Dancing in the Dark

Technology & Financial Risk Management Roundtable

FST took a panel of war weary agents battling to keep risk at bay whilst still allowing businesses to do business and asked them about the current market, their responsibilities and where systems fit in. (With apologies to Bruce Springsteen for the titling.)

Attendees:
Chariman: John Whiteman (JW) previously chief investment officer and the chief risk officer for a hedge fund.
John Collins (JC) risk partner at Rule Financial, previously at Swiss Re, Morgan Stanley and Citi.
Simon Calvert (SC) head of risk IT for Rabobank Financial.
Graham Cobb (GC) works for IBM Cognos, and formally at Barclays Bank for 27 years.
Jo Taylor (JT) from Rabobank, and previously at Chemical Bank, Chase, Merrill Lynch, NatWest Markets.
Greg Stevens (GS) from the Group Market Risk of Barclays Bank, previously at Barcap and JP Morgan working mostly in cash equities and derivatives.
Jean Birkin (JB) from a large American bank.
David Goucher (DG) previously from Abbey Santander, and formerly the Royal Bank of Scotland's trading business head of risk management.
Roger Hodgson (RH) from a large US bank.

JW We're in the dark guys. We are in the dark because although we have some pretty sophisticated mathematics and we have some pretty sophisticated technology, we goofed and we got it wrong. Any ideas as to why?

JC There was a complacency across the landscape. There're a group of people on desks who only ever traded at bids. There were a lot of people in risk management departments who became focussed on the things that were interesting rather than the things that were important. We collectively lost sight of what the real challenges were.

GS Is it possible for the senior management of a large modern firm to get a view of all the risks they are running given the complexity of the current businesses? If it is I would say it's probably more in the culture of the organisation than in the technology.

DG There's always been a disconnect between the executive management team and what I call risk professions. In the older days, or indeed in the 'hedge fund days', the people who had a capital investment in the business absolutely knew the risks their business was taking. We have put risk in a box, we have risk professionals that deal with risk and we produce sanitised risk reports that go up to executive committees and that's how the committee interprets the world.

GS But I don't believe the risk manager's job is to reduce risk. It's to have an educated debate about it. All you can ask is if you are going to get rewarded enough for the risk you're taking. I think one of our failures in the risk industry right now is that we fail to communicate that this is the role of the risk manager.

JB I think that is a very good way of putting it, because you don't want to be seen as a business prevention officer – which is how some of the risk managers are being referred to.

JT True – however if you take more money for a trade, you've got to monitor it, and if you can't monitor it then how can big organisations actually know where their risks are sitting? Can the systems keep up? Can IT keep up with what the business is actually doing, or is the business moving too quickly?

Darkness on the Edge of Town

JW But look where the conversation is going? It's really interesting. We start off with a conversation that said we're in the dark. Could it have been otherwise and Greg said, "Well hang on a minute. You can't be a 'Dr No' in this. You've got to go in there saying are we being rightly priced". But at what point in this conversation have we become complicit in the production of the disaster we've just lived through? Not doing our jobs and not putting our hand up and saying hang on, there's a really big problem here?

SC I think it seems clear to me that as business became more complex and we were all making lots and lots of money, we allowed the systems and the risk management to slip way behind the new business and we could never underpin the calculations of some of the more complex structured transactions with sufficient quality market data even to understand what was in the portfolio. I don't think you can say that risk managers were complicit in that, because whenever they said no they were bullied into approving it or they were moved in to a different role.

DG So whose responsibility is risk management in the bank?

SC It should be everybody's.

JT But you have got a conflict of interest – if I'm a trader here to make money – and that's my role, I see an opportunity and would want to take it. The risk manager on the other hand is saying "well, we want you to make money but my role is to reduce/manage the risk," then on top of that you've got the system saying "well actually we need to monitor that risk. There's no point agreeing to something if we then can't monitor it".

JC I think many of us have worked at organisations and may still be at organisations which arguably are too big to risk manage effectively and in those organisations it is difficult to get the right information in a timely manner to make informed decisions for managing risk. This has a significant impact upon our ability to function effectively as risk managers.

JW The technology was caught out?

GS Also the regulators are saying "Well actually, if you're going to be a bank in the 'too-big-to-fail' category then you're not going to be allowed to take that level of risk and we're going to move the goal posts and make it prohibitively expensive in capital terms".

JW Greg, that brings us back to the same old problem, because even if we had the technology and the information right, and even if we knew there were bad things being stored up, then the we would be in the same situation where we can't afford to be Dr Nos and say "don't do it".

GS I think there are examples where, with the right information, you could easily have convinced senior managers that "ok, we are pricing this at a stupid level and we're going to stop right now". If you look at the hedge funds that made the most money in '07 they did it by basically working nights and weekends pulling apart the zip codes of the sub-prime universe to find out where those weak mortgages sat and which bonds they were sitting in and shorting those bonds. They made billions off it and hats off to them.

RH But that was mismanagement rather than the business themselves.

JT If I have the information I can make educated decisions. Do I want to make more money and take that risk or actually say no, and stop at that point?

GS Clearly UBS's senior management didn't have the technology or the management information system – I think very few of us had that level of technology at that time. If they had appreciated the concentrations of exposure from so many areas I think they would have rapidly said "Uh oh. We're well over our boots here".

DG Have we professionalised risk management so it's run separately? Unless risk management has the ability to say no and actually take decisions, it's obviously not risk managing.

Brilliant Disguise

JW But I'm really interested in what Greg and Joanna are saying because you're actually saying that had we had the right information; had we been able to make the right call on price concentrations that it wouldn't have happened on our watch. So, acid tests in your organisations are what are you actually going to do going forward? Are budgets actually increasing?

SC Absolutely! We are investing a lot in the systems infrastructure at Rabobank. Rabobank is of a size where you can implement global systems, you can have a global consolidated view and that goes back to your original question. I think a company of our size, you have the capability to implement global consolidated systems. I think conversely if you're a Deutsche Bank, an RBS, a UBS or a Citi, it's very, very difficult to do that and even if you start to implement a three year strategy towards building those global consolidating warehouses, the chances are that some time around that three year path you'll merge or you'll be taken over and you throw that strategy up in the air and you start all over again. I actually think it's impossible for the Top 10 to implement such a completely integrated structure because they silo their exposures.

JT I've been through a merger and you end up just bolting together the old systems; just bolt it on and piece it together with some tape. That's hard enough to deal with, let alone if you say 'let's scrap it and restart something new' and I think that adds to the pressure and the problems that are faced. You've got huge businesses with different systems. They don't all talk to each other and you have to keep going forward at the same time.

JB The complexity of the business keeps changing, so you have to try and keep track of it. For example, if you look at the collateral requirements that the regulators are coming up with and the kind of collateral reporting that we now need to produce, what extra pressures is that going to put on the business? And then what value does that reporting add to the business? Moreover, if you're a hedge fund and if I'm providing you financing, the cost of financing has gone up because of all the systems and everything I need to put in place, and I'm going to pass those through to you. So you are going to want to pass those through to your client, and it's really just the man on the street that will suffer?

GC One thing that strikes me is that we've sort of strayed a little bit from this risk professional responsibility, and the other thing was talking through the point that you made before which was "Who is responsible for this?", and basically everyone should be across the organisation. So from my perspective how are you actually making that element happen? Because that's the cultural change that needs to happen using enterprise BI to drive ownership rather than this should be the sole person ploughing at the furrow desperately trying to get people to listen. How are organisations trying to change that game?

JW At the hedge fund, the job of the risk manager is to hold out a P&L mirror to the trader. Everything's expressed in P&L terms so that you can actually see the damage that's about to be caused. All the stress tests are live. I like that because we're recalculating every second. Now I like that intimate relationship. We refer to it in the firm as 'an entangled relationship' – rather than calculating beautiful technical numbers that haven't any meaning whatsoever. We are one of the funds that did come through. It probably was luck but I think there was some skill in it and I think, quite specifically, there was some risk skill in it.

SC But is that a scaleable model to bigger banks? I'm not sure it is.

JC It comes back to those questions on whether certain institutions are too big to risk manage. Perhaps the answer to that is yes. Whether one can constrain the size of an institution because the brain power within the institution is important too. I think people would argue that most tier one investment banks are risk managed, but some institutions with 24,000 people might be too big to risk manage.

GS I think you can get to a stage where if you can get enough smart people in an organisation with the right culture saying we're going to make sure the right information flows up the channel. I think it's possible.

SC I think it's the stress test that's important, and the ability to have user-defined or extreme stress tests created on the fly as the market collapses around you is a key element of what your risk systems should be able to supply to you.

GS The stress tests being run two years ago were clearly too benign. A number of institutions have gone under, so those stress tests were wrong because they were basically limited. They were under-estimating the size of market moves, particularly the size of correlations and the swap/treasury spread breakout – things that people had never seen before happened and that's why those stress tests are now seen as flawed. A reverse stress test is saying "okay – let's assume you are in an absolute mess and you are out of liquidity and confidence and you are about to go under. You're in that state. Now describe a scenario that got you there and now describe the plan that would stop you getting there and get you out of it".

JC It's a test to the point of destruction or from the point of destruction. It's a big favourite of the regulators at the moment, but like a lot of regulation it will then just become a science of avoidance in some ways. I guess the problem with any stress test is that it just becomes formulaic. How many investment banks run off 100 stress tests every day? To all intents and purposes they're meaningless because they don't apply at that moment in time. I think the stress test is more the ability to flex a portfolio. Can you see the creaks in time and can you act upon them? That's the real stress.

SC To talk a little bit about our experience from a systems point of view: 18 months ago we were in a position if we wanted to run stress tests across all our portfolio, IT would have to be involved. It would probably take to define a new stress test I mean, they would have to be scripted in to several different systems, and that might take a week – it might take longer, but now we've invested a lot in that piece of our jigsaw puzzle over the last 12-18 months. We're now in a position where a risk manager can define his or her own stress tests and run them across the entire portfolio within the same day, which is as good as we need to be really.

Human Touch

JW To what extent do people at the table feel that technology and information adds the flexibility that Simon is describing? Do you think you'd still end up with the same old problems of a risk manager being partly complicit in the risk-taking culture?

JC At the end of the day we have the same clients, we trade the same products. You know, we fly in the same airplanes; we sleep in the same hotels. The only differentiator are the people and the technology. I think certain evolutions in technology recently have fundamentally changed the game, and our ability to respond to services-based technology with the expansion of memory technology which made real time manipulation of data possible.

JT It's all about having the technology and knowing how to use it and interpret data because if you interpret the data wrongly you're no better off just because you've got a good system that gives you great figures. You have to be able to know what it is you're asking it and what it's telling you and then what you're going to do with that data.

GS But there's a huge amount of devil in the detail, if you start having discussions about some of the assumptions you are making just to reach base camp. For example, if you actually talk to anybody about putting a swaptions portfolio out to Markit

Partners every month, there are many assumptions required to make that feed. Institutions have thought their models were telling them certain things and actually they were calibrated to tell them nothing of the sort. I think we've got enormous amounts of computing power now and we can throw incredible amounts of data at it. But if the data's not right then you're not going to get the right answers, even if the maths is quite credible.

SC Do you think if you've got holes in your market data – an incorrectly proxied market data – the impact on your exposures is huge?

JB The liquidity crisis is sort of a big indication of how difficult it was to price some of these assets and if you couldn't price them you can't really risk manage them. If you look from a practical point of view, people just didn't know what the values of these things were, which then leaves you exposed. If you don't have the data, you can't price them.

DG Shouldn't someone be holding their hand up in the organisation and say "Actually we shouldn't be doing this stuff?"

JB But if they have it on the books already, what are you to do?

DG Then someone should say "Let's get rid of it at the best possible price and get out."

JB I think that's what they all tried to do!

JC If they were airline pilots they couldn't say they almost hit the runway!

JW Now you guys are firmly in the kind of qualitative camp on this idea which is you're saying we can produce lots of qualitative models as they can be technically based, but in the end a human mind has to apply common sense.

JB I think someone asked the question about the balance of power between risk managers and the CEO who are the business heads that are making the money. As long as the money was being made for organisations and as long as risk managers within an organisation didn't have the power they needed or the significance of what they were doing wasn't acknowledged by the board or by senior management, it was a very brave risk manager – even if he or she foresaw what was happening to put their hand up and say "This is the Titanic – we're heading towards the iceberg!" I'm sure as organisations do the investigation into what went wrong, part of that should be to assess the risk management function. There will be more stress tests and regulators no doubt will be taking a keener look in to how risk management is actually performed at different levels. But still fundamentally I think it comes down to the balance of the people who could see how the good times were going. Part of it was also to do with the ratings agencies because how much do they know about what's really happening inside the banks?

DG Is that good enough? Should risk managers have actually stood up in those organisations or, if they were listened to, left? That's the only thing you can do. If you have a view that the bank's doing the wrong thing or is taking the wrong risks, not being listened to then…

RH Perhaps there's an element of shooting the messenger because there are business managers who do want to work with risk management and appreciate what risk management brings them in terms of being a devil's advocate, and there are those people who are so focussed on making money and regard risk managers as business prevention officers.

JT It's learning from the past. I note that one of the questions was: "Is it a good thing that's happened or not?" One way you can look at it is it's a new way of looking at things. It's opened eyes to look at other ways at what you can look at to give you the indicators.

DG I think it's terribly important. I'm going to take a look at a completely different example of the same thing. In the SME market one of the corporate lending models has been set to 'lend' for the last ten years and are now set to 'don't lend'. The quality of the middle that says actually, we like this particular company because of its management strength and the way its financed and some of its other things, even though we don't like that particular sector, we will go in to that line – that quality bit doesn't exist because it's been replaced.

JC It's old-school risk management isn't it? You know what's in your portfolio and you know the risk you're taking.

Blinded by the Light

JB There is a good story that somebody tells in the US where they actually sat down with Mr Madoff a few months before the whole thing blew up, and he wanted to try and broker a deal with JP Morgan. He couldn't answer all of the questions and because of the gut feel instinct the risk manager walked out and said "I don't feel comfortable with this" and that comes back to this whole thing of you do need that qualitative input because even though the numbers on paper look fine…

RH With Madoff there were a lot of people who went in to do the due diligence and they weren't getting the right answers. They thought well it's Madoff so we'll do it anyway.

JW I can add an anecdote to that which is that in my own firm when traders come under stress the first signs are not actually on their screens and they're not actually within the numbers – they're in their bodies! Their physical behaviour changes – they go to the loo more often, for example, because they don't want to be in front of their desks.

GS I worked for a guy a few years ago and he was the senior operations manager at Salomons and he didn't have any of the risk analytics in any of the operations to detect his trouble spots. What he did have though was an HR database that every month could tell him the overtime figures round the world. He's looked at these and worked out who was working the hardest because they were booking the most overtime and he would call up the managers wherever they were and whatever department they were in and asked them what was going on. These were the trouble spots bubbling up and there were people working very hard to try and keep the lid on.

JT I remember when I was at NatWest Markets the FX traders breached their limit and we had to get approval, at the time I was in Front Office Credit Management and thinking what a big hoo-ha, but it's only as time goes on and things happen that you realise the risk manager's there for a reason. Precautions are there because if things do go wrong you have to be aware and you have to be alert.

GC I think the profile of a risk manager will benefit hugely from the current climate. The important thing is, as things settle down and things start to turn back the other way, how they keep it.

JW What are people thinking and doing about liquidity risk at the moment. Implicitly a lot of the conversation has been about credit risk and market risk, but actually it was the liquidity risk that ran us all over.

JC I've spoken to a number of clients about liquidity and I think there's been a regulatory response to liquidity risk and there's a lot of liquidity regulation – CPO822, 0824s are a response, in a way, and so I see a number of big banks in particular are taking a regulatory response to liquidity risk management so they're dressing up liquidity regulatory compliance as liquidity risk management, but I don't see an awful lot of real liquidity risk management – the liquidity on the asset side of the balance sheet – the liquidity on the liability side of the balance sheet or an attempt to look at the liquidity across the balance sheet. What I do see is that the banks who had strong liquidity positions who were sitting on a lot of cash continue to do so, and have done relatively well and other banks are seeking to emulate that.

JW In terms of liquidity risk are we still a little bit in the Dark Ages in terms of being able to measure it, being able to define it, to build systems for it.

GS I think it's actually a vast topic. Build for what? Northern Rock didn't get killed by anyone under 30 – it got killed by pensioners who've got the time to queue all day to get their money out. So the FSA and all the other regulators are going to say "if you want to be able to run a retail bank you've got to know how old your depositors are. And have technology to do it". Now that's got nothing to do with hedge funds and leverage and liquidity, but I think on the investment bank trading side, people have learnt the hard way. So many markets went through a liquidity crisis with no-one to trade that product with and whether you liked it or not it was staying on your balance sheet, but I'm sure there must be a lot of trading heads saying you've got to be able to monitor systemically the liquidity as some measure of daily trading volumes on anything. For something like the OTC markets, to the extent they will survive the regulatory attempts that are clearly crowding in on them, I think that people will say: "Well, I want to know that you've still got liquidity". In my time I've seen futures just disappear and leave the book with mechanism for hedging. You have to develop proxies, but too few traders have the experience of such events (until recently).

JW But you're right – there is a knowledge gap. We don't know the liquidity risk in the way that we know, let's say, credit risk. We can measure distances to the default of the customer – quite sophisticated even though we've misused it, we've got some quite sophisticated understandings of credit risks. What we find in our organisation is that everyone knows what it is but no-one can quite define it, yet everyone's quite confident about it.

JB I think probably one of the most interesting conversations I had recently was with a compliance manager who was asked to write the risk management module process for his whole organisation – a very large asset manager, and the CEO made the decision that he had to have a risk management process in place that would first tick the regulatory boxes before actually ticking the risk boxes of the firm, and I think that's where a lot of regulators need to be aware of what they're asking for. If you have a compliance manager at the top of that organisation being asked to write the risk management process, and that just raised a few questions in my mind as to how we go forward and deal with that.

JC I'd like to offer a closing comment. Whether the crash was a good thing or a bad thing, I think it was an inevitable thing and a good thing in the sense that we've learnt from it. The crash was as inevitable as night follows day, whether you're looking at tulip bulbs, the Mississippi, South Sea or the Roaring '20s, Japanese property – you know, you've got this endless cycle of boom and bust.

JW But John Maynard Keynes said that bankers are smart because they take risks together and they fail collectively, so you can't point fingers at them very easily. Risk managers, however, are supposed to be individuals – so it doesn't really help us to hide in the crowd does it? They are to some extent still in the dark.