B RISK MANAGEMENT LESSONS OF THE FINANCIAL TURMOIL[1]

This special feature presents some observations on what were good risk management practices at large financial institutions, as well as the main lessons that could be learnt from the recent period of financial market distress and the recommendations that could be made from a risk management perspective.

INTRODUCTION

Over the past year and a half, the most severe financial shock recorded in decades has been witnessed. The end of the financial market turbulences is not yet in sight, with damage extending from the financial sector to the real economy. Practices at financial institutions have been at the centre of the chain of events that has now been termed "the credit crisis of 2007-08". In response to the major financial turbulences, supervisors, as well financial industry groups, have assessed the performance of the risk management functions at large financial institutions during this period of intense stress. This assessment has resulted in a number of reports, and first conclusions have been drawn by these expert groups on what has worked well in risk management. This is, of course, an aspect of great importance as the recent high-profile banking failures demonstrate. The downfall of large financial institutions can ultimately be attributed, in one way or another, to the failings of risk management. On the other hand, for those firms that have weathered the storm more or less unscathed, good risk management practices can be seen as the main variable explaining their good performance.

OBSERVATIONS ON GOOD RISK MANAGEMENT PRACTICES DURING THE RECENT TURBULENCES

So, what has worked well in risk management and what initial lessons can be learnt from the episodes of extreme financial distress in 2007 and 2008? Earlier in 2008, a group of financial supervisors from different countries provided a first assessment of, and response to, this question. The resulting document identified four areas in which banks that had performed well were particularly effective:[2]

Effective firm-wide communication

The report of the Senior Supervisors Group found that those firms that did well "generally shared quantitative and qualitative information more effectively across the organisation." This allowed the firms to anticipate potential problems in the markets for asset-backed securities (ABSs) well in advance, giving them the necessary time to implement plans to mitigate, reduce or completely shed risks while this was still possible and not overly expensive.

This firm-wide communication framework permitted senior management to implement macro-hedges when deemed necessary, as individual business units would otherwise have made decisions in isolation. In firms without this enterprise-wide framework, decisions taken at the level of business units increased, rather than reduced, the exposures at risk as the crisis developed. In other cases, awareness of the risks developing in some areas of the ABS markets was minimal or non-existent until it was too late.

Independent and rigorous valuation practices

Firms that performed well had established a disciplined approach for the valuation of complex or potentially illiquid securities. This implied a strong risk management culture, in which a critical and sceptical attitude existed to challenge the valuation input assumptions used by the front office. Independent assessments of the credit quality of assets backing complex securities were conducted to identify the intrinsic value of those securities. These valuation and credit assessment procedures were applied consistently across the firm. Valuation estimates were sometimes "tested" by selling a small

1 This special feature draws on discussions with risk management experts in various large international financial institutions, as well as on various reports produced by industry groups and financial supervisors.

2 See Senior Supervisors Group, "Observations on risk management practices during the recent market turbulence", March 2008.

proportion of illiquid assets to observe actual prices, or collateral disputes were monitored for clues to inconsistency with valuations provided by other dealers. These practices allowed those firms to have a better insight into both the true value of the securities and the implications of rating agency models and their results.

Effective management of funding liquidity, capital and the balance sheet

Better-performing firms had a closer alignment of treasury and risk management functions. These firms incorporated information from all business lines into a global liquidity planning concept that included actual and contingent liquidity risk. They had also created internal pricing mechanisms that provided incentives to charge business lines for building up contingent liquidity exposures so as to reflect the cost of obtaining liquidity in a deteriorating market environment. In addition, good firms "actively managed their contingent liquidity needs", by avoiding, for example, business lines such as structured investment vehicles or collateralised debt obligation warehousing, and these firms "exhibited greater discipline in adhering to limits in the face of changing market conditions".

Risk measurement and management reporting practices

Firms that managed to avoid major problems tended to have management information systems that were more adaptive and could rapidly incorporate altered assumptions as the market environment changed. Risk management in those firms relied on a wide range of measures of risk, sometimes including the levels and the growth of both net and gross notional amounts, and profits and loss dynamics, to provide several perspectives of a given exposure. Assumptions behind risk measures were updated frequently, and made transparent, so that they were more vigorously challenged. A blend of quantitative and qualitative assessments of risks was used to enable risk managers to swiftly revise their risk assessments in response to rapidly deteriorating conditions.

MAIN RECOMMENDATIONS FOR RISK MANAGEMENT IN FINANCIAL INSTITUTIONS

These initial observations by supervisors on what constituted successful risk management practices in the face of a very challenging financial environment provided financial market industry groups with the basis on which they could build a set of recommendations on best practices for risk management at financial institutions. Two reports stand out as particularly relevant in this regard: (i) the Counterparty Risk Management Policy Group report (CRMPG III) and (ii) the report of the Institute of International Finance.[3] These two reports, which were published in the summer of 2008, underscore the importance of good risk management practices as a precondition for containing systemic risks. Broadly speaking, three main areas of recommendations can be highlighted:

Governance and risk culture

It is recognised that an effective promotion of a consistent risk culture throughout the firm is the main enabling tool in risk management. Large financial institutions should examine their framework of corporate governance from time to time so as to ensure that it is fostering the incentives that will properly balance commercial performance and disciplined behaviour over the cycle. Good governance begins with the clear allocation of risk management responsibilities to senior management and, in particular, to the Chief Executive Officer (CEO) of the firm. It is the responsibility of the CEO and senior management to convey and develop a risk culture that covers all areas and activities of the firm, with accountability for risk management being a priority for the whole institution.

A key element of an effective risk culture is the communication of the firm's risk appetite, and ensuring its adoption throughout the firm. Firms should make sure that the risk appetite level is established by the highest level of management

3 See Counterparty Risk Management Policy Group, "Containing Systemic Risk: The Road to Reform. The Report of the CRMPG III", August 2008, and Institute of International Finance, "Final Report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations", July 2008.

and shared with the Board that is the ultimate overseer of the risk management function.

Another important element of a good corporate governance framework is the need to have a strong organisational structure for risk management. Firms should assign operational responsibility for risk management to a senior officer, the Chief Risk Officer (CRO), who should have sufficient seniority and independence from business line management. The CRO should have the ability and capacity to influence key decisions of the firm, with the objective of making sure that the level of risk taken by the firm is consistent with the agreed levels of risk appetite and that an integrated view of the overall risks faced by the firm is presented and discussed with senior management.

Institutions should ensure that their risk management functions are staffed appropriately in both good and bad times, with the capacity to work in periods of stress when spikes in processing large volumes occur and under various disaster recovery scenarios.

Large and complex financial institutions should, from a pragmatic point of view, rely on a number of high-level "institution-wide committees, to facilitate communication, coordination, and, in some instances, consensus-based decision making."[4] The CRMPG III report also stresses the importance of committee structures as a way to foster firm-wide cooperation and communication so as to help reduce the temptation of promoting a silo-mentality in isolated business lines that could bring down the entire firm in bad times.

Risk measurement and integration of risk management areas

Risk management should be implemented in a comprehensive, firm-wide fashion. The accurate measurement and monitoring of risks is essential, but it is, unfortunately, not enough to achieve a successful implementation of an effective risk management function. Ultimately, "good risk management and monitoring reduces to the basics of producing accurate information, at the right time, to the right people, such that those people can make the most informed decisions possible".[5] Therefore, robust communication channels should be put in place to allow the exchange of risk information between the Board, senior management and the various business lines, including the controlling function. Firms should be ready to invest adequately and on a sustained basis in their risk management teams and IT infrastructure and systems. A comprehensive, firm-wide risk management function also requires firms to develop an integrated firm view of all sources of risk, incorporating credit, market, liquidity and operational risk.

Very important is the need to have policies and procedures to identify and manage risk concentrations, aggregating risk exposures across the firm, regardless of whether they are contingent or non-contingent, on or off-balance-sheet, or contractual in nature. Firms should have the ability to rapidly compile aggregated counterparty information, incorporating exposures across all related legal entities on a global basis that reflects the effect of netting and collateral arrangements.

Risk management should not rely on a single risk methodology, taking into account the limitations of models and risk measurement techniques such as the value at risk (VaR).[6] In an environment like the financial markets, in which extreme price movements can be frequent, seemingly robust risk management tools can prove to be inadequate. With this in mind, firms should expand the range of risk metrics, moving beyond VaR as the dominant risk measure to include a range of stress tests, scenario analyses and other measures that could be useful in revealing portfolio risk characteristics, again taking into account the possible model drawbacks of these alternative risk measures. For example, it became clear that stress testing

4 See CRMPG III, op. cit.
5 See CRMPG III, op. cit.
6 See also Box 14 in ECB, *Financial Stability Review*, December 2007, and Box 13 in ECB, *Financial Stability Review*, June 2007.

as an additional risk metric used by the industry needed refinement, as evidenced by the large volume of losses at financial institutions during the market turbulences.

Valuation issues

Market conditions have made the valuation of many financial instruments very challenging during the recent market turmoil. As markets became less liquid, investors needed to resort to model-based valuation to price their positions, and to comply with fair valuation principles. However, the theoretical prices obtained from models turned out to be less reliable as the markets, from which key parameters for valuation had been derived, became more thinly traded and volatile. In this environment, pricing disagreements and collateral disputes increased, contributing substantially and materially to systemic risk. In general, but more specifically in this type of market context, it is important that firms "should ensure that they employ robust, consistent pricing policies and procedures, incorporating disciplined price verification for both proprietary and counterparty risk trades."[7] Theoretical or model-based valuations should be subject to sensitivity analysis with due consideration of the fact that market prices may become unreliable in periods of low liquidity. Firms should put in place an appropriate governance framework that ensures the independence of controls and a validation of valuations by the risk management function.

It has been also recommended that, whenever possible, firms should use transparent and liquid instruments, rather than bespoke products. To promote this practice, firms should consider imposing internal charges against profit and loss accounts for hard-to-value or illiquid transactions or other methods such as higher capital charges, limits or higher haircuts when the collateral received in a collateralised transaction has low market liquidity. In addition, firms should ensure, to the greatest extent possible, that whenever the same instrument is held by different business units, that instrument is marked at the same price. Different valuations for identical instruments could lead to inaccurate information being used for internal and external decision-making, and could possibly trigger legal and reputational issues that may have a financial impact.

CONCLUDING REMARKS

More than a year has passed since the start of major disruptions in the financial markets. Financial institutions have been at the centre of the turbulences. Despite various and repeated efforts to restore confidence and credibility in the financial industry, the situation in the banking system remains fragile. The risk management practices in some major financial institutions that led to the recent turmoil are an important contributing factor. This special feature summarises what has worked well in risk management and what the first lessons are that can be learnt from the experience gained over the past year and a half.

It is important in these closing remarks to emphasise the importance of senior managers in promoting a corporate governance framework in which risk management can operate effectively. Senior managers are the ultimate guarantors for an adequate risk culture to permeate into all parts of the institution. They should be directly involved in risk management decision-making so as to ensure that the institution's agreed risk tolerance is respected and maintained. This is important as, far too often, senior managers at large financial institutions did not heed the advice of risk managers prior to the start of the crisis. It is therefore not surprising that those firms that did relatively well were run by executives that were directly involved in risk management and, therefore, had direct knowledge of the market issues that were developing.

7 See CRMPG III, op. cit.