

Risk management 2017

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In this issue...

03 Hedge fund risk remains a moveable feast

By James Williams

05 Regulation and security increases the need for risk management

Interview with George Ralph, RFA

09 Managing liquidity risk in response to SEC rule 22e-4

Interview with Naz Quadri, Bloomberg

11 How can managers make risk more strategic?

By James Williams

14 Establishing a combined risk compliance framework

Interview with Ittai Korin, PortfolioScience & Raya Gabry, Eze Software



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Hedge fund risk remains a moveable feast

By James Williams

Gauging risk sentiment among hedge fund investors is more art than science but there are some indirect signals that one can use to examine this. If one looks at total inflows into hedge fund strategies in 2016, a clear picture emerges: CTAs attracted USD26 billion in net inflows, in stark contrast to all other strategies, which suffered USD110 billion of aggregate net outflows. The biggest losers in all of this were equity strategies, shedding USD50 billion of net assets; this despite generating 6.85 per cent returns.

What this would suggest is that large institutions, by favouring CTAs, view hedge fund allocations (of which CTAs can broadly be included) as more of a risk diversification exercise than relying on them for pure

performance reasons; they've been able to rely on traditional markets for this.

"It doesn't feel as though there's been a specific change in risk appetite among our investors," says Alexandra Coupe, Associate Director, PAAMCO, one of the industry's leading fund of hedge fund managers. "I think a bigger change has been for this low volatility environment to persist and grind lower. Since return expectations have to match risk, and large institutional investors are hungry for returns, investors have started to think about how to increase risk to meet their return expectations.

"We also are not seeing complacency with current low risk levels, but rather a creative thought process to address risk: 'How can

we manage risk in a way that also optimises the Sharpe ratio?”

This persistent, low volatility environment has created nuanced responses. As mentioned, CTAs have been increasingly favoured by institutions as a way to diversify risk and generate uncorrelated returns. In response, CTAs and global macro strategies – whether they are being encouraged by investors or not – have jacked up their risk appetite, feeding off benign market conditions. Conversely, bottom-up strategies, such as equity and credit long/short strategies and event-driven strategies, are still using modest leverage, requiring investors to look for innovative solutions.

“A few years ago, large US institutions invested in hedge funds for pure performance reasons. Today, it is more for risk diversification purposes. The fact that CTAs did well in 2008 explains why they currently favour them, ahead of any future market correction. They are cherry picking strategies precisely for this purpose. It is not just a performance-based decision,” opines Philippe Ferreira, Chief Strategist at Lyxor Asset Management.

That said, family offices and smaller institutions are still very much hungry for returns and will be more inclined to juice returns across their hedge fund allocations, not just use them to protect against the downside.

As such, risk appetite and risk taking is very much bifurcated depending on the type of strategy, and the type of investor. Ferreira says that whereas leverage ranges anywhere from 5 to 10X among global macro and CTAs, it is still between 1.5 and 2X for event-driven and equity long/short strategies; well within the five-year average.

“Broadly speaking, hedge fund investors would be willing to see hedge funds take more risk. While low volatility returns are good for conservative investors such as pension funds, for others they want to see higher volatility returns.

“For instance, on our platform we have launched leveraged versions of hedge funds including one CTA that we offer as a 2X leveraged version of the flagship strategy, and a merger arbitrage fund that uses 1.5X leverage. There is a general acceptance of higher volatility of returns, but over recent



“I like to think of hedge funds like pizza. The crust is the market risk, the various toppings make up the idiosyncratic risk – so we’re in the business of delivering thin crust pizzas with a lot of different toppings to suit the risk/return appetite of our clients.”

Alexandra Coupe, PAAMCO

years hedge funds have remained far less leveraged than in the past,” explains Ferreira.

Coupe says that leverage is probably at the higher end of the usual range but hasn’t become excessive at all. Part of this could be because the banks are more protective over their balance sheets. Another reason why hedge funds are checking leverage levels is because the low volatility environment scares them.

“Hedge funds and hedge fund investors have been burned before using too much leverage in a low volatility environment and then getting hit hard when volatility increases, as happened in ’08. It is a lesson that the industry has learned and this seems to be keeping a check on leverage rising to uncomfortable levels,” suggests Coupe.

How then, can those investors who want higher risk/returns, achieve this at a time when leverage remains modest?

One of the techniques employed by PAAMCO is to build customised portfolios.

As Coupe explains: “We’ve always thought of hedge funds as delivering two types of risk: market risk and idiosyncratic risk. The way we can best serve our investors is by focusing on increasing the idiosyncratic risk component. I like to think of hedge funds like pizza. The crust is the market risk, the various toppings make up the idiosyncratic risk – so we’re in the business of delivering thin crust pizzas with a lot of different toppings to suit the risk/return appetite of our clients.”

To continue this culinary analogy, the more jalapeno peppers on the pizza, the more risk the investor is willing to take.

► 6

Regulation and security increases the need for risk management

Interview with George Ralph

Increased regulatory requirements have pushed alternative fund managers to think more about risk, which has become multi-faceted: it is no longer about evaluating market risk ex post, but monitoring counterparty risk, liquidity risk, cyber risk, compliance risk and technology risk.

As the regulations become more stringent, so managers' awareness of what they need to do to adhere to them has risen.

George Ralph, Managing Director of RFA, says that to deal with increased regulation, and the rising threat of cyber attacks, managers are increasingly turning to IT outsourcing.

"However, this does not mean that managers can transfer risk to a third party vendor and expect them to get on with it; there's got to be an element of shared risk. This was raised in the FCA's FG16/5 guidance paper released last July," says Ralph.

Specifically, section 3.4 states that *"Regulated firms retain full responsibility and accountability for discharging all of their regulatory responsibilities. Firms cannot delegate any part of this responsibility to a third party."*

Regulation, like risk, cannot be outsourced. Even though fund managers rely on IT vendors to provide infrastructure-as-a-service, or a broader suite of managed services, they are merely solving the technology component. This is not a risk transference exercise.

Striking the right balance is therefore critical when outsourcing. Firms need to have an IT risk management process in place to monitor all of their business risks, regardless of whether they are managed internally or externally.

"If you consider the components of an operational risk framework, having a very



George Ralph, Managing Director of RFA

clear objective as to how you manage risks, identifying which risks you are willing to take on internally, and placing comments alongside each identifiable business risk as to how you would mitigate it, is useful. Then, you should have a board member who is responsible for each one of those risks. I don't think one individual should be responsible for all risks in a business," comments Ralph.

He concedes that if there is a limited (not wholesale) element of risk transference when outsourcing, there needs to be clearly defined terms in place detailing what the vendor is doing to mitigate that risk.

"If we've got people hosting on our infrastructure then we will provide them with SOC reports every year, we'll provide them with penetration test results and vulnerability reports on a frequent basis, to show them that, irrespective of whether the client was managing the risk internally, or by using RFA, they get the same amount of security and diligence.

"In some cases we sit on the board of our fund manager clients – and indeed some hedge funds who are not our clients – advising on technology risk," explains Ralph.

However, the biggest risk to any business is reputation risk. "Some hedge fund clients ask us to keep their founding partners out of the news. If there's a news article that goes out which has been completely fabricated, once its on Google you can't remove it. We work in collaboration with a number of security companies to prevent such issues from arising," confirms Ralph.

As investment firms embrace technology to meet the regulatory challenge, it is more important than ever to put in place a robust IT risk management process to stay both compliant, and secure. ■

- 4 ▶ Coupe says that one of the preferred customisation tools that PAAMCO uses with hedge fund portfolios is known as ‘custom levered pari passu’.

“We look at the return stream of a particular hedge fund, the ability for it to deliver returns in a variety of market conditions, and then we leverage the portfolio while simultaneously keeping the market risk exposure the same. That shifts the contribution of risk from market risk to idiosyncratic risk.

“The trick is to increase leverage and manage risk in a thoughtful way to ensure you are delivering more idiosyncratic risk and therefore ‘alpha’ as opposed to simply taking more market risk, or ‘beta,’” explains Coupe.

Since the start of 2017, leverage has started to move higher for certain strategies, in particular CTAs and global macro funds. This is a cyclical trend, rather than structural. When volatility is low, managers tend to increase leverage because they feel more confident in the positions they hold in the portfolio.

If one looks at the major equity indices, they have risen some 20 to 30 per cent over the last 12 months. Macro data has been more supportive, in Europe in particular, volatility has fallen across the equity and fixed income, and markets have rallied.

“That explains why the global macro and CTA strategies are willing to take more risk because they want to take advantage of stronger risk appetite in the market,” says Ferreira.

It’s also worth pointing out that both of these strategies use embedded leverage through futures and options – they don’t need banks to lend them capital. They are less constrained in that regard. Bottom-up fundamental strategies are still constrained from a leverage perspective but global macro managers can dial up leverage much more easily.

If investors go down the customisation route, perhaps using carve-out strategies that focus on a sub-set of a manager’s strategy, to increase the idiosyncratic risk component, they can take confidence in the knowledge that firms like PAAMCO have the technology tools and infrastructure in place to monitor risk forensically.

“Any deviation from what we expect, in



terms of ex ante risk, should be red flagged. We have reassessment triggers so if there is a change in behaviour – let’s say we hire a manager whose DNA is in value equities and all of a sudden he starts rotating into growth equities – it would quickly be a cause for concern. And one we would want to understand more fully. We are laser focused at making sure the return stream generated by a manager is what we expect,” states Coupe.

One way to increase risk is to allocate to strategies operating further out on the liquidity curve – hybrid strategies, distressed debt, direct lending, bank loan funds have all gained in popularity recently. While harvesting illiquidity premia is an option, Coupe says that PAAMCO prefers to focus on liquid hedge fund strategies. “We

believe we have enough levers to increase idiosyncratic risk and make investments that are closer to home. We do have distressed debt exposure, event-driven exposure but we make sure it is kept at an appropriate size/level for our investors.”

Looking at manager behaviour in 2017, Ferreira confirms that net exposure in equity long/short and credit long/short strategies has increased as evidenced by the re-weighting of portfolios into more cyclical sectors than defensive ones.

“There has been stronger capital investment into cyclical stocks that have benefited from the improving macro environment, and less investment in defensive stocks that are more favourable when economic markets are depressed.

“Higher net exposure and higher exposure to cyclicals are two indications that equity managers, in particular, are increasing risk. They are rotating into financials, as well as consumer discretionary and technology stocks. So I would say there is more risk appetite among equity long/short and event-driven managers.

“However, as mentioned, these bottom-up strategies are still using less leverage than global macro and CTAs, which are more top-down strategies that invest in broader underlying securities and can be more reactive to market changes,” comments Ferreira.

One important consideration here is that fundamental-based strategies and RV strategies, such as fixed income arbitrage strategies which make returns by using massive amounts of leverage to exploit tiny price inefficiencies, no longer find it easy to put risk on the table, even if they want to.

This is because the banking sector has, following the '08 financial crash, been subject to much tighter regulation. Basel III, for instance, requires banks to shore up their Tier 1 capital ratios. Suddenly, using the bank's balance sheet to support hedge funds has become greatly reduced. Banks simply will not provide as much leverage as they once did.

“If the regulator is asking you to monitor more closely your counterparty risk, and you have to put aside higher levels of capital to serve hedge funds, meaning leverage is more expensive and less available because



“Several elements will need to be passed by Congress but US banking regulation could be softer in the years to come. That could facilitate access to leverage.”

Philippe Ferreira,
Lyxor Asset Management

of these tightening banking standards,” says Ferreira. He confirms that within the fixed income arbitrage space, “we’ve seen the number of funds reduce because the smaller funds just don’t have access to the necessary leverage to fully deploy their strategy”.

Coupe points out that banks have their preferred strategies that they will be willing to extend more leverage and balance sheet to i.e. those that are the most profitable to them.

“It’s therefore a bit easier for the equity long/short, and equity market neutral strategies, given the amount of trading they do. But it gets a bit harder for credit managers and event-driven managers to get balance sheet because it’s a slower moving book,” says Coupe.

To finish on a positive note, it just might be that President Trump’s administration becomes a white knight, given that there are signs he wishes to deregulate the banks and roll back on things such as the Volcker Rule.

“This might provide US banks with a renewed incentive to start lending again and start providing fund managers with more leverage. We will have to wait and see. Several elements will need to be passed by Congress but US banking regulation could be softer in the years to come. That could facilitate access to leverage,” concludes Ferreira.

Whatever the future holds, ‘risk’ will always remain different things for different people. Some investors, some strategies, will always be more inclined to put greater risk on the table than others. One thing that is certain, though: market regulation and better technology means that the 30X leverage levels that were seen pre-crisis are likely to remain a thing of the past. ■

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Managing liquidity risk in response to SEC rule 22e-4

Interview with Naz Quadri

With investment managers typically running multiple strategies, both onshore and offshore, across a range of asset classes, paying heed to regulatory rules has been a relatively straightforward affair.

Global regulations over the last decade have required financial institutions to become more prescriptive in terms of improving their trade compliance frameworks and enhancing pre-trade analytics. As such, most of the liquidity-related concerns in respect of Comprehensive Capital Analysis Review (CCAR) prescribed by the Federal Reserve Board, Solvency II, MiFID II, and liquidity coverage ratios under Basel III are essentially just rules from the regulator to adhere to.

Conversely, regulations such as the Alternative Investment Fund Managers Directive (AIFMD) on the buy-side, the upcoming Investment Company Liquidity Risk Management Programs rule – known as SEC rule 22e-4 – and prudent valuation regulations introduced by the European Banking Association for the sell-side, place an actual requirement on the end user to estimate their liquidity.

“With AIFMD, it is requiring fund managers to time bucket their liquidity and report those to the national regulators, but in my view SEC rule 22e-4 is probably the most challenging rule, to date,” comments Naz Quadri, Head of Liquidity Analytics for Bloomberg’s Enterprise Solutions business.

Twenty years ago, there was no consistency of approach in terms of how people viewed liquidity. Since the '08 global financial crisis, the G20 have committed to rolling out an alphabet soup of regulations.

“They’ve become more challenging, to the point where, under SEC rule 22e-4, you’ve got the first mandated regulation around measuring, categorising, and reporting on liquidity,” adds Quadri.



Naz Quadri, Head of Liquidity Analytics for Bloomberg's Enterprise Solutions

This is putting pressure on financial institutions to closely track the distribution of liquidity throughout the month and categorise their liquidity into different buckets.

“PruVal is interesting. The EBA is asking the banks to give them details on their positions, which would have a liquidating horizon over 10 days for example, but also to give them an exit price for each position with 90 per cent confidence. To ask for a confidence level has real implications on how people design their liquidity models,” explains Quadri.

AIFMD and SEC rule 22e-4 are pushing liquidity risk management front and centre of trading strategies, placing much greater emphasis on ex ante risk. In theory this should help asset managers avoid getting caught out, should markets turn and their funds suffer a wave of redemptions.

To help with this firms such as Danske Bank Asset Management have adopted solutions such as [Bloomberg's Liquidity Assessment Tool \(LQA\)](#) to measure and monitor liquidity risk across asset classes. Copenhagen-based Danske Bank Asset Management has more than EUR100 billion in assets under management. It uses Bloomberg LQA to measure and benchmark the liquidity risk of its fixed income and equity portfolio investments to meet its myriad regulatory reporting requirements.

Bloomberg LQA allows users to quantitatively and consistently evaluate market liquidity across multiple asset classes, including government and agency debt, corporate bonds, municipal bonds, global equities and ETFs. More asset classes are to follow by the end of 2017.

Four time buckets under SEC rule 22e-4

The technological prowess of liquidity risk management solutions like Bloomberg LQA is vital in supporting asset managers as

they cope with regulation, of which SEC rule 22e-4 is the latest example.

It was passed unanimously on 13th October 2016 and impacts US open-ended mutual funds and ETFs. Commenting at the time, SEC Chair Mary Jo White said: "These new rules represent a sweeping change for the industry by requiring strong transparency provisions and enhanced investor protections. Funds will more effectively manage liquidity risk and both Commission staff and investors will receive additional and better quality information about fund holdings."

"What the SEC is trying to achieve with this rule is for registered investment advisers to put in place a liquidity risk management process to define how they are managing their liquidity – reporting on order execution, reporting on breaches, etc. Secondly, they want the ability for firms, on a monthly basis, to categorise their holdings on a time basis, within four time buckets. And thirdly, alongside that time bucketing, to set thresholds," says Quadri.

Briefly, the four time buckets are defined as follows:

1. "Highly liquid"

Positions that can be sold and settled within three business days;

2. "Moderately liquid"

Positions that can be sold and settled in more than three but less than seven calendar days.

The SEC asks funds to also consider "disposal", i.e. classify the remaining positions that can be sold but not necessarily settled in current market conditions.

3. "Less liquid"

Positions that can be sold within seven calendar days but probably will need more than seven calendar days to settle.

4. "Illiquid positions"

Positions that will take greater than seven calendar days to sell.

"What is interesting about this regulation is, will clients be able to do monthly reporting on this? They are going to have to check for breaches, and check that going into the fourth week of the month their liquidity is in good shape. It's quite likely that for mid-sized to large organisations, it will become a daily operational function," suggests Quadri.

In many respects, SEC rule 22e-4 is the first explicit regulation to codify, or formalise, liquidity risk management.

Asked whether it could be viewed as too prescriptive, Quadri says that the SEC has been "fairly smart" in this respect and refers to three key pieces of wording.

When trying to figure out which liquidity bucket something should drop into, the rule states that it should be based on the amount of time it would take to liquidate "without significantly changing the market value of the investment".

It is, therefore, up to the individual to determine how much cost they are willing to incur to liquidate a series of positions.

The second piece of wording is that they need to be able to do this under "foreseeably stressed market conditions".

"The SEC is giving the nod to investment advisers that they need to consider stressed market conditions and will allow the individual fund manager to determine what they deem to be 'foreseeably stressed'.

"The third piece of wording is that they don't expect the investment adviser to liquidate their entire portfolio. They ask managers to look at redemptions that the fund would reasonably anticipate having. Imagine you have an ETF that has been running for a number of years that has, historically, had few investor redemptions. You would therefore base your categorisation on that small redemption rate.

"All of these wordings provide a degree of flexibility to investment firms," explains Quadri.

Each of the four liquidity buckets are interchangeable, such that in the event of a market downturn, if a manager were about to hit their threshold limit in bucket four, for example, they could sell out and take a cost hit; or, alternatively, invest more in buckets one and two to change the overall percentage allocation across the fund. Whatever combination the manager wishes to take, such that their liquidity profile remains in compliance.

"The regulators are not mandating how to deal with a liquidity crunch. They are giving a mechanism for an investment firm to look at their portfolio and, by a set of rules, determine what their liquidity characterisation is," concludes Quadri. ■



How can managers make risk more strategic?

By James Williams

In a post-regulatory world, one of the ways for hedge fund managers to gain an edge on their peers is thinking about how to make risk more strategic. To tell a more coherent story, in terms of how they manage risk to improve their reputation and their asset raising capabilities, as well as helping with the overall performance of their fund(s).

This needn't be confined purely to investment risk. As will be revealed, it could also include technology risk and liquidity risk, to name but two.

Providing tools for managers to move risk management into the front-office to gain clearer insights into how ex ante risk can be measured and analysed at the pre-trade level, when building positions in portfolios, is becoming more popular. Hedge funds

understand that active risk management can be a key component of a fund's performance, not something to stymie the portfolio manager.

"Asset owners are pressing hedge fund managers on the total cost of ownership and making sure there is a real value proposition being offered. Our clients want to be able to prove this using our risk analytics and performance analytics, and demonstrate that they have a compelling story to tell," says Ian Webster, Chief Operating Officer at Axioma, whose Axioma Portfolio solution can best be thought of as the front office tool for portfolio construction.

There are three categories of fund managers, when it comes to risk.

Category one is basic risk reporters. The

regulators and investors want a risk number to attach to the fund so they provide the basic risk report. They see it as a necessary evil. Category two includes those who are trying to control risk; they may have dedicated risk departments who construct risk overlays to hedge risk within portfolios. Category three includes those whereby risk is an integral part of their portfolio management construction process.

"If you embed risk management as part of your investment process, you don't treat it merely as a hedging overlay, you don't treat it merely as a reporting function, you make the portfolio manager responsible for that risk.

"That immediately gives you a much more robust way of managing portfolios. And I think there's an argument that suggests, ultimately, if the portfolio manager is responsible for the risks being taken, you get 1) a much more controlled environment, and 2) potentially an environment where trading becomes more cost efficient. The more you have to overlay, and put extra controls around the portfolio manager, the more you introduce additional costs," explains Webster.

In his view, as the portfolio manager is ultimately responsible for the fund's returns, they ought to take responsibility for the risk as well. "You shouldn't be sub-contracting that risk to another department or individual within the firm," he adds.

Treating market risk more strategically and embedding it into the investment process, makes for a much more compelling marketing pitch.

Axioma Risk is a leading solution for firms to analyse their portfolios once they've been constructed using Axioma Portfolio. Rather than view market risk in a monolithic fashion, Axioma Risk helps managers to develop a more three-dimensional picture.

Webster says that there are three key areas one should be thinking about. The first is the portfolio construction process, taking into account your risk budget and risk appetite. The second part is portfolio analysis, of which risk analysis is a part: really understanding what is happening within the portfolio.

"We have many different models that clients can run so analysis is a key component. And thirdly, scenario analysis -



"The smarter fund managers in the industry are not using a single tool, they are looking at investment risk through multiple lenses."

Ian Webster, Axioma

stress testing, running 'What if...' scenarios to look across the portfolio to see what might happen in the future, if certain market conditions were to prevail.

"Just as risk overall, has many components, so within market risk itself there are many tools one can use to understand the risks you are holding within your portfolio. The smarter fund managers in the industry are not using a single tool, they are looking at investment risk through multiple lenses: from a factor risk management perspective, a granular risk management perspective, using statistical models, scenario analysis and so on," says Webster.

Ittai Korin is President, PortfolioScience. He observes that integrating risk management more into the front-office has been a significant trend in the post-regulatory environment.

"To the extent that things are easily and more dynamically accessible and integrated, it means that risk can show up in more places than it used to. For example, in the front-office, PortfolioScience RiskAPI can be used alongside a firm's portfolio management system. All of a sudden, there is a much wider spectrum of risk data points going into the decision-making process in the front-office. Rather than looking at things once a month or once a quarter, the portfolio management team can look at where they are trading, in real time, and make more quantitative risk management decisions," says Korin.

Depending on a fund's mandate and workflow, in many cases, he says, the introduction of risk into the portfolio allocation process was entirely dependent on the individual mandate. Funds that were purely fundamental, or quant-focused, would say, 'We're not interested in risk being part of the decision making process'.

"In today's regulatory climate, it's no

▶ 15

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Establishing a combined risk compliance framework

Interview with Ittai Korin & Raya Gabry

New York-based PortfolioScience and Eze Software have joined forces to offer the marketplace a unique solution for fund managers: pre-trade compliance rules based on market risk.

The RiskAPI service, developed by PortfolioScience, is a fully hosted and customisable risk solution that integrates seamlessly with existing applications and programming frameworks to generate risk calculations for multi-asset, multi-currency portfolios and individual positions.

Eze Investment Suite, Eze Software's straight-through processing solution for the entire investment lifecycle, culls inefficiencies and replaces innumerable manual operations tasks by streamlining portfolio analytics, modelling, trading compliance and risk, from idea generation to settlement. The Portfolio Science application adds a layer of risk analytics to the order management workflow.

"That combination of being able to do risk analytics and pre-trade compliance in real time, as opposed to waiting for static reports once a day or once a week, really does change the execution-level risk landscape," comments Ittai Korin, President, PortfolioScience.

RiskAPI is a cloud-based engine, built from the ground up to be very dynamic. "The Eze Compliance engine interacts dynamically with RiskAPI and checks quantitative measures - in this case, risk measures - to ensure everything is running as it should be at the pre-trade compliance stage. Before the portfolio manager executes a set of trades, he can see what the new VaR would be for the portfolio, or what the correlation would be to rates or oil. Then, with Eze Compliance's rules-checking engine, the team can decide whether to proceed or not, depending on the investment strategy's guidelines," Korin explains.

The engine can also be used for



**Ittai Korin, President,
PortfolioScience**



**Raya Gabry, Associate
Director, Product Management
at Eze Software**

regulatory risk (beneficial ownership rules), diversification rules and ensuring compliance with proprietary strategies.

"Eze Compliance automates any rules the client puts in place and avoids the need for manual intervention. Our pre-trade compliance checks can prevent any trades from entering the trading system before they happen, if there was a risk of breaching limits. We also have a powerful post-trade compliance tool that clients use to determine how close they are to breaching limits at the end of the day, or intermittently throughout the day," explains Raya Gabry, Associate Director, Product Management at Eze Software.

In the UCITS world, funds have to implement a VaR rule on a pre-trade basis. Before any trade is executed, if it violates the VaR limit, the front-office cannot proceed. Therefore, from a regulatory perspective, it's vital for those wishing to diversify their fund range to implement a rules-based risk engine and be able to monitor each fund dynamically.

"One of the benefits of this integration is a solution to a very real need from a regulatory perspective," adds Gabry. "We have a large number of regulatory rules templates that can be easily assigned to the appropriate fund(s) and that makes it easy for clients to ensure that they are not breaching these regulatory requirements.

"With the RiskAPI integration, we can now take it a step further, where we can run rules on VaR at the pre-trade stage for UCITS funds."

Many smaller or mid-sized funds that want to get to the next level in terms of growth have to present themselves in the best possible light to institutional investors.

"With RiskAPI and Eze Compliance, fund managers can demonstrate there is a verifiable, repeatable risk compliance process in place," concludes Korin. ■

12 ► longer possible to take that approach. Just because you are a fundamental fund, for example, doesn't mean you shouldn't be looking at risk data points in running the strategy," adds Korin.

In that respect, technology is substantially enhancing the way that investment risk is managed, not just at the pre-trade compliance level, but post-trade as well. In other words, risk management has become as much a forward-looking (ex ante) process, as a backward-looking (ex post) process. Larger, sophisticated managers have been doing this for years. The difference today is that with regulation such as AIFMD, all managers, even those running modest AUMs, have had to bring risk management into much closer strategic alliance with portfolio management.

This in turn has the potential to give fund managers greater confidence in broadening the strategy suite. They may spot an opportunity of attracting niche investors by offering a regulated version of their flagship strategy. In order to do so, however, they have to be certain that they can monitor risk limits and stay within regulatory guidelines.

"Let's say a portfolio manager is executing on their strategy and they don't realise that by buying certain instruments it would significantly increase the VaR of the portfolio and exceed the monetary threshold," comments Raya Gabry, Associate Director, Product Management at Eze Software. "When a portfolio manager is executing an investment strategy, they aren't necessarily thinking about regulatory or firm-level restrictions. This can be overcome using RiskAPI in conjunction with Eze Compliance. Even if you're not keeping these things in mind while running the strategy, you have to still ensure that no limits or rules are breached at the pre-trade level."

One of the unintended consequences of market regulation is that it has, inadvertently or not, required fund managers to gain much greater transparency into another aspect of their trading environment: liquidity risk.

With the upcoming SEC Rule 22e-4, both the buy-side and sell-side will need to apportion assets into four liquidity buckets so as to have a clear estimation of their liquidity distribution over a certain time horizon.

Bloomberg has a solution to manage this risk exercise, known as Bloomberg LQA. '



"We are currently working with a number of sophisticated clients to understand how they would want us to optimise things for them. That'll likely happen next year, once they've had time to properly use LQAP."

Naz Quadri, Bloomberg

As Naz Quadri, Head of Liquidity Analytics for Bloomberg's Enterprise Solutions business explains, it works in three different ways to help clients: a single security mode, a portfolio mode and an offline batch processing mode: "What we are solving, at the root level, is to give clients the ability to answer the following questions: 'First, if I hold a certain amount of a given security how long will it take me to get out of my position with minimal market impact? Second, if I must liquidate a percentage of my holdings in a certain number of days, what cost impact would that have?'"

"LQA uses a fully probabilistic model that allows users to ask questions with a 90% confidence outcome, a 70% confidence outcome; whatever is acceptable."

Bloomberg's LQA can also be applied at the portfolio level. A solution called LQAP allows users to load a portfolio and run bucketing scenarios under various market conditions.

"Under rule 22e-4, the SEC gives investment advisers flexibility in terms of doing what is necessary without significantly changing the market value, what are foreseeably stressed market conditions, and what they feel is a reasonably anticipated trading size. All of these are various inputs that can be entered into LQAP and out will come a distribution," says Quadri.

He adds that regulations such as rule 22e-4 mean that managers' trading and execution workflows should take into consideration these new liquidity regulations. Previously, portfolio managers made investment decisions without necessarily thinking about how the fund's liquidity profile would change.



"Now, they need to see at the pre-trade stage what the liquidity impact will be on the fund otherwise they might have to take corrective measures. So it will make liquidity risk management more of an ex ante function," confirms Quadri.

One other aspect of the risk function that could help managers become more strategic is by simply establishing a technology risk management process. This needn't be arduous at all. By identifying every IT risk in the business, and building a process that prioritises those risks, and what mitigating actions need to be taken, the manager can straightaway gain greater clarity on where to spend their IT budget.

"If an investor visits a fund manager to do their ODD and asks what their largest technology risk is, the manager should be able to pull out a spreadsheet and tell that investor what their top five risks are. And not only that, they can tell them, in detail, what they are doing to mitigate those risks. That's going to give investors a lot more confidence," asserts George Ralph, Managing Director of RFA, one of the

industry's leading IT advisory groups.

He adds: "Fund managers want to proactively look at what mitigating actions can be taken against the risks and the sentiment is, 'If we just invest in X or Y based on RFA's input, we can dramatically take our risk level down'."

Whether it is market risk, liquidity risk or technology risk, the common thread of this argument is that by approaching things from a position of knowledge, fund managers will be better equipped to make smarter, more strategic risk management decisions.

That can count significantly in one's favour, when trying to stand out from the crowd.

"Investors want to know what you're doing to mitigate your risks from an operational perspective. Even more importantly, they want evidence that you know what your risks are. The worst case scenario is an investor asking a manager, 'What are you doing to manage your IT risk' and the response is, 'Oh, nothing. We outsource it all.' You can outsource technology but you can't outsource risk," concludes Ralph. ■