



MARKET PERSPECTIVE
*Risk Manager Roundtable:
The limits of analytics*

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The credit crunch is deepening and broadening into a more general – and worrying – financial malaise.

Every day there are fresh casualties, including some of the most illustrious names in banking. At SunGard's inaugural risk managers' roundtable in September, Dr Chris Marshall, Managing Director Risk Advisory Services, SunGard Asia Pacific led the discussion. Jean-Marc Schwob, Product Director, SunGard Adaptiv Credit participated, as did representatives from major financial institutions based in Australia.

Greed vs fear

Chris Marshall opened the meeting by talking about the financial crisis and how model risk threatens financial innovation and challenges the role of risk management. He quoted Mark Twain: "History does not repeat itself, but it does rhyme", to illustrate how problems can lead to responses which lead to further problems...

While it was clear that many risk models had been inadequate to the task, Chris put in a plea for models, many of which have been remarkably successful. Black Scholes, he pointed out, is probably the most successful applied model in economics. What the models missed however were long-term causal changes (Nassim Taleb's Black Swans) – especially vanishing liquidity. Statistical correlations based on near term data were simply overwhelmed by a much larger, unseen systemic risk.

It is clear by now that the rise of the 'originate and distribute' banking model, supported by credit derivatives, encouraged massive growth in collateral-based lending. The lending discipline of banks slackened: greed overcame fear. The short-term reaction, a collapse in credit liquidity, presages a longer term change involving stricter lending discipline, more stringent capital requirements and much greater demand for transparency from both regulators and investors.

There is the danger that the reaction exacerbates problems by fuelling a downturn in the broader business cycle. Within banks we cannot do much about macro economic cycles – but we can understand them and make our stakeholders aware of the implications.

Shock of the new

But there are cycles built into organizations themselves – the financial innovation cycle for example. Eager for margin, banks develop new financial products. If they work, they encourage new entrants, which erodes margins. Time for a new product, which may deliver a temporary increase in margin, but often at the cost of an increase in complexity. Complexity begets risk.

Product innovation always outpaces risk technology and analytics. Operations managers, legal advisors, systems vendors and risk managers always seem to be fighting the last war. Part of this is analytical – pricing one scenario is easier than pricing multiple scenarios. Another part is organizational: resources are allocated first to the fee-earning front-office and next to the risk-monitoring middle-office.

Short term risks become long term losses, borne not necessarily by the individuals or front-office groups who extracted the short term margins, but



by risk managers, shareholders and by society at large. Politicians, executives and regulators need to respond. Yet knee-jerk responses can exacerbate the problems. The best market risk managers can do is to be aware of these high level cycles and their implications.

Lifecycle of a model

But models too have a natural lifecycle. Good models identify and capture phenomena. The ideas within the model become accepted, widely applied, and – surprise – the phenomena begin to match the model. The limitations of the model, its embedded assumptions about liquidity for instance, are ignored – until they cannot be ignored and the model is discredited.

One of the breakthroughs of Basel II is that it is getting banks to focus on the problems of model management, the disciplined process of using historical data to develop models, assess their quality and maintain them over time in the face of new data. Too late for many, alas.

Despite everything that has happened, statistical risk models have added value and will continue to add value, provided we understand and can communicate their limitations. We will never completely mitigate the risks but we can better understand and remedy the extreme shocks that threaten and challenge the financial system.

Spreading the blame

The debate was opened to the floor and the spotlight fell quickly on the over-reliance on models. But, some argued, modelling wasn't the source of the turbulence. There was a bubble in cheap credit. Lending agents, paid commission to approve 'liar loans' perpetrated multiple frauds. Rating agencies gave AAA ratings to senior tranches of subprime CDOs with very little history to determine the necessary amount of subordinated protection necessary to justify such a rating.

Beyond that, investors (and many banks themselves) failed to differentiate the limited robustness of such ratings relative to those of more traditional instruments. Banks promoted huge volumes of such securities based on these ratings, reaping significant short-term returns while the going was good and money was easy.

Now there are examples of banks making traders more accountable by charging for risks taken on a deal. A trader can be charged via internal credit portfolio management for, say, the cost of hedging risks. This makes the dealer more accountable.

Anything that incentivised dealers to choose safer counterparties was welcomed. Jean-Marc Schwob pointed out that Adaptiv Credit has the functionality to provide this kind of credit charging. You can check credit limits while viewing the charge for each deal.

A lose/lose deal

But aren't model risks really problems of incentive? The panel agreed that when risk managers obstruct a high risk deal they don't get any kudos, but when they greenlight a bad deal they suffer. Perhaps risk managers should be more highly regarded and compensated? General agreement.

Stress testing and scenario analysis came into focus. But we still lack a structured approach to stress testing. Results should be scrutinized in light of risk appetite limits, quantified and tied back to historical data. The value of historical data was itself questioned. Does market history, in fact, repeat itself?

The flaws of economic capital were delineated: unstable correlation data can cause economic capital models to be unreliable. How can we reconcile different modelling horizons between market and credit risk? Should we be striving toward a common horizon? Yet dealers will always see deals as short term while risk managers need to take a longer term approach.

Too many models, finally, have short memories. Grey hairs may be the most important risk management system of all. Models tend to emphasize recent events; it takes professional experience to consider longer horizons and potential systemic feedback loops. A common sense approach is needed to look beyond the numbers. Guess what? If it sounds too good to be true, it probably is.

Risk management is dead. Long live risk management?

Traditionally market risk management has focused on numbers. Are we moving back to a more subjective assessment of risk? Banks (those that remain) need to think more laterally. Liquidity risk is an essential factor. What used to be a 1 in 100 year event seems to be happening every week now. Banks need to think hard about risk appetite and capacity. And what about risk managers? Those who thought that machines running complex analytics could control risk, without the seasoned judgement of experienced risk managers, were seriously misguided.

About Adaptiv

SunGard's Adaptiv provides enterprise-wide credit and market risk management and operations solutions for financial services institutions. Adaptiv assists institutions of varying size and complexity to deploy technology to meet both internal and regulatory requirements for risk management and operational control. Adaptiv helps financial services institutions from the banking, hedge fund, asset management, insurance and corporate sectors with our deep understanding of risk management and operational processes.

To talk to an expert to learn how SunGard Adaptiv can help your business please call: +44 (0)208 081 2779 or email adaptiv.marketing@sungard.com

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