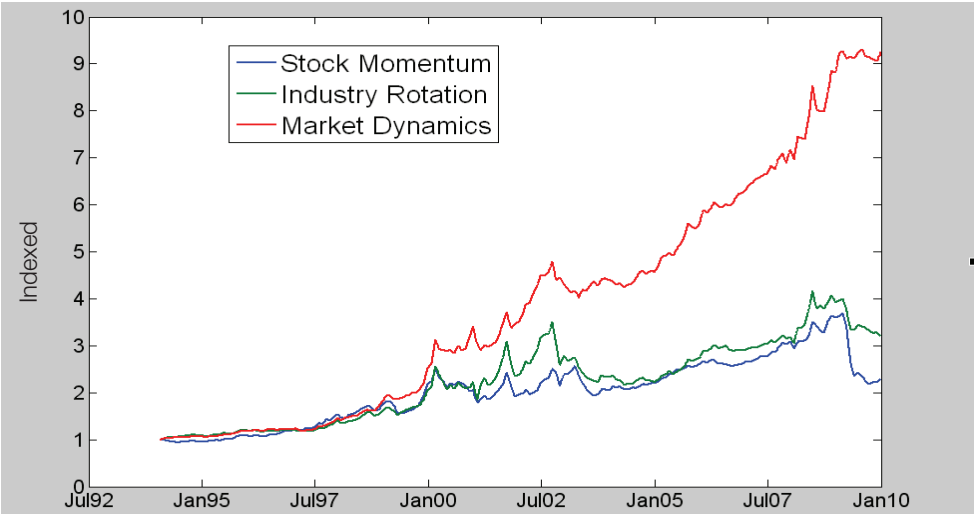
As a reminder, the new momentum factor combines two different industry momentum components. One component is a global industry momentum factor that forecasts future industry returns by capturing medium term macro trends similar to the existing global industry rotation factor, but enhanced to control for the volatility biases inherent in momentum strategies. The other component is based on a shorter-term formation horizon to capture changes in trend direction and to inform the medium term factor. This short-term signal also incorporates lead lag relationships within industries, to capture the diffusion process of how information from industry leaders is propagated to laggards within an industry.

Given the changes made to the industry momentum factor, and in line with academic literature, the stand alone stock momentum factor has been decommissioned. That is not to say stock momentum is being ignored as a significant portion of the old signal is being captured in the new market dynamics signal. Further work on stock momentum in excess of industry momentum may lead to the re-introduction of this component but this factor does not currently contribute to improving risk adjusted returns.

The momentum factors used in the new model have been combined and renamed. The momentum strategies used in the forecasting model are now called market dynamics.

Looking at the returns to the factor purely on its own we get the following chart. Please note these returns take no account of transaction costs or constraints and are independent of market movements. As such the illustrated returns are very much indicative of expected improvements. The returns use the stocks in the investable universe for a generic global portfolio, which is the MSCI World Developed Markets Index.

Performance of the old price momentum factors, stock momentum and industry rotation and the new market dynamics factor



Source: OMAM

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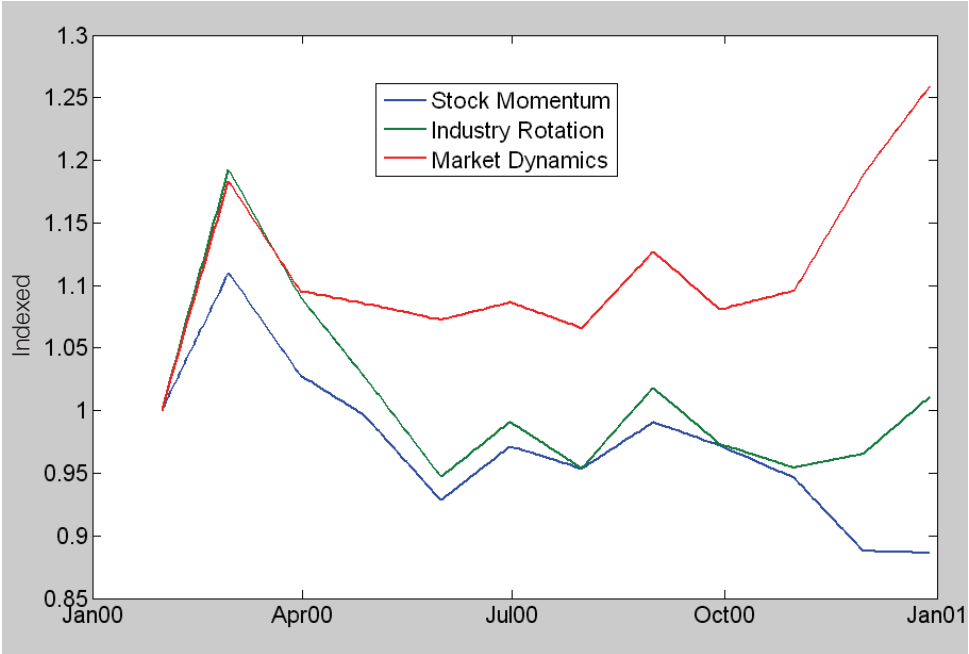
The overall outcome of replacing the previous two momentum factors is positive. It can also be seen that in periods of strong momentum performance, the new signal adds to the forecasting ability of the model in a similar way to the old signals. More interestingly, given the use of a shorter-term momentum signal to help spot changes in market direction, we can look specifically at periods of market turns. There have been four major recent changes in market sentiment and direction. These are:

Q1 2000 – move down
Q1 2003 – move up
Q4 2007 – move down
Q1 2009 – move up

Q1 2000

The period following the technology asset bubble was an aggressive move down in asset prices. It occurred rapidly and is very much the type of market event that the new signal is designed to deal with. Given the 12 months of prices used in the formation of the old signals, a quick change in direction leads to significant amounts of stale data being used in the momentum factors. The following chart shows that according to our backtest, the change in market direction is much better dealt with by the new signal relative to the old ones. Again, this is due to the incorporation of a shorter formation window in one part of the signal which informs the model about these aggressive changes in market direction.



Source: OMAM

Q1 2003

The move up in asset prices after a period of negative performance is also difficult for medium-term momentum signals to deal with. Although this example is less clear cut, there is a definite improvement of performance using the new signal over the old ones as again the old signals contain significant amounts of stale data as the market changes direction relatively quickly.

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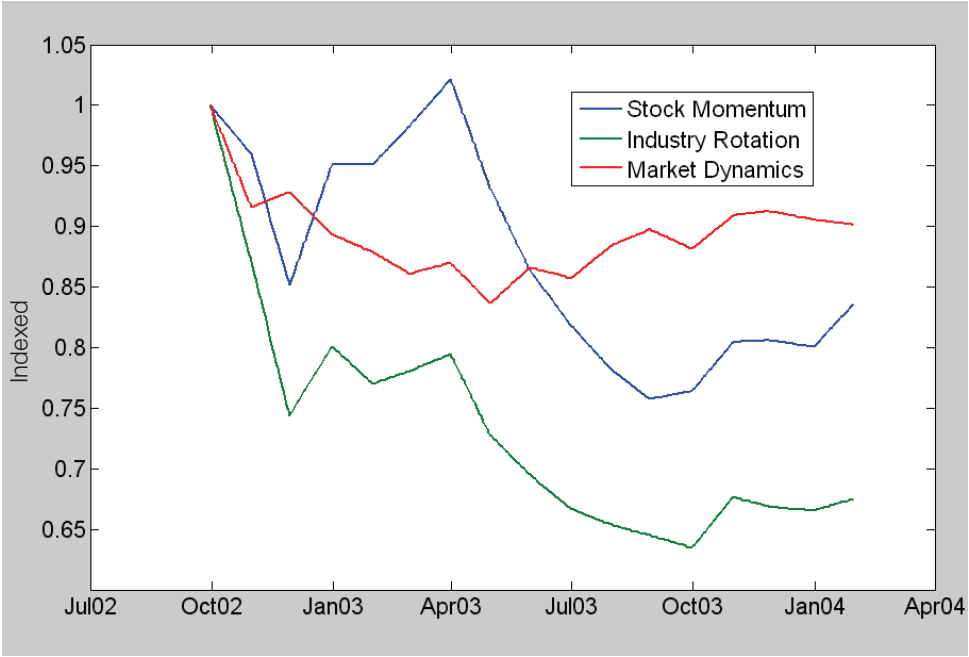
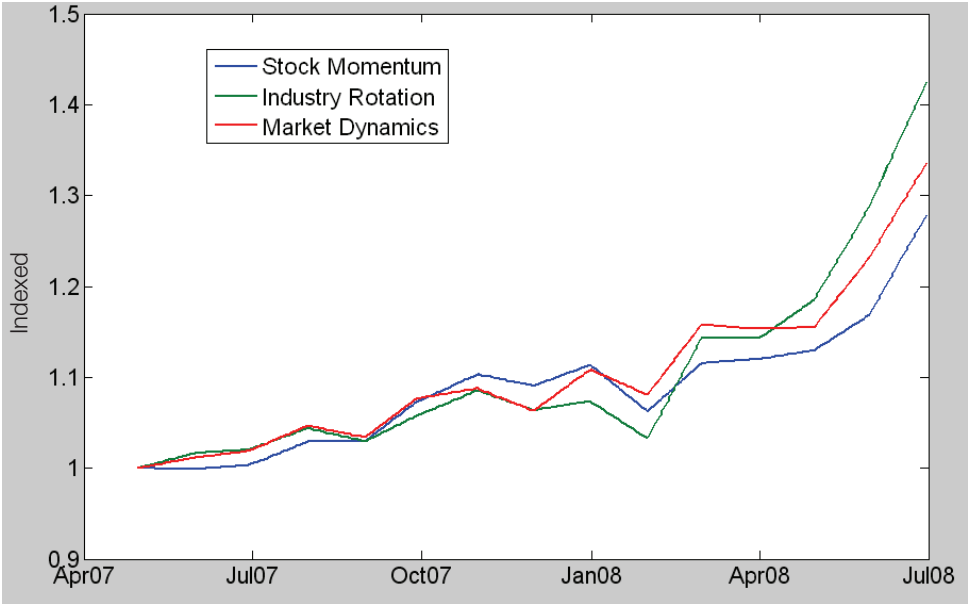


Source: OMAM

Q4 2007

The move down in asset prices towards the end of 2007, whilst aggressive in the size of the move, was preceded by a period of flat asset price movements. It seems likely this flat performance, which included a significant level of changes in market leadership, was of sufficient length to allow all momentum factors time to adjust to the new macro drivers of the market. As we can see from the chart below, the returns to both the old and the new factors were positive over the period, however the new structure has lower volatility over the period.



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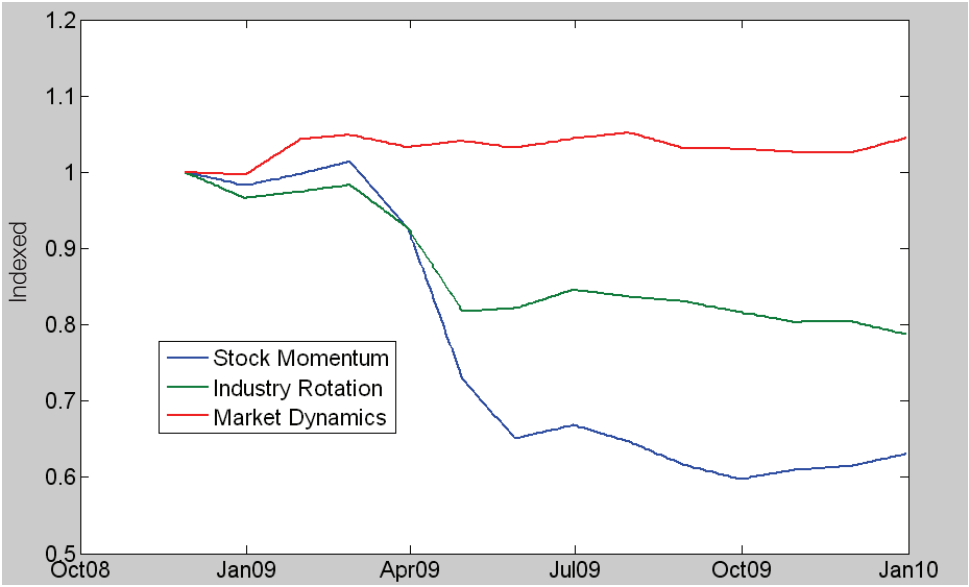
Please see important information overleaf

Q1 2009

This was a time of aggressive change in market direction as new macroeconomic expectations and falling levels of default probability were priced into assets. Standard medium term momentum signals would typically struggle in this environment given the amount of stale historic information captured. As we can see from the chart below, the incorporation of shorter term measures of momentum leads to a significantly better outcome for factor performance.

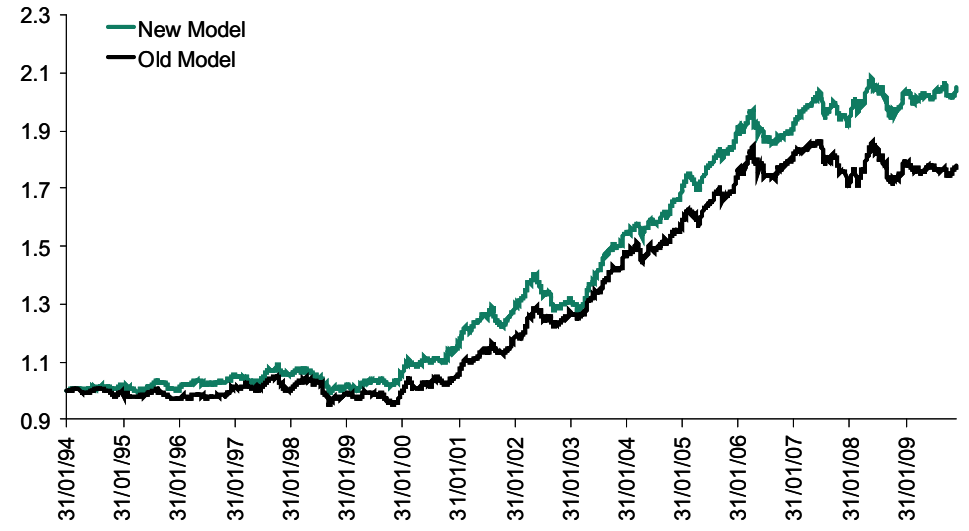


Source: OMAM

Portfolio backtest

The new market dynamics factor is now included in the forecasting model and introduced into the portfolio construction process used for a generic global long only fund. All constraints are set to reflect those included in a live portfolio, including risk and turnover. The returns shown are less transaction costs but gross of fees. As with all backtests, these returns should be taken as an indication of performance of the model over the period described.

Comparison of old and new model using active returns above benchmark returns



Source: OMAM

Backtested performance results may be reissued in the future on the basis of changes to the investment model. Potential investors should be aware that they may not be in possession of the most up to date backtested performance. Simulated/backtested performance results have inherent limitations, are shown for illustration purposes only and are not guaranteed. No representation is made that a client will achieve results similar to those shown. Such results are hypothetical and do not represent actual trading, and thus may not reflect material economic and market factors, such as liquidity constraints, that may have had an impact on the adviser's actual decision-making. Simulated results are also achieved through the retroactive application of a model. The results shown are adjusted for dividends and net of fees. No representation is made that a client will achieve results similar to those shown.

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As the previous backtest chart illustrates, the new model improves performance, particularly in periods of changes in investor sentiment. The incorporation of a factor which deals with changes in market direction more efficiently and diversifies the themes captured in the portfolio gives us much higher confidence of positive performance in the future.

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