Hedge Fund Risk 2013

Using technology to battle the Lernaean Hydra

Tools that enhance risk management framework

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Publisher

Editor: James Williams, james.williams@globalfundmedia.com
Online News Editor: Mark Kitchen, mark.kitchen@globalfundmedia.com
Deputy Online News Editor: Emily Perryman, emily.perryman@globalfundmedia.com
Asia News Correspondent: Hans Schlaikier, hans.schlaikier@globalfundmedia.com
Editorial Consultant (CI): Dara Lutes-Guest, dara.lutes-guest@globalfundmedia.com
Graphic Design: Siobhan Brownlow, siobhan.brownlow@globalfundmedia.com
Sales Managers: Simon Broch, simon.broch@globalfundmedia.com;
Malcolm Dunn, malcolm.dunn@globalfundmedia.com
Marketing Consultant (CI): Leanda Jane Guy, leanda.guy@globalfundmedia.com
Marketing Administrator: Marion Fullerton, marion.fullerton@globalfundmedia.com
Head of Events: Katie Gopal, katie.gopal@globalfundmedia.com
Chief Operating Officer: Oliver Bradley, oliver.bradley@globalfundmedia.com
Chairman & Publisher: Sunil Gopalan, sunil.gopalan@globalfundmedia.com
Photographs: iStock Photos; various
Published by: GFM Ltd, Floor One, Liberation Station, St Helier, Jersey JE2 3AS,
Channel Islands Tel: +44 (0)1534 719780 Website: www.globalfundmedia.com
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Alternative investments can involve significant risks and the value of an investment may go down as well as up.
Risk management technology battles the Lernaean Hydra

By James Williams

Akin to the multi-headed Lernaean Hydra faced by Hercules, managers and technology providers alike must today find solutions to control the multi-headed beast that is risk management.

Risk means different things to different people. But to summarise the key components, it now encapsulates: liquidity risk, market risk, counterparty risk, operational risk, regulatory risk, and more recently, sovereign risk.

Five years ago, the idea that Western governments could present a meaningful risk to how hedge funds trade was folly. With the eurozone meltdown, folly has become fact. This illustrates just how complex and self-evolving “risk” is in financial markets.

Technology is integral to helping managers keep ahead of the risk curve. One of the main catalysts behind re-shaping the risk environment is market regulation.

The Dodd-Frank Act and CFTC regulation in the US is pushing the envelope and requiring hedge funds, seemingly overnight, to completely overhaul their approach to collateral and margin management. What was once a simple bilateral relationship with their brokers for the purpose of trading OTC derivatives is now set to become a complex web of counterparty relationships with CCPs, requiring every OTC contract to be cleared and margin posted.

The ability, at the pre-trade level, to estimate initial margining is a paramount concern. Right now it’s difficult for fund managers to anticipate how much initial margin will be called by the prime broker because the...
The calculation performed by the CCP will rely on risk-based analytics (e.g. historical VaR).

“Our risk management engine is embedded in our collateral management tool to provide managers with an estimation of initial margins. Knowing how much margin will be called and whether they have enough liquidity to cover the margin call will be vital for managers’ collateral management process,” explains Jerome Lafon, buy side product manager at Misys.

This is as much of an operational risk concern as it is regulatory. And in Lafon’s opinion, systems that provide integration across all asset classes will be necessary for managers to navigate the risk waters going forward. The point he’s making is that having the capability to estimate pre-trade initial margining is not a one-off exercise.

“It requires a collateral management solution, a simulation tool, and a risk management system that plugs in to the portfolio management system. You need to have all the building blocks in place for consistency of data. Without that, there’s no way your risk system will be using the same data and have the same pricing libraries as your portfolio and collateral management tools.”

Imagine Software has been providing front-to-back real-time portfolio and risk management solutions to the financial community for nearly 20 years.

In response to CFTC regulations that come into effect this June, the firm has developed a product for clearing houses (as well as prime brokers and asset managers) to achieve the high speed/high volume risk analysis they will need to help establish risk-based limits – and monitor those limits thereafter - under CFTC Rules 1.73 and 1.74.

The Imagine High-Volume Risk Management (HVRM) solution (which is cloud-based) will be able to perform risk calculations on thousands of trades per second and is, in the words of Imagine CEO, Dr Lance Smith, "blindingly fast".

Such enormous structural shifts in market regulation – and the impact this has on risk management - are certainly keeping firms like Imagine busy.

“The margin rules for IRS, for example, are based on a five-year historical simulation. Under new regulations the clearing houses have just 60 seconds to decide whether to accept or reject the trade.

“That’s a massive amount of yield curve data to work with, so we’ve had to rise to the challenge to deliver those calculations using creative technology and immense processing power," explains Smith from New York.

As mentioned, buy-side firms, who have come to rely on Imagine’s expertise in real-time risk analytics, are benefiting from this enhanced capability. Imagine has built a series of bespoke margin calculations using house rules from prime brokers and exchanges for its clients to use. “Portfolio managers want to be able to adjust their positions if a margin call is imminent or a contract is about to expire, etc.

“Having an intraday margin calculation means they can avoid that margin call by putting on new trades to potentially bring it down," adds Smith.

One of the dangers of having too many risk metrics popping out of a trading screen is that traders become distracted. How are they supposed to make sense of these figures? At the basic level, they want to see correlation between asset classes in the trading strategy – or, in the case of a fund of funds, across the underlying managers in the portfolio – historical VaR, and position-level VaR.

While VaR is undoubtedly important, it is ultimately a backward-looking tool. Today’s CRO or COO has to have a multi-dimensional appreciation of portfolio risk. That requires combining forward-looking metrics with the likes of VaR.

“VaR is analogous to skiing downhill backwards. We allow clients to run stress tests for a range of different market scenarios. The ability to run these forward-looking scenarios is essentially the antidote to backward measures such as VaR,” says Smith, adding that the firm has worked
Lyxor Asset Management, a subsidiary of Société Générale Group, was founded in 1998.

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* USD 96.4 bn, equivalent to EUR 75.3 bn – AuMs as of March 31st, 2013.

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Mitigating selection and operational risk on MAPs

Interview with Stefan Keller

For a firm like Lyxor, whose managed account platform is one of the largest and most successful in the industry – it currently hosts 107 single managers - staying on top of the risk management process is of paramount importance. It’s also a hugely focused operation, one that relies both on systems and people. This is understandable given that an enormous amount of work goes into screening managers before they are accepted onto the platform.

Mitigating selection risk is, therefore, a key element in Lyxor’s overall risk management process and involves a three-stage due diligence process according to Stefan Keller, Head of MAP Research & External Relations at Lyxor.

“We have a dedicated ten-strong hedge fund research and analysis team based in New York, London and Tokyo. Their job is classic investment due diligence and sourcing managers. They have to identify, evaluate, and monitor top-quality funds for our investment universe.

“This first layer – the search for talent – is critical. We look for early stage star managers through to the most highly regarded established managers in the business.”

“We want skilled managers who have succeeded in various market cycles. We want compelling investment strategies with attractive risk rewards. That often means that firms need to be transparent organisations, with a solid operational infrastructure and a solid internal organisation ideally using a team-based approach to investment management,” explains Keller.

Operational due diligence, the second layer, is handled by a dedicated team who belong to Lyxor’s risk department in New York and Paris. The team reviews all legal, financial, marketing documentation, conducts background checks on managers, and assesses business plans as well as talk to the COOs. There are five steps to this process:

1. Fund evolution and direction;
2. Key team and process assessment;
3. Documentation review;
4. Counterparty checks – confirmation of professional service relationships;
5. On-site visits – this is ongoing, all managers are visited at least once a year.

“As you can see we invest a big part of our resources in mitigating selection risk,” says Keller, who continues: “The third stage of the due diligence process is onboarding the manager. Here we define the trading limits, validated by Lyxor Risk department. These trading parameters are customised for each fund that joins our platform.”

Mitigating operational risk is just as important for Lyxor as mitigating selection risk. Not only are all assets segregated to ensure total control, and trade limits clearly defined and codified in an investment agreement – which Lyxor is then able to monitor on a daily basis – but oversight of the assets in each fund is implemented through the use of independent administrators.

“You need to build a risk framework that allows the manager to implement the strategy. We set a pre-defined level of risk at the onboarding stage but because this is customised for each fund the limits set are such that they allow the manager to fully implement the strategy.

“We have eight key parameters we use when monitoring managers: the instruments being traded; leverage levels; liquidity terms; Forex; sensitivity to market parameters; credit risk; concentration risk, and country risk,” confirms Keller.

The fact that it’s been over a decade since Lyxor took the initiative to remove a manager from the platform illustrates just how robust its risk management framework is.
diligently to develop data visualisation tools to help portfolio managers manage multi-dimensional risk data more intuitively.

“We have heat maps where sector exposures are laid out clearly. For example, if you are a long/short equity manager, deep red will indicate significant short exposure, deep blue significant long exposure. You can then click on the heat map and drill down to interrogate the underlying figures.”

One of the key tools in the reporting and analytics toolbox at ConceptONE LP, another US-based risk and portfolio analytics firm, is risk budget (volatility sizing). The idea behind this is to help manage performance swings across all market/performance cycles, relative to both market conditions and the objectives and constraints of the portfolio in question, and is, says the firm’s COO, William Livingston, one of its most effective risk tools: “It does this by quantifying portfolio volatility capacity in a way that renders it consistent with incremental loss tolerance. For example, if your maximum acceptable incremental loss is 10 per cent, it would be inconstant with this constraint to experience daily swings of say 3 to 4 per cent. As performance improves, you move further away from this target loss, and volatility capacity increases. Conversely, as losses accumulate, the portfolio moves closer to the maximum negative return threshold, and volatility should rationally be subject to tighter constraints. Our risk budgeting tool captures these concepts in quantitative form.

“What we offer is the ability to monitor both volatility and VaR in parallel with a manager’s P&L, risk budget and portfolio content.”

This is designed to help managers avoid letting risk spiral out of control. But that only works if people are disciplined. Unfortunately, when a trader experiences losses in the portfolio, human instinct is to take more risk, not less. So as useful as risk budgets like the one created by ConceptONE are, they remain at the mercy of the human mind.

The fact that managers are now under more pressure to generate returns necessarily means that more risks are being taken and more complex assets are being traded to find that elusive alpha.

Livingston believes that the real alpha opportunities emanate from traders who manage risk more effectively than their peers during stress events when the risk premium rises and price sensitivities diminish: “Portfolio managers who generate positive alpha during these intervals place themselves in a position by retaining risk capital to reinvest at strategically favorable prices that tend to manifest themselves when those who managed risk less effectively are forced to liquidate their positions at suboptimal valuations. In our judgment, this is a much easier path to positive alpha than superior portfolio construction in stable markets.”

Access to the right data from front through back is an integral part of mitigating operational risk within hedge funds. Not only does it help forge closer, more efficient workflows between the front and back office, it demonstrates an institutional quality infrastructure.

Livingston says that ConceptONE has built a central data repository to satisfy the different reporting needs of managers: be they regulatory or client-based.

The same data that a trader relies on to monitor real-time risk can then be expanded outwards all the way to a summary month-end report to the investors, or even a quarterly Form PF filing.

“The margin rules for IRS, for example, are based on a five-year historical simulation. Under new regulations the clearing houses have just 60 seconds to decide whether to accept or reject the trade.”

Dr Lance Smith, Imagine Software
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ISIN (CHF) LU0218909108
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Commodities trading requires disciplined risk management

Interview with Jeremy Baker

Inflation risk is very much a known unknown. It’s not a question of whether inflation will rise, but rather when, in developed markets. Admittedly, the UK recorded a fall in inflation to 2.4 per cent in April. But from a longer-term perspective, inflation is something that investors should be thinking about and planning for.

One way to protect against inflation risk is through commodities. These aren’t exactly flavour of the month right now with investors favouring riskier asset classes like equities. But as Jeremy Baker, senior commodity strategist at Harcourt Investment Consulting, states: “The trend in commodity prices recently has not been too favourable but one could argue that there is still a structural bull market in China and inflation in the West is a long-term issue. I would not be recommending clients to shift their allocations into equities given the rise in markets we have seen since last November. Personally I would be advising them to look elsewhere for value, which I believe still exists in the commodity markets.”

Harcourt runs two actively managed commodity funds: Vontobel Fund – Belvista Commodity and Vontobel Fund – Belvista Dynamic Commodity. The latter has the ability to use leverage and take short positions, the former is more of a standard smart beta-type product. Both use the DJ-UBS Commodity Index as their reference benchmark.

Part of the way that the commodity portfolio managers at Harcourt build the risk profile is through specific sector deviations relative to the benchmark. These vary for each sector within the portfolio and are based on the underlying liquidity. This then helps determine how much the fund can deviate away from the benchmark through being actively underweight or overweight in its positions.

“The further along the curve you go the less liquidity there is. A front-month contract has good liquidity, but if you look at say the sugar market 18 months out, it is a different thing altogether. Liquidity and open interest within individual commodities are important factors in managing risk in the fund.

“In addition, we look at size limits versus the benchmark. We have specific sector limits which are then broken down into individual commodity contract limits. Let’s consider crude oil: what we could do there is deviate from the benchmark by plus or minus 7.5 percent. That could also apply to soybeans, copper, natural gas,” explains Baker.

Given that both funds offer daily liquidity, it is vital that the fund does not get caught out in a market where liquidity suddenly dries up. Taking this sector-by-sector approach to determine the level of deviation makes for a highly flexible risk management process.

As Baker continues: “We use a structured and disciplined investment process. Position risk is managed on a pre-emptive basis. We are looking to maximise the alpha from our positions but we always monitor the VaR and tracking error of each commodity contract versus the benchmark itself. We look at standard risk measures, analyse the volatility and correlation of individual commodities as well as ex ante monitoring to determine relative VaR. We then use this to determine the risk within individual commodities and individual sectors.

“What we have found historically is that VaR risk tends to sit in one particular sector, and within a few commodities within that sector, so we know exactly where the risk sits and how to manage that risk within the portfolio.”
Paladyne Systems is a leading OMS/PMS provider to the hedge fund community. In response to the growing need to keep on top of risk management the firm recently rolled out Paladyne Portfolio Risk; a real-time risk analytics solution for the buy-side community. At the same time, it launched Paladyne Risk Master, aimed more at fund administrators to better support their risk reporting capabilities.

“Paladyne Risk Master integrates with our reference data platform as well as our data warehouse and our front-end portal for reporting. Everything is bundled together into one offering for clients to be able to do more ‘risk on demand’, whereby they enter the data warehouse, upload the data, after which the system will run a host of risk reports and analyses as part of a reporting package,” explains Sameer Shalaby, President, Paladyne Systems.

Paladyne’s real-time risk solution is a partnership with Numerix, a firm that had built Numerix Portfolio which uses model libraries to run “What if...” scenarios, Monte Carlo simulations etc. The decision to partner seems to have worked.

“We started integration about a year ago to see if we could fill the risk management gap that clients were asking for. Everything worked out great but I didn’t feel comfortable taking it to market without owning the asset and control our own destiny in supporting it. So we struck a deal with Numerix whereby we agreed to licence their source code while taking on a number of Numerix team members to support our own staff.

“We now have clients using Paladyne Portfolio Risk as a combined solution for front through back and risk,” explains Shalaby who adds that managers will now be able to better control market, liquidity and regulatory risk.

In addition to VaR and stress testing the risk solution offers predictive scenario modelling, sensitivity analysis, credit valuation adjustments (CVAs), potential future exposures (PFE) as well as historical and deterministic analysis tools.

“Post’08 everyone has been focused on developing institutional-grade technology infrastructures and having the right risk tools is very important, in real-time. Managers have to constantly keep on top of risk. That’s why we did the deal with Numerix.”

Sameer Shalaby, Paladyne Systems
“Loss aversion is the single biggest reason for failure in our industry and it’s incredible how deeply rooted in our psyche it is,” comments Simon Savage, risk specialist at GLG Partners, part of Man Group.

The most successful portfolio managers are those who can clearly articulate and express how they make money. If they can’t, logic would suggest that they are merely resorting to a random process.

In an intriguing paper entitled “Fear, overconfidence and irrationality: overcoming the psychological traits that undermine the asset management industry”, published in March 2013, Savage and co-author Paul Gibson, chief tactical writer at Man Group, deliver three key insights related to behavioural risk.

Firstly, many active managers are reluctant to deviate from benchmarks even though maintaining low tracking errors impedes value creation. Managers should, argues Savage, be encouraged to express “real conviction” in their stock picking.

Secondly, too many managers believe in their own talent. This acts as a self-improvement disincentive and creates what Savage refers to as an “entity view”. Not only does this inhibit the ability for managers to self-reflect and build on their strengths while mitigating their weaknesses, it leads to loss aversion: i.e. managers are less willing to make mistakes for fear of tarnishing their reputation. Savage and Gibson argue that managers are more likely to succeed and make better trading decisions by working in a collaborative environment.

“As soon as any hint of loss aversion creeps in you tip the balance towards cutting winners and running losers. And when that happens, you’re baking failure into the cake,” says Savage.

This has led GLG to develop an evaluation framework in which managers are encouraged to hone their skills and develop a growth mindset where their trading ideas are openly shared, and feedback is taken on board.

“You have to understand your strengths and weaknesses and appreciate how you make money - that process-driven approach and building self-awareness is what we at GLG are doing to improve the skill of our portfolio managers as part of an active risk management program.”

“Our aim is to create repeatable, sustainable skill at investing. Fund management is a skill, so what are you doing to improve that skill?

“People at the top of other skill-based professions like elite sport surround themselves with feedback, telling them what they’re good at, and bad at, so they repeat their strengths and omit or improve their weaknesses; that’s how any skill-based activity sustains performance,” says Savage.

Too often, managers focus purely on how much money they’ve made. At GLG, the emphasis is on building the right processes that lead to that end result. Each quarter, Savage meets with portfolio managers to analyse their performance using behavioural reports. “For one portfolio manager, it only took a 50 basis point market reversal to close their winning positions. For losing trades, however, they were willing to wait until the market had moved 5 per cent before closing out: a 10-fold difference in pain threshold.

“For this manager, if they’ve got a winning position and the market moves slightly then do something different. Go for a walk. Talk to a colleague. Alternatively, if it’s a losing position avoid thinking ‘This time it’s different’. Cut the position and expect it to feel bad.

“We’re arming managers with the tools to improve their skills as traders. It’s about eradicating bad behavioural traits and enhancing their core strengths. That’s risk management.”
“It seems to be a law of nature, inflexible and inexorable, that those who will not risk cannot win.” – John Paul Jones

The Holy Grail for any portfolio manager is to find a way of maximising their investment returns by taking the least amount of risk. Fine in theory. Difficult in practice. As managers continue to access hitherto inaccessible markets in the elusive search for alpha, they are exposing themselves to more investment risk. Effective risk management has become a vital exercise as a result.

Swiss-based Harcourt Investment Consulting is the alternative investment and advisory arm of Vontobel and runs a number of hedge fund-of-funds as well as two actively managed commodity funds – Vontobel Belvista Commodity fund and Vontobel Belvista Dynamic Commodity fund. Speaking with Hedgeweek, Bruno Melo, Head Portfolio Risk Alternatives at Vontobel Asset Management, says that the most important facet of risk management is liquidity risk given that both funds are UCITS-compliant.

“Both funds offer daily liquidity so we have to be sure that the instruments we are dealing with are highly liquid. If you’re looking for alpha and you want to explore new markets and new instruments you have to be sure that the liquidity is there. We use a combination of risk management systems – in-house systems plus systems from companies like RiskMetrics and Bloomberg. That gives us comfort when trading new instruments,” says Melo.

To keep within regulatory guidelines it is also essential that VaR limits are closely monitored. The fact that this number is also

Risk management: the bigger picture

By James Williams
easy to communicate to investors for their own understanding means that as far as Melo is concerned, VaR “remains the key risk measure.

“We also use parameters such as conditional VaR, gross and net exposure by sector, as well as exposures for each individual security. Neither fund can be too concentrated in any one single commodity contract or sector.”

Operational risk is, it could be argued, just as important for today’s hedge fund COO as market risk is to a firm’s CIO. Investors increasingly want demonstrable evidence of the processes and controls in place to monitor counterparty risk, disaster recovery plans, regulatory compliance and reporting expertise, not to mention the day-to-day risk solutions in place to manage portfolio risk.

New York-based South Ferry Capital Management LP is an event-driven credit shop established by John Reilly in 2010. At the beginning the firm used its administrator, Northern Trust, to provide a basic Bloomberg-driven risk solution. This, explains Marshall Terry, COO, was fine for the first 18 months or so but as the fund grew and regulatory and investor demands became more onerous, it became apparent that a more consolidated solution was needed.

“We went out to look for another vendor to complement our administration solution with Northern Trust. We ended up partnering with ConceptONE. The solution has helped transform what was a manual pivot table process into an automated process where our daily risk numbers are turned into exposure sheets, which we use to internally disseminate to investors/prospective investors. It’s making sure there’s continuity in the data as it comes through the system,” says Terry.

Prior to this the firm was doing its exposure calculations in Excel but it quickly became apparent that this was too time-consuming and “ripe for error” in Terry’s words. The ConceptONE solution creates a more automated, efficient workflow. This naturally benefits the front and back office as they all have access to the same risk data.

This creates a form of “operational alpha”. It’s what a lot of today’s successful managers are looking to put in place to show investors they mean business.

“We use a combination of risk management systems – in-house systems plus systems from companies like RiskMetrics and Bloomberg. That gives us comfort when trading new instruments.”

Bruno Melo, Vontobel Asset Management

It also leads to what Terry refers to as having a more holistic view of risk management.

“Traditionally, because of the way firms have built their infrastructure over time as demands changed, there has been a siloed approach to producing risk data, investor data and regulatory data. When we mapped out our infrastructure development plans, we wanted to ensure that we built our risk and regulatory reporting infrastructure so as to ensure the same data set is being used to populate our exposure sheets, our internal risk numbers, and our regulatory reports.

“What we and many firms are now doing is taking a holistic approach to risk management. We have limited resources so we have to be strategic in how we go about doing this, which involves finding vendors that are willing to work with us and customise something for us; that’s key.”

Adopting this comprehensive view of risk has long been a conceptual approach endorsed by SkyBridge Capital LLC, one of the world’s leading hedge fund of fund and advisory firms with approximately USD7.7billion in AuM and under advisement.

Tatiana Segal is the firm’s head of risk management. Segal notes that portfolio transparency has increasingly been a factor in raising institutional assets and has been an area of evolution at the firm. Complementing its existing risk framework, which incorporates a proprietary Hedge Fund Analytics application, SkyBridge has hired the RiskAggregator solution provided by Imagine Software.

The resulting risk platform offers both returns-based and position-based analytics.

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Peter Hughes
Group Managing Director
Tel: +44 7780 997609
peterhughes@apex.bm

Paul Spendiff
Managing Director
Apex Technologies Ltd
Tel: +44 (0) 20 3664 8785
paul@apextechnologies.co.uk

apexfundservices.com
Apex Vision: Why use a sledgehammer to crack a nut?

Interview with Paul Spendiff

Operational risk, it could be argued, is equally as important to today’s hedge fund manager as market risk.

To help support its global client-base of approximately 750 funds, Apex Fund Services established Apex Technologies last year. Headed up by managing director Paul Spendiff, the firm works with a variety of partners. One of these key partnerships is with Linedata. This has resulted in Apex Vision, a portfolio management solution that sits on the Linedata Beauchamp platform.

Other partners include StatPro, offering portfolio analysis, risk and asset valuation support, and Eze Castle Integration, which has given rise to the Apex Cloud. A range of other solutions can plug into Apex Vision such as Apex 247, a web hosted manager and investor reporting tool, which uses the PMS to create a real-time reporting feed.

At the front end clients have the option of using their own systems, Apex Vector, the integrated FIX connected front-office trade order management solution with pre-trade compliance or Apex Trade Manager, based on Linedata’s heavy duty OMS, Longview.

The result is a fully flexible, multi-asset front to back portfolio management solution, and as Spendiff explains:

“As you place orders in the OMS, within 15 minutes that trade is coming in to our fund accounting system at the back end. You can see that as the manager, and, if you want, extend that to your investors. They could basically watch you trade, with say a 20-minute delay. That’s quite a potent offering for managers who are looking to differentiate themselves from the crowd.”

From an operational risk perspective, Apex Technologies works with Apex’s clients to develop suitable processes for overcoming operational stress, from execution processes through to reporting processes.

“Obviously, the PMS is integral to this. Managers need to have the ability, in real time, to look at counterparty risk, trade risk (any trade breaks occurring?), to see if there’s too much concentration risk in the portfolio, liquidity risk etc. It’s about providing operational oversight. With Apex Vision we give managers the tools to dig down and interrogate their portfolios,” says Spendiff.

To cope with investment risk, rather than trying to be all things to all men Apex Technologies has created an open architecture that Spendiff refers to as “risk tool agnostic”; hence the multiple risk tool partnerships. What this allows is for managers of all shapes and sizes to find a solution that best fits their needs.

A small manager might only require a cost-effective risk tool like StatPro to run analysis on a plain vanilla equities book.

“Alternatively, a larger manager might require a more complete solution for UCITS reporting where the data needs to be more deeply interrogated, or a powerful risk engine where they can run multiple "What if..." scenarios across multiple markets.”

“We are able to support any type of scenario, depending on the client’s risk management needs, to give them the analysis they want. It’s about providing them with the data that we have in a format they can use. We would rather work with a range of risk partners – from Riskdata to StatPro – because it means we’re not trying to second guess what our clients want.

“We could build the world’s biggest risk engine but 95 per cent of clients wouldn’t need it; it would be analogous to using a sledgehammer to crack a nut.”
Overconfidence and irrationality: overcoming the psychological traits that undermine the asset management industry, Simon Savage, risk specialist at GLG Partners makes a number of observations on behavioural risk. Firstly, managers are typically reluctant to deviate from benchmarks (and are essentially running closet tracker funds) for fear of failure. Secondly, Savage argues that believing in your own talent constitutes a “self-improvement disincentive” and that rather than fostering self-esteem, lauding a manager’s talent has the opposite effect, creating an “entity view”.

What Savage is getting at is that fund management is a skill-based profession and as such traders need to hone their skills on a daily basis. Otherwise, behaviourial risk becomes an impediment to self-improvement. “Loss aversion is the single biggest reason for failure in our industry and it’s amazing how deeply rooted in our psyche it is,” says Savage. What is clear is that managers have a much higher capacity for running losers than they do for running winners; this is what GLG is trying to eradicate by getting its portfolio managers to develop processes and checklists that enable them to build on their strengths and mitigate their weaknesses.

“Self-awareness is important. That means focusing not on the outcome but on the process. What factors make you like a stock and want to invest in it? Keep track of those factors and let’s look at the outcome based on win/loss ratios,” adds Savage.

In addition, GLG wants its traders to operate within a risk framework that neutralises systematic exposures. Savage explains: “If you think about a classic
One of the biggest challenges managers have faced in the last couple of years has been greater regulation. In parallel with investor demand for transparency, having the right risk infrastructure in place to handle regulatory and client reporting has become de rigueur.

That means having an even greater understanding of risk throughout the lifecycle of an investment strategy: from pre-trade risk exposures to leverage levels, margining management, liquidity profiling, real-time risk analysis, post-trade impact on P&L, through to risk reporting and compliance.

"Regulation is forcing managers to think carefully about risk and to be able to accurately report it in a standardised fashion," says Jerome Lafon, buy side product manager at Misys.

Under the AIFM Directive, managers will have a regulatory obligation to report their risk figures. Sophis VALUE is an integrated solution offered by Misys. Modular in nature, it supports managers from front through back, including risk management and compliance, providing a single consolidated view of a multi-asset portfolio. Part of that solution is a reporting tool that enables managers to customise their reports for regulators and investors.

“It enables clients to produce reports in an automated fashion at the end of each day, which can then be emailed directly to investors or to the regulators,” explains Lafon. “Investors won’t allocate to a fund manager today who isn’t able to clearly articulate their risk management framework, or explain the figures. In this regard, investors are becoming a lot more demanding.”

Misys has recently enhanced Sophis VALUE in two areas to further support managers’ day-to-day risk management operations.

The first enhancement allows managers to run pre-trade simulations and compliance verification checks on a wide range of instruments including equities, OTC derivatives and listed derivatives: previously this was only possible for listed derivatives.

Managers can perform risk management calculations at the pre-trade level to determine how a trade will impact the book. They can also check that no excess risk is being taken by simulating different trading scenarios and monitoring what impact their trades will potentially have on VaR, leverage levels, etc.

The second development has been to provide an initial margining calculation for managers as the market moves towards OTC clearing under CFTC regulation in the US and EMIR regulation in Europe.

The volume of data involved when clearing trades through central counterparties (CCPs) will, from a margining perspective, present managers with a massive operational headache. Each CCP will use its own calculations for determining initial margin requirements based on VaR calculations.

Misys recognised the importance of developing a tool for Sophis VALUE that could allow managers to run their own initial margin estimations.

“This collateral management tool plugs directly into our VaR engine and allows us to provide managers with an estimation of initial margin at the pre-trade level before they decide which swap to trade. Knowing how much margin will be called is highly important for their cash management process and will help them better manage their collateral needs," says Lafon.

Sophis VALUE already had a VaR module and a collateral management module in place. What this new solution has done is simply plug them both together.

“An initial margining estimation requires a collateral management solution, a simulation tool, and a risk management system which utilises the same data that is used in the portfolio management system. You need to have all the building blocks in place. Now, we have.”

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Hedge Fund Risk Hedgeweek Special Report Jun 2013
risk framework there'll be a model that spits out an estimate on tracking error, risk parameters that tell your exposure to value factors, momentum factors etc. That feedback to a manager has the right intention of corralling their risk. However, in the ultimate objective of making a good investment decision, it could be completely misaligned.

“Inevitably, P&L takes over as the primary decision candidate. As soon as any hint of loss aversion creeps in you tip the balance towards cutting winners and running losers. And as soon as that happens, you’re baking failure into the cake.”

Segal says that part of the discipline of risk management is being able to forecast the potential impact of various stress scenarios, e.g. the LTCM hedge fund blow-up in 1998 which lost USD4.6billion.

“We want to assess the risk drivers, break them down into component parts i.e. currency impact, equity price impact etc, and seek to understand what our exposure is and what impact it could have on the portfolio.

“You have to look at risk holistically; not just risks to your underlying instruments but risks to your investors, risks to your asset base. It’s important to be able to drill down to the lowest common risk denominator as well as the aggregate risk profile.”

Manager risk is a unique challenge faced by fund-of-funds. At Harcourt, the Vontobel Diversified Alpha fund uses, says Melo, a three-layer risk framework. The first layer is at the inception stage when concentration limits are set on strategies and styles within the portfolio. Second involves the ongoing monitoring of managers where risk and performance issues are regularly discussed and analysed.

“Thirdly, we look at risk measures for each individual manager and aggregate them to ensure there’s not too much risk concentration in a given asset class or market geography, and that the VaR limits are not being exceeded,” explains Melo, adding that the risk budget, overall, is set at the strategy level (after which individual limits are applied to each manager).

“Strategy A, say CTAs, might have 50 per cent of the risk budget and so on. Each fund is allocated to the corresponding strategy

“Having full segregation and control of the assets is necessary to mitigate operational risk. We set pre-defined trading limits and then put an investment agreement in place to enforce those limits. We then use a number of independent administrators to provide valuations on the assets.”

Stefan Keller, Lyxor

risk bucket so it’s very straightforward to monitor these risks across the portfolio. We then set risk concentration limits for each fund within the overall portfolio. No one fund can exceed 10 per cent of the portfolio’s risk budget.”

Segal says that a comprehensive approach to monitoring managers is vital as they evolve their strategies – and by default their risk profiles – over time:

“If they evolve their strategy, is their risk framework scaled up appropriately before they take on additional risk? This is very important for us to keep on top of.”

Greater transparency means that managers are on the hook more than ever. Regulatory and investor reporting means that managers have to be on top of all facets of risk. If not they face incurring reputation risk.

“Enhanced transparency is conducive to making our dialogue with managers more inclusive. It helps to be able to verify the information, but trust remains an important component of every manager relationship,” adds Segal.

Concludes Terry: “We now have a risk framework that not only gives us more of a holistic view of risk management, but is also sustainable and scalable. We’ve made a deliberate decision to move away from a silo-based approach to risk management.”

Hedge funds have to continue taking risks to boost returns and justify their fees. Having this holistic view of risk management will likely separate the winners from the losers.