Managing risk in perilous times Practical steps to accelerate recovery





About this research

Managing risk in perilous times: Practical steps to accelerate recovery is a briefing paper written by the Economist Intelligence Unit and sponsored by ACE, KPMG, SAP and Towers Perrin. The findings and views expressed in this briefing paper do not necessarily reflect the views of the sponsors, which have commissioned this publication in the interest of promoting informed debate. The Economist Intelligence Unit bears sole responsibility for the content of the report.

The findings are based on two main strands of research:

- A programme of desk research, conducted by the Economist Intelligence Unit, which examined current academic and industry thinking around risk management, with a particular focus on financial institutions.
- A series of interviews in which senior risk professionals, financial services participants and academics were invited to give their views. In some cases, interviewees have chosen to remain anonymous.

Our sincere thanks go to all the interviewees for sharing their insights on this topic.

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Introduction

Chief risk officers at the world's financial institutions are unlikely to look back fondly on 2008. Within little more than a year, the international financial system had been brought to the brink of collapse following five years of unprecedented growth. And while there were many actors to blame for the situation – not least a combination of negligent lending, irresponsible borrowing and unrestrained economic expansion – poor management of risk was widely seen as an important culprit.

As financial institutions, regulators, central banks and governments look to the future, there is certain to be a careful reappraisal of the role and responsibilities of risk management. But perhaps a more fundamental question is not whether risk managers were doing their job properly, but whether the financial architecture as a whole enabled and empowered them to do so. Did the profit motive drown out cries for greater restraint and did risk management lack the authority it needed to take decisive and necessary action?

Both institutions and supervisors are asking themselves other, vital questions. Were the tools available to risk managers fit for purpose? Was the approach to risk management based on a historical view of the world that pertained to an unprecedentedly rosy era in markets and the economy? And was there insufficient risk expertise and understanding at the very top of some of the world's largest organisations?

In this research, which is written by the Economist Intelligence Unit and sponsored by ACE, KPMG, SAP and Towers Perrin, we examine the lessons that have been learnt from the current financial crisis, and propose ten practical lessons that could help to address perceived weaknesses in risk identification, assessment and management. Although our research is primarily directed at financial institutions, we also highlight ways in which these lessons could apply to corporates from other industries. The ten lessons, which are listed below in no particular order of priority, can be summarised as follows:

- 1. Risk management must be given greater authority
- 2. Senior executives must lead risk management from the top
- 3. Institutions need to review the level of risk expertise in their organisation, particularly at the highest levels



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- 4. Institutions should pay more attention to the data that populate risk models, and must combine this output with human judgment
- 5. Stress testing and scenario planning can arm executives with an appropriate response to events
- 6. Incentive systems must be constructed so that they reward long-term stability, not short-term profit
- 7. Risk factors should be consolidated across all the institution's operations
- 8. Institutions should ensure that they do not rely too heavily on data from external providers
- 9. A careful balance must be struck between the centralisation and decentralisation of risk
- 10. Risk management systems should be adaptive rather than static

The research is based on a programme of in-depth interviews with leading participants from the financial services industry, along with a selection of independent risk experts. The report author was Alasdair Ross and the editor was Rob Mitchell. We are grateful to the interviewees for their time and insight.



1. Risk management must be given greater authority

Over the past few years, risk management as a discipline has absorbed a rising proportion of investment in financial institutions and corporates, and has occupied an increasingly senior position in the corporate hierarchy. The development of ever-more sophisticated risk management tools was designed to reassure investors and regulators that self-regulation was working, and that the profusion of new financial instruments, however difficult to understand, was being properly scrutinised and evaluated by those at the sharp end of the business.

Such was the level of comfort among regulators and policymakers that in June 2005, months after the first rumours of strains in the US housing market were bubbling to the surface, Alan Greenspan, then-chairman of the Federal Reserve, would acknowledge only "signs of froth" in certain local markets. (His successor and the current incumbent, Ben Bernanke, was no more prescient, saying in congressional testimony in March 2007 that the impact of what was by then a substantial subprime problem on the broader economy and financial markets "seems likely to be contained".)

So why were banks' risk managers not sounding the alarm bells? Part of the answer is that they were, but that they were not heard. "At large universal banks 18 months ago, risk managers were trying to curb risk-taking by front offices," says Viral Acharya, visiting professor of finance at New York's Stern School of Business. "But risk managers are not the profit centres."

In other words, risk managers – a cost on the banks' balance sheet – were calling for restraint on business at a time of high profitability in the sector as a whole. Those generating the profits pushed to be let off the leash and, all too often, the senior executives allowed the profit centres to win the argument. "The bargaining power of profit centres builds during the good years, so it becomes easy to sideline the risk managers," says Prof Acharya.

The attitude that the opportunity for profit was trumping any concerns being raised by risk managers was exemplified by Charles O. Prince, Citigroup's former chief executive, in July 2007. In a now infamous phrase he told reporters: "As long as the music is playing, you've got to get up and

Questions for corporates

Risk is an intrinsic part of the product offering of the financial services industry – hence the soul searching that is currently taking place as banks and other providers seek to rebuild their reputation for prudence and security. This does not mean, however, that corporates in other sectors cannot learn from the mistakes and reparations of the financial services industry. In these highlighted sections throughout the report, we examine the risk management implications for companies outside the financial services sector.

To examine the role and responsibilities of risk management in their organisation, senior executives from across the business spectrum should ask include the following questions:

- Do risk professionals have appropriate authority in the organisation? If a problem with potentially damaging reputational consequences arose, is there confidence that there are processes in place for this issue to be elevated to executive management?
- Does the company strike an appropriate balance between authority for risk management and the profit-making objective?



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dance. We're still dancing."

To counteract these problems, risk management must be an independent function that is given sufficient authority to challenge risk-takers effectively. Writing in the Financial Times in February 2008, Lloyd Blankfein, chief executive of Goldman Sachs, summarised the change that is required. "Risk managers need to have at least equal stature with their counterparts on the trading desks: if there is a question about the value of a position or a disagreement about a risk limit, the risk manager's view should always prevail."



2. Senior executives must lead risk management from the top

If risk management is to be given appropriate attention throughout the organisation, leadership and tone from the most senior level in the organisation will be essential. In many institutions, risk management is still struggling to shake off an outdated perception that it is largely a support function.

This outmoded perception of risk management is due in part to its relatively short history. "Back in the 1980s, there was no risk management department," says John Crosby, a quantitative analyst, or 'quant', and until recently head of quantitative analytics at Lloyds TSB. "A bank's head trader had the experience and authority to rule on poor trades and have them unwound." Then in the 1990s, institutions began to worry that this was too much responsibility for one individual, and set up risk management departments. "They came up with metrics to judge what traders' exposure was," continues Mr Crosby. "But this is risk measurement, not risk management. The head trader had the authority to tell you to cut your positions, and you did it in minutes. Risk management simply doesn't have that clout."

Risk management must be defined as being the role of senior management, usually the chief executive. There should also be appropriate board oversight of risk, usually through the audit committee or a risk committee. The chief executive, as the "owner" of risk in the institution, must be seen to elevate the authority of risk management, and his or her focus on risk must filter through the organisation to build a robust, pervasive risk culture.

Richard Goulding, Group Chief Risk Officer (CRO) at Standard Chartered Bank, credits the authority given to the risk function in his organisation with helping steer the bank clear of the subprime slick. The risk function is independent and powerful, responsible for delivering earnings within a range of volatility set by the board. "I've never seen any move, from the chairman down, to overrule senior people in the risk function," he says.

Questions for corporates

A risk-aware culture is fundamental to the success of any business and the only way to ensure that this permeates the organisation is for the leadership team to set the appropriate tone. The questions that corporates need to ask themselves may include the following:

 Is the leadership team providing appropriate "tone from the top" to set expectations around risk management? How is this message being cascaded through the organisation?

- Are there appropriate independent committees in place to review risk management practices?
- Is there an individual in the organisation with overall responsibility for risk management?
- Would it be appropriate for the organisation to recruit a chief risk officer if there is not one already in place?



3. Institutions need to review the level of risk expertise in their organisation, particularly at the highest levels

The proliferation and complexity of new financial instruments and trading strategies, often based on complex mathematics or channelled through a chain of institutions in opaque and unregulated markets, was bound to confuse even the sharpest observers. Indeed, in many cases this may have been the explicit intention, as traders and dealers sought to engage in risk-taking that would have been difficult to justify had it been clearly understood.

Sandro Boeri, managing director at Risk Audit Ltd, a UK-based company offering corporate governance training, sums it up in a damning remark. "To have asked the right questions of business units, senior executives would have had to engage in a debate that was beyond their competence, in a language they did not understand."

To remedy this situation, financial institutions must be confident that they have sufficient risk expertise at the most senior level. They should have the tools and information at their disposal to understand the institution's risk appetite and positions, and there should be appropriate channels of communication to ensure that material information about risk is passed to the appropriate executives and board members.

The Senior Supervisors Group report on risk management practices, published in March 2008, makes the point that the senior management at firms that avoided the most severe losses in late 2007 tended to have representatives with capital markets experience. The report went on to suggest that this experience helped the teams to assess and respond to rapidly changing market developments. As the authors explain in their report: "This observation does not imply that firms should select executive leaders on the basis of their experience in managing risk in trading businesses. Instead, it emphasises the need for senior management teams as a whole to include people with expertise in a range of risks since the source of the next disruption is impossible to predict."

Questions for corporates

Expertise in risk and understanding of the risk environment are universal concerns for all sectors. The types of questions corporates may need to ask themselves include the following:

• What are the main risks facing your organisation? Are you confident that the executive management are aware of these risks, their

severity, and the potential impact that they could have on the business?

- Does the executive management team at your organisation contain individuals from a diverse set of professional backgrounds?
- Is there a danger that senior executives may be insulated from understanding the true risk picture because information is filtered as it rises through the hierarchy?



4. Institutions should pay more attention to the data that populate risk models, and must combine this output with human judgment

One feature of recent financial innovation has been the trend for quantitative techniques to replace human judgment in evaluating trading opportunities, valuing assets and measuring risk. In banks, the reliance on models based on increasingly complex mathematics proved doubly damaging: not only did the models fail correctly to register the true levels of risk being assumed, but the sense of security they gave, both to banks and to their regulators, allowed dangerous lending practices to flourish.

Quantitative modelling in financial markets had been growing in complexity since the introduction of the Black-Scholes-Merton method for pricing options in the 1970s (Myron Scholes and Robert Merton were rewarded with the 1997 Nobel prize in economics, after Fischer Black's death). But although an entire academic field has flourished in the wake of this initial innovation, the underlying principles of financial modelling remained – and remain – unchanged.

"It's not like physics, where, say, you can predict the alpha particles emitted by decaying radioactive material with great accuracy," says Mr Crosby. "We're trying to assign a probability that a share price will hit a certain point in a certain period. We're not particularly good at it."

The collapse in 1998 of Long Term Capital Management, a hedge fund run by Scholes and Merton, should perhaps have brought a more fundamental re-evaluation of their methods than it did. In the event, the most widespread variant of the new financial techniques, Value-at-Risk, or VaR, remained a key risk management tool.

VaR, introduced by JP Morgan in the late 1980s, aims to calculate the probability of future losses given past market performance and to encapsulate this in a single number; for instance, at a given confidence level, what is the biggest loss the institution can expect from a given portfolio?

There are two problems with this. First, if past market volatility is for some reason not comparable with future performance, the model will give the wrong result. In hindsight, this was almost inevitable in the lead-up to the credit crunch. Volatilities in most asset markets had been on a downward trend for over a decade, and this trend had accelerated during the extraordinary period between 2003 and 2007. Instead of recognising this for what it was, the sign of an unusually extended business cycle reaching maturity, financial institutions, leading regulators and many market experts argued that it reflected the success of financial markets unfettered by regulation.

Questions for corporates

- What are the sources of information that the organisation uses to gain an understanding of its risk position?
- How reliable are these sources and are they tested against other sources to ensure their validity?
- Does the organisation tend to rely on historical data?
- To what extent is human judgment and gut feeling used as a method for identifying and assessing risk? How confident is the organisation that it is applying the right combination of qualitative and quantitative risk inputs?



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The second problem is that, if the model is based on a mistaken assessment of the probability of problems arising, the bank is more likely to find itself in the "tail"—the portion of potential loss that is above the confidence level set by the bank. In the tail, there is no theoretical limit to the size of the potential losses. Since financial institutions had used the new financial architecture to increase their own borrowing on a vast scale, the losses were sufficient to drive some of the sector's biggest names to the wall.

This illustrates the point that to blame the models is like blaming the car for slipping on an icy road. No matter how sophisticated, models are limited by the quality of the data feeding them. Indeed, models tend to magnify even small errors in inputs such that these render the output dangerously wide of the mark.

Even with the best data, responsibility ultimately rests with those deciding how the models are used. No risk management tool should be used in isolation, and quantitative methods should always be backed up with qualitative approaches and the vital inputs of human judgment and dialogue.

"If past market volatility is for some reason not comparable with future performance, the model will give the wrong result"



5. Stress testing and scenario planning can arm executives with an appropriate response to events

Stress testing and narrative scenarios have long been recognised as important tools in the risk management arsenal – both by management teams and banking supervisors. In the boom years, however, such tools lost ground to the apparent mathematical precision of quantitative analytics. Given the results delivered by those quantitative models, it is not surprising that stress tests and scenarios are making a comeback.

"We're seeing very little demand for training courses on quantitative analysis," says Mr Boeri. "But courses on stress testing and scenario planning are fully booked."

Correctly used, these techniques can help financial institutions to gain a clear understanding of the impact of severe but plausible scenarios on their financial position. In theory, stress testing should help institutions prepare for the kind of highly unexpected, "tail risk" events that we saw during the financial meltdown of late 2008. Yet in reality, few banks could claim that their stress testing processes were sufficiently robust, both before and during the crisis, to give them the warning that they required.

The crisis has highlighted a number of important deficiencies with current stress testing practices. First, many institutions were overly conservative in the scenarios that they explored. They tended to assess the impact of relatively minor events, or to assume that market dislocation would only last for short periods. In addition, they often failed to take a sufficiently broad, firm-wide approach to stress testing, choosing instead to focus on specific risks or business units rather than exploring system-wide risk concentrations.

Second, stress testing tended to rely on recent historical data. The problem with this approach is that recent data refer to economic and market conditions that were unusually benign. When testifying before the House Committee on Oversight and Government Reform, Alan Greenspan, former chairman of the Federal Reserve, admitted the shortcomings of this reliance on recent data: "The whole intellectual edifice collapsed in the summer of last year because the data input into the risk management models generally covered only the past two decades, a period of euphoria."

A third problem is that the incorporation of stress testing into the Basel II framework led some

Questions for corporates

Scenario analysis is becoming a widely used tool across the entire business spectrum. In the same way that financial services companies use this technique to add a qualitative layer to more quantitative methods, many corporates are deriving considerable value from exploring the impact of a range of potential scenarios on their business. Questions that corporates should ask themselves include the following:

- Does senior management set aside time to discuss potential political and economic scenarios and consider the impact of these outcomes on the business? If not, should this be done more formally?
- To what extent are different scenarios considered when setting long-term strategy? Is there a tendency to rely on an "official future" rather than test the business model against other, potential outcomes?
- Does senior management seek a range of views and perspectives in order to test its assumptions?



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market participants to assume wrongly that the technique was primarily a box-ticking, compliance exercise. This devalued stress testing in the eyes of senior executives, and meant that the output rarely fed through into the strategic, decision-making processes at the top of organisation. In addition, it meant that insufficient effort went into developing robust and challenging scenarios that reflected rapidly changing external conditions.

The Bank for International Settlements tackled this point in their recent report *Principles for Sound Stress Testing Practices and Supervision*. "At some banks, the stress testing programme was a mechanical exercise," wrote the authors. "While there is room for routinely operated stress tests within a comprehensive stress testing programme (e.g. for background monitoring), they do not provide a complete picture because mechanical approaches can neither fully take account of changing business conditions nor incorporate qualitative judgments from across different areas of a bank."

Stress testing must be integrated with the firm's overall risk management processes, and mechanisms developed to ensure that the results are communicated to senior management in such a way that it is possible for them to formulate a clear response. Where historical scenarios may be considered inappropriate, institutions should adopt testing hypothetical scenarios that explore a wide spectrum of possible outcomes.

Stress testing and scenario analysis rely on the involvement of the board and senior management to provide adequate resources, define scenarios and assess responses to specific findings. Senior managers can also mandate the involvement of a wide variety of participants in stress testing in order to foster debate and prevent it from becoming a mechanical exercise performed in isolation. They can also request that stress testing takes place across the full spectrum of risks and portfolios, and spans business lines in order to identify risk concentrations. In some cases, this may require investments in underlying infrastructure and data consistency.



6. Incentive systems must be constructed so that they reward long-term stability, not short-term profit

Greed: This is the word that comes up most often when politicians, regulators or ordinary consumers are asked about the roots of the credit crunch. But this by itself is an unsatisfactory explanation. Greed is not just a universal human characteristic, but a necessary component of the capitalist model. Without it, economic incentives would not work.

But a common lesson from most market failures is that the incentives have to be carefully designed. "Where high-risk positions can be taken in illiquid assets, it's very hard to prevent problems unless the incentives are right," says Prof Acharya.

So while vigorous action should be taken to root out illegal trading, such as the Ponzi scheme set up by Bernard Madoff, a spotlight should also be shone on the incentive structure that encouraged actors throughout the economy to pursue short-term rewards with no regard to long-term costs.

The growth of this unbalanced incentive structure was itself an indicator of trouble ahead, but one that was largely brushed aside. "No one had the courage to look at areas where there were incentives to cheat," says Mr Boeri. "Bonuses for risk-taking were so high that few could afford to take a contrary view. They would not have lasted long."

Short-term incentive structures were endemic during the boom. The bonus culture rewarded traders and senior financial executives for realising immediate profits on assets that would take years to mature. Share options encouraged behaviour that pushed up equity values regardless of long-term consequences.

"Many of the banks struggling now to make capital were buying back their own shares in 2004, 2005 and 2006," says Mr Crosby. "Maybe their stock options led them to pursue anti-dilutive strategies."

There were other incentive anomalies. Using securitisation, banks in effect made money on the difference between the cost of borrowing on short-term money markets to fund mortgage lending and the cost of selling the pooled mortgages to institutional investors. In the process, they were shifting credit risk off their balance sheets. As a result, and in contrast with the traditional banking model, banks were being rewarded for the volume of business they could generate, rather than the quality of the underlying loans.

Questions for corporates

The issue of incentives and their link with risk exposure is far more serious in financial services than other industries, but there are still important lessons to draw. In particular, corporates should assess the following:

• Are corporate governance processes sufficiently robust in the organisation to ensure that

remuneration issues will not cause reputational problems? Is there a qualified remuneration committee in place to review and approve policies?

• How is the link between corporate performance and compensation made? Are the right indicators being used throughout the organisation, and are incentive programmes designed in such a way that they motivate and reward, but do not encourage behaviour that is detrimental to long-term shareholder interests?



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This removed the incentive for prudent risk assessment and replaced it with the opposite: an incentive to provide mortgages to an ever-growing demographic. Similarly, the investment banks who took the credit derivatives to market and the rating agencies who gave the senior tranches their endorsement made money on volume, regardless of quality.

The mismatch between the short-term incentive structure and long-term risk exposure that characterised the run-up to the crisis has been identified as a key area for reform. The bonus culture and remunerative models for senior banking executives are likely to be overhauled, with some of the rewards in future being withheld to match the maturity of the underlying business.

If corporations are unable to enforce this discipline on themselves, then the success of risk management in heading off future crises will depend on the ability of governments and regulators to design and enforce rules that do the job for them.

"A spotlight should also be shone on the incentive structure that encouraged actors throughout the economy to pursue short-term rewards with no regard to long-term costs"



7. Risk factors should be consolidated across all the institution's operations

The financial crisis has demonstrated that some institutions have found it difficult to identify and aggregate risks at a firm-wide level. The traditional approach of separating credit, market and operational risk, while enabling a more thorough treatment of each category according to relevant lines of business, runs the risk of creating risk "silos", whereby risks are treated in isolation and there is no clear, overall picture of the interaction between them.

A firm-wide approach to risk can address these problems. "Enterprise risk systems look at risk across business units, and watch out for accumulations of positions by different businesses that could prove catastrophic if all were realised at once," says Prof Acharya.

The July 2008 report from the Institute of International Finance, an association of financial institutions, highlighted the need for a firm-wide approach to managing risk. "A comprehensive, firm-wide approach to risk management should be implemented by all firms," wrote the authors. "Such an approach should allow the firm to identify and manage all risks across business lines and portfolios. Robust communication mechanisms should be established so that the board, senior management, business lines, and control functions can effectively exchange information about risk."

Institutions need to develop a culture where risk is a concern for everyone in the business, and where there is clear and frequent communication across organisational boundaries. Conversations about risk appetite and risk capacity should not be restricted to the risk function, but should take place throughout the organisation.

Equally, risk management should be tightly integrated into operations, and lines of communication should be clear enough that changes in risk levels can be escalated to the correct layer of authority before mitigation becomes impossible. Institutions should be aware, however, that risk information can become sanitised as it rises through the organisation.

As the Senior Supervisors Group report noted in its report: "Hierarchical structures tended to serve as filters when information was sent up the management chain, leading to delays and distortions in sharing important data with senior management. In contrast, some firms effectively removed organisational layers as events unfolded to provide senior managers with more direct channels of communication."

For companies seeking to compile a firm-wide view of risk, the Financial Stability Forum stressed the

Questions for corporates

Companies outside the financial services sector would also benefit from developing a firm-wide understanding of risk exposure. In considering their approach, they should ask themselves the following questions:

• Does the organisation understand the interaction

between different risk categories and the way in which an event in one part of the business might have a knock-on effect elsewhere?

- Is there a common language of risk to ensure clarity of understanding across the organisation?
- Does the organisation have a data and IT infrastructure that supports the aggregation and communication of risk information?



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need for information to be shared freely between risk management and senior executives. "The turmoil has exposed significant differences between firms in their ability to effectively identify, aggregate and analyse risks on a firm-wide basis," wrote the authors. "In this respect, the timing and quality of information flows both up to senior management and across the different businesses of the firm are important. Firms that shared information effectively benefited by being able to plan up to a year ahead of the turmoil to reduce identified risks."

Equally important is the need to create a consistent data structure and IT architecture that enables the aggregation of risk at a firm-wide level. Institutions should implement standardised definitions to identify and manage risk, and should facilitate communication and sharing of information across business lines and geographical boundaries.

"Institutions need to develop a culture where risk is a concern for everyone in the business, and where there is clear and frequent communication across organisational boundaries"



8. Institutions should ensure that they do not rely too heavily on data from external providers

In the wake of the financial crisis, credit rating agencies have come under sustained fire from regulators, central banks and industry commentators. Critics have pointed out that they have an inherent conflict of interest, in that they are paid to rate securities by issuers, rather than investors. This could mean that rating agencies had an incentive to offer favourable ratings in the expectations of repeat business from issuers. "They got into the habit of issuing AAA ratings for fear of losing the account," says Mr Crosby. "They were not only negligent; they may have been fraudulent."

Serious doubt has also been cast on their models for pricing risk, particularly in the case of complex securities, such as collateralised debt obligations. Many CDOs were given top AAA ratings, despite being made up of risky, sub-prime mortgages. The models said that the instruments were safe because of the low default correlation between the underlying liabilities, but this was misleading. "The diversity story is true in most parts of the business cycle," says Mr Crosby, "but when you have wild gyrations all correlations go to 1."

Commentators have also directed criticism at rating agencies for what is perceived to be the tardiness of their response to downgrade securities once the credit crisis hit. This, according to critics, raises questions about the robustness of the underlying models and methodologies used by the ratings agencies.

While greater scrutiny of the activities of rating agencies will undoubtedly be on the supervisory agenda, it is clear that financial institutions must also recognise the limitations of external ratings and risk information. In the run-up to the credit crisis, too many banks blindly relied on the assessments of rating agencies as an input, and were then left with no way of pricing risk when these ratings proved inadequate. This has highlighted the need for financial institutions to address their over-dependence on credit ratings, and to supplement ratings with their own analysis, which should be continuously updated over the entire period of the investment.

Questions for corporates

Corporates are not as exposed to this problem as financial services companies, but the issue does highlight the need to pay careful attention to sources of external risk information. In considering how they use external providers, corporates should ask themselves the following questions:

- To what extent does the organisation rely on external sources of risk information? How robust is this, and does the organisation regularly benchmark the information against other sources?
- Does the organisation know and understand the methodology behind external sources of information used? Is it aware of the limitations of this data?



9. A careful balance must be struck between the centralisation and decentralisation of risk

A central risk function, determined at a senior level, is essential in order to set risk appetite, implement and monitor controls and provide oversight of the firm's risk position across its various business units and geographies. But this must also be combined with an approach whereby risk is embedded in the regional office or business unit, such that each profit centre has ownership of its own risks.

This dual approach to managing risk requires absolute clarity as to the responsibilities for specific activities. A situation should not arise where it becomes tenable for traders to blame risk managers for lapses in risk oversight, or vice versa. There should be a recognition that risk-taking occurs at the business level and, as such, lines of business should be primarily responsible for the risks that they take. Risk-takers should disclose their position to those tasked with managing risk centrally, ensure that they keep within agreed risk limits, and escalate warnings about sudden or unexpected changes in the trading conditions. Particular attention should be paid to involving central risk managers in the creation and approval of new products.

Institutions must therefore strike a balance between centralisation and decentralisation. There should be a central, independent function with a clear line to executive management and relevant non-executive committees. The central function can also ensure a consistent language and set of definitions to ensure that information can be gathered and aggregated easily.

The role of a more embedded approach to risk is to stay close to the business and provide more granular oversight into trading and business activities undertaken by individual business units. This helps to instil a risk culture throughout the organisation, and prevents a perception that risk is some distant entity that serves primarily as a support function.

Questions for corporates

In financial services, the whole business model is predicated on taking risk, so the issue of centralisation and decentralisation is far more prominent than in other industries. Nevertheless, there are some questions related to this topic that should be relevant for corporates:

- What is the standing of risk management in the organisation? How close is it to the business?
- To what extent is risk management seen as a support function? Would closer integration with the business lead to it having a more strategic role? In what ways might this benefit the organisation?
- Are risks identified and aggregated centrally and subject to an enterprise-wide view?



10. Risk management systems should be adaptive rather than static

The events of the past year have demonstrated the dangers of the failure to update or question assumptions about risk. Consider, for example, the heretofore widespread view that liquidity for securitised assets could be taken for granted even during times of market stress. This, along with many other assumptions, turned out to be little more than an illusion.

The scale and unprecedented nature of the problems that befell the financial markets in late 2008 illustrates clearly the need continuously to conduct observations of the real world and feed these back into the system design on a regular basis. This enables the system to correct its inherent weaknesses, as well as recognise and respond to changing business conditions.

The Senior Supervisory Group points out that those institutions that took a more adaptive and dynamic approach to risk management tended to fare batter during the crisis.

"Management at the better performing firms had more adaptive (rather than static) risk measurement processes and systems that could rapidly alter underlying assumptions in risk measures to reflect current circumstances," note the authors in their report. "They could quickly vary assumptions regarding characteristics such as asset correlations in risk measures and could customise forward-looking scenario analyses to incorporate management's best sense of changing market conditions."

The institution's ongoing observation and analysis of external conditions should feed through into the overall risk appetite and, in turn, to the risk limits set for individual lines of business. The risk appetite and limits should be determined by a comprehensive study of all potential sources of risk that might affect the organisation. The key here is that senior management and risk managers should assess the environment regularly, and ensure that any substantive changes are taken into account.

Questions for corporates

The speed with which the market situation turned in late 2008 is a reminder that the risk environment is evolving more rapidly than ever before. This is a concern that applies equally to financial services companies and corporates. Specifically, corporates should ask themselves the following questions:

- How frequently is the organisation reviewing and updating its assumptions about the risk environment? Is this process frequent enough given current external conditions?
- How is information about the changing risk environment communicated to senior management?
- To what extent do changes in the external risk environment lead to changes in risk management priorities or processes?



Conclusions

The events of the past year have uncovered significant deficiencies in the way in which financial institutions manage risk. It is clear that risk management has lacked the necessary authority to exert an appropriate influence over profit centres, and has in many cases found it difficult to articulate a firm-wide view of risk exposure. The tools used to manage risk have also been found wanting, from stress testing and scenario analysis to the reliance on external rating agencies.

But as the dust starts to settle from the financial crisis, a consensus around what needs to be fixed is starting to form. Many institutions are subjecting their risk management policies and processes to a significant overhaul, and are investigating a wide range of tools and techniques to give them a better overall picture of risk.

While efforts to upgrade risk management techniques are commendable, there is a more fundamental point to address around the culture of the organisation. It has become apparent that, during the boom, the concerns of risk managers were all too often swept aside in the quest for profit and competitive advantage. As the industry seeks to rebuild its reputation and regain trust among investors, customers and supervisors, the balance of power needs to shift back towards risk management. Armed with appropriate authority, clear visibility into lines of business, and the ear of senior executives, risk management will become an integral part of any future recovery.

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