



## MARKET PERSPECTIVE

### *In defence of sound risk management*

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# In defense of sound risk management

**Josie Palazzolo of SunGard looks at the role of risk managers in the current financial crisis and explains why so many were deprived of the analysis tools and the authority to carry out their responsibilities**

When the financial markets reached a crisis point in September 2008, a number of banks looked to their risk managers asking why these events had not been foreseen.

In the post-mortem of the subsequent months it has become clear that too many risk managers had been unable to carry out their responsibilities due to inadequate investment in risk infrastructure and lack of strong authority. Whilst there are many causes to our current troubles, the role of the risk department and the tension between regulatory compliance and controlling risk is a strong contributing factor; to ensure the same mistakes are not repeated it is imperative that we understand why certain areas within risk departments were overlooked.

It is clear that certain institutions were guilty of creating a culture where the group risk manager was relegated to a role of regulatory reporting and too far removed from the institutions' strategists and traders to be truly effective. The evidence for such a view is mounting as banks, regulators and governments conduct comprehensive reviews into their risk management processes.

A recent speech made by Bank of England executive and author of the Bank's Financial Stability Report Andrew Haldane talked of the "misaligned incentives" at many banks which rendered stress testing a fruitless exercise, other than to fulfil futile regulatory requirements. "There was absolutely no incentive for individuals or teams to run severe stress tests and show these to management," said Haldane. "Stress testing was not being meaningfully used to manage risk. Rather it was being used to manage regulation,"

said Haldane. "Stress-testing was not so much regulatory arbitrage as regulatory camouflage."

## What went wrong?

An over-reliance on Value at Risk (VaR) has been cited by many as the principal cause of the failure of banks' risk systems to predict the rapid deterioration of global financial markets. VaR was introduced 15 years ago as an important market risk measure designed to enable large companies to get a headline figure for the exposures they faced across several markets and asset classes.

In many ways VaR was the first attempt to address the growing need for enterprise risk management. Financial institutions and corporates were growing in size and the complexity of their investments and market exposures were similarly increasing. VaR represented a way of normalising all of these different risks and exposures across a varying landscape of asset classes and presenting high level management with a guideline to the company's exposure.

Yet instead of becoming the basis of an enterprise risk initiative driven by senior executives and the password for risk managers to gain access to the corridors of power, it has been castigated as the catalyst for a global economic meltdown. As one leading hedge fund manager has said: "VaR is like an airbag that works all the time, except when you have a car accident".

A damaging moment for VaR was when it became the measure adopted by global regulators, notably the Basel Committee. This is not to suggest that the regulators were wrong to pick out VaR as a useful guide that banks could rely on to calculate their capital adequacy ratios, however such a move led some banks to push VaR out to the remote confines of regulatory capital rather than the inner sanctum of internal risk measurement and corporate strategy and the fate of an entire industry's risk managers was sealed. They would not be getting a seat at the top table. Instead they would be given their own office deep down in the basement and away from the trading floor with a sign on the door that read 'compliance'.

The philosophy behind VaR did not become embedded in the risk management processes of the bank, nor did it become the cornerstone of bank's decision-making. Instead VaR was used merely to produce an arbitrary and ineffective figure with which to satisfy the regulators and report to shareholders. Banks viewed the calculation of a bank-wide VaR figure as a huge expense in terms of time, people and technology – an obligatory expense that was depriving banks of profit.

The banking industry then engaged on a lengthy lobbying process in order to convince the regulators that their original requirements were far too onerous and impractical and a series of consequent compromises resulted, allowing banks to approximate and take short cuts and form poorly validated processes to be accepted.

The risk control function similarly became viewed within the bank as a cost center incapable of actually generating revenue and merely existed to prevent others from doing so. Such a view was reflected in the relative technology budgets awarded to banks' risk departments. While the front-office teams of algorithmic traders were given an open cheque book in the pursuit of alpha, many risk managers were finding their budgets devoted to maintenance rather than continued improvement.

Meanwhile the infrastructure of banks was becoming harder and harder to manage from a risk perspective. Globalisation and consolidation had taken hold creating behemoth banks that were an amalgamation of one-time rival institutions, operating and trading across every available timezone. Volumes and instrument complexity were forever increasing forcing VaR numbers to be delivered later and later in the day and with less comfort of its correctness. In some large banks, VaR numbers were being delivered two or three days after the close of the business day. How much value could a risk manager add if he only has access to old unreliable and unverifiable data?

A complacency had set in among many banks creating a ludicrous maxim – the bigger the bank, the more powerless the risk department was in setting things right. The size of the investment needed to support a proper risk infrastructure and to empower the risk managers was deemed too high. Unfortunately, a number of smaller banks followed the example of these larger banks in persuading regulators that this compromised approach was 'the best they could do'.

The branding of VaR as a regulatory reporting function left these banks believing their own balderdash. Risk management had been rendered impotent precisely because, and not in spite of the fact that it was redefined as an act of compliance. The fact that it was too hard to deliver to the risk department the quality and vastness of data to get the 'speed to insight', forced it more to become a regulatory function. Banks somewhere began to think that if they merely produced a satisfactory VaR number for the inspectors, they would be successfully managing risks for their shareholders.

The risk function became isolated not just from the decision making but also from the very risks that it was mandated to manage. Risk managers were unable to advise on whether traders were making dangerous trades because they were not seeing trade level data. Instead they were being handed down 'aggregated' data by various

departments. The data was essentially meaningless as risk managers were not given any indication of the underlying data and how these arbitrary numbers had been calculated. It was akin to being given the answer to a mathematical problem but not any of the working.

All the interesting interim results were thrown away for the sake of efficiency and new measures to complement VaR were considered too costly to add to the analysis. Fewer scenarios based on shorter histories were run to meet VaR processing deadlines and they were not complemented with the stress tests needed for proper risk analysis.

Numerous banks found themselves overexposed to extreme events because not enough had been invested in analysis for abnormal market conditions. In order to analyse stress events, risk managers needed more than the current VaR infrastructure – they needed full revaluations of every trade in the bank under stress scenarios – no shortcuts.

But for many, VaR was about data shortcuts for efficiency sake. The approximation of data often took out the non-linear aspect as many banks reverted to using sensitivity grids when calculating VaR. Sensitivity grids, however, were useless in calculating stress losses. Banks' risk departments were often limited in the number of stress scenarios that could be run as well as the inability to change and add to the stress events to monitor.

The deficiency of a stress testing infrastructure forced more reliance on VaR results and contributed to the creation of a culture where front office traders were able to effectively circumnavigate the risk management department by "stuffing the tails" and senior management could state that they were satisfying their regulatory requirements. VaR itself had been diluted and approximated; there was nothing left for risk managers to drill down into for further examination. The interesting data was gone. Instead they had to merely take these numbers at face value.

It is unsurprising, therefore, that the revelations of risk managers' unheeded

warnings continue to have such resonance during this time of inquests. The end result was a self-fulfilling prophecy: risk managers could not add value to decision making because they did not have the data they needed to empower them; nor could they be empowered because they did not add any value to the business.

### What needs to change?

All banks are currently involved in a forensic examination of their risk processes as they search for what exactly went wrong and how it can be made right. The first discovery, is that some will find that they did not arm their risk managers with sufficient authority, resources and investment to effectively manage risk and this is the first thing that must be corrected. The risk management function must be recognised as a vital part of the business and it must be equipped as such.

The primary step that banks should take is to ensure full transparency as regards trade data and full access to this data for risk managers. This allows them to ask meaningful questions of the data and create relevant scenarios and effective stress tests. They should no longer have to deal only with aggregated data that has been diluted and approximated along every step of its downward journey toward the high-level risk managers. The transportation and storage of this data will require investment.

Banks will have to invest in updating the infrastructure that supports the risk function. As banks have invested in evermore sophisticated trading technology to support their increasingly exotic dealing, the risk systems have been left behind with the disparity between front and back-office technology only adding to the isolation of risk managers. This needs to change.

There can be no compromise on the methodology. Sending sensitivity grid measures to the corporate risk department is not enough. It prevents risk managers from running the extensive stress-testing they need to do because these sensitivity

measures can only cater for small rate shocks, not what is indicative of a stress test. Instead risk managers should be running tens of thousands of scenarios and data mining to find the interesting insights and stressing market variables and credit variables for a combined valuation effect.

Advancements in architecture and software, as demonstrated by the rise of grid computing and business intelligence tools, have reduced the cost of technology markedly. Today's solutions must embrace the new technologies to successfully deliver solutions that are cost-effective and can remedy the woes of the legacy systems. Also, the value of risk management has now increased enormously to the point where very few banks can refuse to spend whatever is necessary to bring their risk management processes to the required standard.

Coupled with the above, banks must change their culture towards risk management. Risk managers must be taken seriously and their recommendations to reduce risk must be listened to. This will demand continued organisational changes from banks which

in the past may have been difficult to recommend, but given the current state of the banking industry such radical changes are wholly necessary. After all, it will be of no benefit to arm corporate risk departments with all of the tools outlined above if they are still isolated from the decision making process.

If you give the right tools to risk managers to gain insights in a timely manner, they will then come to the table equipped with the data to engage in meaningful discussions with the business lines. They will no longer be kept in the dark, devoid of timely and effective data. It is time to stop putting all the blame on VaR. Instead we should continually improve it, augment it, complement it and analyse the underlying scenarios. Let there be an end to the shortcuts that rendered it useless for many.

New regulatory requirements are imminent and while it is folly to try and predict what these specific changes will be, banks can prepare for the changes, safe in the knowledge that, whatever is introduced, a robust risk infrastructure that is fast and agile will be necessary.

## **SunGard Adaptiv**

SunGard's Adaptiv provides enterprise-wide credit and market risk management and operations solutions for financial services institutions.

### **About Adaptiv Risk Cube:**

The Adaptiv Risk Cube component is used to collate, analyze and navigate risk data. Adaptiv Risk Cube collects detailed trade results such as market value and scenario PV results from valuation services. The data collected at the trade level represents stress test scenarios, factor sensitivities, no action P&L, and VaR scenarios which were valued in valuation services such as Adaptiv Analytics and/or front office applications like Front Arena. Adaptiv calculates risk measures, provides dynamic reporting capabilities, result exploration and navigation, risk analysis and distribution, transparency and audit of results. Adaptiv's risk solutions are proven to work on large data sets and calculate risk results on the fly giving unprecedented flexibility to analyse risk data and perform ad-hoc queries.

### **Talk to an expert:**

Learn how SunGard Adaptiv can help your business please call: +44 (0)208 081 2779 or email [adaptiv.marketing@sungard.com](mailto:adaptiv.marketing@sungard.com)