Institution: City University London

Unit of Assessment: 19 Business and Management Studies

Title of case study: Efficient investment strategies for volatile times

1. Summary of the impact

Equity investors have twice suffered large losses, known as 'drawdowns' on their investments in the last dozen years: in 2001 and 2009. This applies to both individuals and institutions and has had an adverse effect on both individuals' living standards entering retirement and the attitude of individuals to the advantages of long-term asset accumulation. The research of Professor Andrew Clare and Professor Stephen Thomas at City University London has created commercially available investment products that offer superior risk-adjusted returns with a transparent strategy supported by published, peer-reviewed research and which avoid such large losses. They developed a simple 'trend following' 'smoothing' technique to create a diversified, developed market equity fund which was launched by WAY Fund Managers in March 2011. At the start of 2013, following the success of this strategy, the researchers launched an investible index, the *Cass Trend Master Index*, in collaboration with Credit Suisse. This index now forms the basis of several structured products predominantly aimed at institutional investors. In April 2013 the researchers launched another set of investible indices, based on the same investment principles, with Goldman Sachs and Indexx Markets. These focus on single asset classes including equities and commodities.

2. Underpinning research

A market 'trend' is a tendency of a financial market price to move in a particular direction over time; a 'bear' market is a general decline in the stock market over a period of time and a 'bull' market is associated with increasing investor confidence and increased investing in anticipation of future price increases. 'Trend following' is an investment or trading strategy which attempts to take advantage of long, medium or short-term moves observed in various markets. Traders who employ a trend following strategy do not aim to forecast or predict specific price levels, they simply 'jump on' the trend (when they perceive that it has established within their reasons or rules) and 'ride it'. These traders enter in the market after the trend 'properly' establishes itself, betting that the trend will persist for a long time. For this reason they ignore the initial turning point and hence potentially miss out on that profit. If the trend turns, the trend following trader exits and waits until the turn establishes itself as a trend in the opposite direction. The underlying economic justification for trend following rules lies in behavioural finance tenets such as herding, disposition, confirmation effects and representativeness biases.

The potential and criticisms of trend following investment inspired a programme of research at City University London led by Professor Andrew Clare (at City since 2004) and Professor Steve Thomas (at City since 2007) in the Faculty of Finance at Cass Business School. They were supported by Senior Research Fellow, Andrew Seaton, in collaboration with Professors Owain ap Gwilym at Bangor University and Peter N Smith at the University of York. The programme comprised four stages addressing the following questions. (i) Can using simple trend following rules within investment strategies help to generate reasonable investment returns and reduce the losses suffered by investors in recent years, which have damaged attitudes to equities in favour of safe but low yield government bonds? (ii) Given the relative cheapness of new financial instruments such as Exchange Traded Funds (EFTs) and the associated low costs of buying and selling them, can we devise a trading strategy using them which neither trades too often, thereby incurring costly transaction fees, nor too infrequently (e.g., passive index funds, with their inherent volatility)? (iii) can we construct rules which guarantee 'enough' diversification to avoid the disastrous equity over-concentration in diversified growth funds of the late 2000s and in conventional UK pension funds for the last 30 years? And is there enough variety of assets available in liquid, tradable form to populate such strategies? And (iv) can the above challenges be solved and made available in a commercially viable fund for both institutional and retail investors?

The researchers' first attempt to explore the impact of trend following techniques came in a paper by ap Gwilym *et al.* (2010) in which they applied the technique to over 30 global equity markets in the form of MSCI (Morgan Stanley Capital International) country indices. Many studies had suggested that 'momentum' investing (based on buying and holding the best performing assets for a set period) was a successful investing rule, but when used in the context of equities it still resulted in large drawdowns (losses) when markets fell. They found that the returns from these equity momentum strategies which incorporated a trend following filter was similar to long-run equity returns but with around half the volatility and with a huge reduction in maximum drawdown and 'skewness'. Hence the risk-adjusted performance was clearly superior to passive investing (buy and hold investment strategy).

How often one should trade is more difficult to answer than the question may suggest. Surprisingly, academia seems to be largely uninterested in transaction costs and they are largely ignored in economic research, yet fees for each trade are a key practical issue for fund managers and investors. Also, the effectiveness of stop loss limits is typically ignored by both academics and fund managers, possibly because investors seem to 'like' them and they appear on due diligence questionnaires. Clare *et al* (2013a) explored the secret world of opaque trading rules used by many investment funds and asked whether they were useful. They found that the best results were obtained by trading only once a month, on the last trading day, ignoring any stop-loss rules, indicating that simplicity is king. Investors should not have to pay for unnecessary complexity. These findings underpin the decision rules in all of their commercial funds and strategies.

The above ideas were developed further and clearly show that trend following combined with infrequent trading and equally-weighted diversification across asset classes can consistently reduce volatility while not sacrificing returns. The same simple principles have been applied successfully to different asset classes: (i) developed-market currencies, Clare *et al.* (2013, forthcoming); (ii) US Equities, Clare *et al.* (2013a); (iii) European equities, Clare *et al.* (2013b); and (iv) commodities, Thomas *et al.* (2014). Finally, the researchers created a multi-asset class strategy using the same techniques as earlier but now forming a portfolio of property, commodities, bonds, emerging and developed equities, Thomas *et al.* (2012). The researchers produced a flexible asset allocation strategy by combining momentum trading with trend following and found that one can achieve the higher return levels associated with momentum portfolios but with much reduced volatility and drawdowns. They applied their findings successfully to a variety of asset classes and found that the approach gives rise to substantially enhanced risk-adjusted returns in a multi-asset portfolio.

3. References to the research

ap Gwilym O., Clare, A., Seaton J., & Thomas S. (2010). Price and momentum as robust tactical approaches to global equity investing. *Journal of Investing*, 19(3), 80-91.

Clare A., Seaton J., Smith P.N., & Thomas S. (2013a). Breaking into the blackbox: Trend following, stop losses and the frequency of trading – The case of the S&P500, *Journal of Asset Management*, 14(3), 182-194.

Clare A., Seaton J., Smith P.N., & Thomas S. (2013b). European Equity Investing Strategy through the Financial Crisis: the role of Momentum and Trend Following, Paper presented at the International Conference on the Global Financial Crisis, 25th-26th April 2013, Chilworth Manor, Southampton, UK.

Thomas S., Clare A., Smith P.N., & Seaton J. (2012). The Trend is Our Friend: Risk Parity, Momentum and Trend Following in Global Asset Allocation (SSRN Working Paper 2126478). New York: SSRN.

Thomas S., Clare A., Seaton J., & Smith P.N. (2014). Trend Following, Risk Parity and Momentum in Commodity Futures. *International Review of Financial Analysis*, 31, 1-12.

Papers 1, 2 and 5 appear in highly respected journals which apply a stringent peer-review process prior to accepting articles for publication. Paper 4 has been downloaded over 4,000 times, making it one of the most downloaded SSRN finance papers of all time (in the top 1%).

4. Details of the impact

The extraordinary volatility that has swept the financial markets since 2000 has led to massive economic and financial dislocation and a deep mistrust of long-term saving. Pension funds have experienced significant devaluation and the practice of conventional asset management is seen as unpredictable and of dubious social value. Professors Clare and Thomas have had significant commercial impact on the investor community in the UK and beyond by creating, developing and distributing investible tradable products generated from their research.

In 2010, Paul Wilcox, Chairman and Founder of the WAY Group, approached the lead researchers, having seen their work presented at conferences, to see if it could be used to construct an investible product,. A successful collaboration followed and in March 2011, WAY Fund Managers, the investment professional division, launched WAY Global Momentum Fund [1].

The fund is based on a range of developed equity markets and comprises 14 equally-weighted ETFs spanning this market. If the market is above its moving average the fund holds the ETF but if it is below, the fund sells the ETF and moves into cash or cash funds. Back-tests have been run to see how a portfolio investing using such principles would have performed over the past few years. The fund moves in and out of markets as they progressively rise or fall, rather than the moment they rise or fall, so it will lag markets when they bounce [2].

The fund attracted £12M very quickly from retail investors, despite hugely volatile markets over the summer and autumn of 2011 caused by such events as the Fukushima nuclear disaster and the US credit downgrade. However, despite these headwinds, the strategy worked in exactly the way the researchers intended and that their research had suggested. Over its two-and-a-half-year life it has produced an impressive performance, with less than half the volatility of the FTSE100 and with a maximum drawdown of less than half that of the FTSE100 (its natural comparator for UK financial advisors). The 'live' two-and-a-half-year period showed that trend following and diversification can work effectively in practice to protect investors from unwanted volatility and in particular from large, multi-month drawdowns, as predicted by the research [3].

Eddie O'Gorman of The WAY Group [4] described the fund as: "*the first step in a series of launches likely to alter the UK investment landscape. There are some outstanding creative investment opportunities out there and, with this powerhouse of academic research as a dynamic driving force behind WAY/Hasley investment protocols, we believe investors will genuinely be provided with something fresh and beneficial to begin 2011*" [5]. The *Financial Times* reviewed the product and concluded that "*three academics have devised a fund that offers exposure to equity markets in a risk controlled fashion*" [6]. The WAY Global Momentum Fund was the winner of the Innovation Award at the Moneyfacts Investment Life and Pensions Awards 2011. For a fund that was less than one year old at the time, this demonstrates the quality of its proposition [7].

The success of the WAY Global Momentum Fund has led to the creation of two further applications of this research. The first is a multi-asset class fund in partnership with Credit Suisse and the second is a range of other single-asset class indices developed with Goldman Sachs.

The first extension of the original commercialisation of trend following strategies is based on multiple asset classes and is a direct extension of the Thomas *et al.* 2012b research paper. The asset classes are developed and emerging economy equities; commodities; bonds; and property. It is being made available to retail investors in one form and to institutions and high net worth individuals in another. The retail version of the strategy was launched as an open-ended investment company (OEIC) on 1st March 2013 as a product of WAY Fund Managers. It is based upon 22 ETFs that represent the range of five asset classes and sub-components of them. The second version of the strategy is available as an investible index. It was launched in February 2013 and has Bloomberg ticker *CSEATMTG (Index)*. Given the inherent low volatility of this approach, Credit Suisse (CS) has created guaranteed (structured) products based upon the underlying index and upon a version of the index with a target volatility of 10% per annum. So far CS has constructed a ten year Delta 1 Note, a five year deposit and a six year 90% Protected Note based upon the underlying index. These products will be distributed by specialist organisations such as Meteor [8]. Crucially for Cass Business School, the underlying index is called the Cass Trend Master Index and is the first example in the UK of an academic institution agreeing to associate its brand with investment strategies. It offers investors some comfort on transparency of investment strategy and the integrity of the research-driven investment process. As mentioned above, it does not offer a promise of investment performance. Robert Dale [9], Head of Structured Products at Credit Suisse said: "*The methodologies the Cass Professors have provided are a robust intellectual framework resulting from research into causality of financial markets and an indisputably unique proposition for our investors.*" Credit Suisse currently offers a series of investible indices based on the trend following rules devised by the City research team, in several different currencies. The products are aimed at institutions (pension funds, Investment Trusts, sovereign wealth funds) and are distributed by both Credit Suisse itself and investment product specialist distributors such as Meteor in the Middle East, Europe, Africa and Asia [10].

A second collaboration, with Goldman Sachs [11], has led to the development of three further Cass-branded indices: the Cass-Goldman Sachs Alternative Strategy Indices. Using the same commercial model, our trend following strategies have been applied to create a developed economy equity index, an index comprising emerging market equity indices and one based upon a range of commodities. Retail investors will be able to invest in these indices in the form of an OEIC distributed by Indexx Markets, a specialist index provider (www.indexxmarkets.com) [12]. Goldman Sachs is able to replicate the multi-asset class strategy in an efficient manner, but it can only really be made available to institutions and high net worth individuals. However, by "wrapping" the single-asset class Cass indices developed for Goldman Sachs into an OEIC, the benefits of the trend following strategy become more accessible to a wider retail audience. Retail investors will be able to invest in these indices in the form of an OEIC developed and distributed by Indexx Markets. Once again, the indices will bear the Cass name.

These strategies will be available to the mass market in low but regular contribution guaranteed long-term savings products such as personal pensions and ISAs. This is consistent with the Government's aim to make low cost, regular savings products available in the general marketplace, see for example the Government consultation on NEST (National Employment Savings Trust).

The research is widely available, published freely, totally transparent in its technology and is a direct challenge to business model and entrenched interests in the investment management industry. The investment funds underpinned by our research offer investors lower fees, low volatility and protection against down-side risk.

5. Sources to corroborate the impact

1. The Way Group, WAY Global Momentum Fund - Fund Factsheet, (Data retrieved September 2013)
2. Walters, Leonora (2011). The WAY to profit from momentum, *Investor's chronicle*, 17th February
3. Vincent, Matthew (2012). Volatile Stocks Test Trend Funds, *Financial Times*, 28th January
4. Way Fund Managers (Testimony can be provided by Sales Director and CEO)
5. The Way Group (2011). The WAY Hasley Global Momentum Fund ushers in new era in fund management dynamics..., Press Release, *28th February*
6. Moneyfacts Group plc (2011). Investment Life & Pensions Moneyfacts Awards 2011 winners announced, The London Marriott Hotel, 23rd September
7. Culley, Nicola (2011). Rules of Attraction, *FT Advisor,* 5th October
8. Meteor (Testimony can be provided by Sales and Distribution Director)
9. Credit Suisse (Testimony can be provided by Head of Structured Products)
10. Credit Suisse Group (2013). Credit Suisse and Cass Business School Launch New Multi-Asset Indices, London, press release, 29th July
11. Goldman Sachs (Testimony can be provided by senior Securities staff)
12. Indexx Markets (Testimony can be provided by Director and Head of Investment)