The intelligence swap

Derivatives trading technology for hedge funds. By Peter John, Fidessa LatentZero

Hedge funds have always had an interesting and diverse relationship with IT. DMA started life at stat arb specialists, for example. Others will invest in strategy-critical, proprietary systems, while at the other end of the scale there are plenty of hedge funds that have almost no IT infrastructure at all.

If hedge funds did go to third parties for technology it was inevitably to prime brokers. But the primacy of the brokers is being challenged by vendors that provide broker-neutral solutions, who have taken the best elements from their widespread deployments at major asset management firms, and distilled them into lighter weight packages for hedge funds. The result is a number of hedge fund-specific compliance packages and order and execution management systems.

The really interesting developments have taken place in functionality, most notably the asset classes and strategies that can now be handled by these sophisticated, broker-neutral systems. In fact, there has been a large scale swap taking place within the financial services world. As institutional investors have adopted the exotic instruments and the occasional high risk/ high reward strategies more commonly associated with hedge funds, so hedge funds are increasingly using the trading technology initially developed for their more traditional counterparts.

This exchange of respective intelligence has considerably enhanced the capabilities of the technology on offer. The software that supports multi-asset portfolios, and strategies like butterflies, caps and collars, and 130/30s, has become more sophisticated, flexible and scalable, and more interesting to hedge funds in return.

Nowhere is this more obvious than in the field of derivatives trading. As traditional asset managers have borrowed the strategy from high-flying hedge funds, so the technology has been developed to support them, encouraged by the larger technology budgets typically found at the larger, more traditional institutional asset managers. But as the role of hedge funds in the trading landscape has become more central, the technology that supported mainstream derivatives trading has been refined and packaged, ready to return to the hedge fund space, where it all started.

The development of derivatives trading technology has taken place in a number of distinct stages. The first was the creation of systems that could model and manage derivatives as part of a diverse portfolio of mixed asset classes.

However, to realise an end-to-end investment management workflow, powerful, real-time P&L and pricing analysis, validation and reporting is essential – but hard to achieve.

The first major development was to overcome the previously prohibitive complexities of measuring exposure to underlying instruments. However, having developed the ability to calculate both primary and underlying exposure of a derivative contract within a fully cross-asset system, the technology opens up a new range of opportunities in terms of modelling and portfolio management. With integrated data and analytics incorporated into the system, a more interactive approach to hedging becomes possible.

For example, until now the standard method of changing exposure to a given market for anyone on the buy-side was to buy or sell bonds or securities to change the duration. Portfolio management tools generated models and anything that was misaligned against targets was highlighted. By buying or selling more securities, portfolio managers were able to balance the portfolio against any variants.

With the ability to calculate an accurate and comprehensive exposure number comes a range of alternative possibilities. The duration can be changed through an interest rate swap, which gives portfolio managers the certainty that they are getting the exposure to markets that they want from the choices that are available. It is no longer necessary to hold the underlying asset, and incur the management and cost issues that come with it, since a swap can be created and the system populated with all the resultant data with a simple mouse click.

To illustrate the point, consider a trader who wants to change the duration on exposure numbers. He/she holds bonds plus interest rate swaps, credit default swaps and inflation swaps to manage duration, manage credit risk and to hedge inflation respectively. Historically, he would have to buy and sell several bonds with different lengths of maturity.

But the trader also has a system with full, interactive hedging capabilities. He/she can, therefore, highlight a number of bonds that need duration management and then ask the system to propose the most appropriate swap. The duration numbers can then be adjusted as necessary, and with that single swap, can be changed for a portfolio of 20 bonds. The same technique can be applied equally successfully to inflation and credit management, or even to LDIs (liability-driven investing) that need very long term duration.

Finally, with interactive hedging comes interactive speculation. Interactive speculation makes it possible to model any number of strategies (regardless of their complexity), build positions that cover all possible scenarios and then respond immediately to market movements with the preferred, pre-prepared strategy. This gives hedge fund managers with multi-asset portfolios the tools to test theories, to model effectively and implement strategies only when satisfied that they will deliver the expected results.

There is little question that hedge funds can benefit from the execution and order management capabilities initially developed for institutional asset managers. Whether they will choose to do so is another question.But with interactive hedging and speculation available to traditional asset managers, and the gap between these more conservative firms and the higher risk environment of hedge funds closing (in terms of strategy, customer and regulatory control) innovations on the buy-side could prove to be irresistible. The trend for more vendor-supplied solutions is set to continue for some time yet.

CASE STUDY

Kempen Capital Management – Implementation of Capstone
September 2008

Background

Kempen Capital Management is a specialist asset manager with a pronounced investment style in European equities, bonds and real estate funds for various institutional investors, foundations and high-net-worth individual clients. Kempen also offers comprehensive fiduciary investment solutions and select investment boutiques for clients. The company aims to achieve the best possible investment performance and works with highly specialised investment management teams.

Paul Gerla, Managing Director of Kempen Capital Managements explains the company's vision: "We believe that specialisation will lead to performance. We focus on a few select strategies where we believe we can excel and deliver outstanding results. Research in the US has shown that there is an inverse relationship between the number of funds being managed and the level of returns achieved by asset managers. Eight of the top ten performers had only a limited number of funds, which compares well to the lower end of the performance table where we find major asset managers with 100 or more investment funds each."

Challenge

The management at Kempen recognise that they will not be able to deliver the necessary levels of performance without the appropriate technology in place. Gerla points out, "For a boutique asset manager, focus on our activities is key. We wanted to have the perfect tools in place to enable our portfolio managers, traders and compliance officers to concentrate completely on client portfolios and our specialised investment funds as well as fiduciary management solutions for pension funds."

The systems that Kempen had in place had served the company for a number of years, but limitations in its modelling capabilities and available data for compliance rules were beginning to show. Managing a large number of clients with specific requirements was time consuming. In addition, compliance officers could only perform a limited number of checks automatically, since they did not have the necessary data feeds to the system. Kempen wanted a system that could offer more sophisticated functionality and when its existing vendor decided to stop support and development of their product, Kempen's management team initiated a project to improve both front and back office systems. When it started looking for a system to cover both sets of activities, Kempen discovered that it was not possible to get a high-performance end-to-end system and started the selection process for a separate front office and trading solution.

Gerla says, "It was becoming increasingly difficult to manage certain client mandates efficiently. These have been growing in complexity over the last few years, and added to a tighter regulatory environment, make a robust system absolutely essential. But we also felt that our portfolio managers needed far greater support. We did not want to have modelling issues that detract from their ability to focus purely on their core skills; managing portfolios, selecting the best companies and delivering returns for clients."

Solution

Kempen initially held several workshops with its portfolio managers and created a list of essential functionality for the new system. This was compiled into an RFI which was sent out to three suppliers. The short list was then narrowed down further to Fidessa LatentZero and one of its leading competitors. Kempen finally selected the entire Capstone suite from Fidessa LatentZero, comprising Sentinel for pre and post trade compliance, Minerva OEMS for order management and Tesseract for portfolio modelling and analysis. Kempen also chose the Fidessa LatentZero managed trading and connectivity network, LTN, as well as the OTC derivatives module.

Paul Gerla explains the decision, "The systems from both providers offer extensive functionality. The most important factor in the selection was the underlying technology. We thought that Fidessa LatentZero was about two years ahead, and the derivatives trading capability, in particular, was very advanced. You need to have the right technology to manage derivatives and structured products effectively and we felt that the Fidessa LatentZero system could manage these instruments. "It was the underlying architecture that convinced us. The quality of the technology itself would offer us greater speed and performance. It would integrate more easily with our other systems and it would be much easier to upgrade and add new functionalities in the future."

Aside from the technology the Kempen team was also impressed by the quality of Fidessa LatentZero's people and the business knowledge that they had. "We felt that the people understood the business from the start," says Gerla, "There was a good fit with our organisation."

Results

The implementation of Tesseract enables Kempen to rebalance more than 400 portfolios in less than one minute, which makes a tremendous difference to the business. Kempen can now meet a far greater number of client restrictions and regulatory requirements because of the greater number of rules incorporated into Sentinel and the ease with which new rules can be added. The speed of the rule checking engine means that conducting post-trade compliance on a daily basis has become much more straightforward with the elimination of the former manual processes.

The company has begun algo trading through the Minerva order management system, and has far greater connectivity to brokers and trading destinations via LTN. Gerla says, "The FIX connections are crucial for us, it is essential to so many aspects of the modern trading workflow. Incorporating FIX connectivity is a major undertaking so having a managed FIX service takes away a lot of that responsibility.

Benefits

Kempen believes that the implementation of Capstone has brought about a significant amount of positive change to the business. The STP rate has improved and the Portfolio Managers are now much better supported and more able to focus on delivering results rather than carrying out administrative tasks. The new system has proved to be popular on the trading desks. Both portfolio managers and compliance managers have found Capstone easy to use and to navigate around. As Paul Gerla points out, "One of the advantages of this system that it looks a lot like Excel, and portfolio managers are always very fond of Excel.

"It is very straightforward. If you want to do a rebalance or change some draft orders, it can be done with a simple mouse click. This enables us to work efficiently and we have seen major productivity benefits there. It is more accurate and efficient in the operational processes as well. Capstone has been embraced across the company because it enables our people to do a better job, and gives them more time to do that job."

Gerla concludes: "The lesson we learned is that if you really want to outperform your competitors, then everything should be in place in the front office to support your workflows and processes,and you should focus on core areas. That's what the Capstone suite allows us to do."

Biography

RICHARD JONES

CEO, Fidessa LatentZero

Richard Jones has been CEO of Fidessa LatentZero since its incorporation in 1999, working with Dan Watkins to create an agile, profitable business with a compelling proposition.

Jones has two decades' experience of working in both the financial services and IT industries. As IT Director of Jardine Fleming Investment Management in Asia, Jones was responsible for all aspects of IT strategy, implementation and support across the region. He also worked for Coopers Lybrand management consultants providing strategic advice on systems and package selection to large financial institutions.