Approaches to measuring, limiting and managing risks, especially those facing small and medium-sized institutions

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Introduction

I am greatly honoured to be here today to discuss the subject of risk management for small and medium-sized financial institutions. Unlike the other presenters, I am by no means an expert on the Chinese banking system – nor am I an expert on the establishment of a deposit protection scheme. Instead, I hope that I can share with you some insights that I have gained as a humble bank examiner. I have a short presentation, hopefully with ample time at the end to field questions. So far in this conference, we have heard excellent presentations on the external framework necessary for financial supervision and problems that supervisors have faced recently. Our focus now will turn to the internal framework that banks need to develop to control their risks.

Managing risk is a concern for banks of all sizes. Why? Well, we have heard that it is important for the proper implementation of financial intermediation. We have also heard that it is to ensure that banks are operated safely. I have a more basic view – it is important so that banks can be profitable. I want the banks I supervise to be as profitable as possible. I like greedy bankers. Greedy bankers want to make money for their institutions – and greedy bankers know that the losses from one bad loan can offset the profits and hard work on 20 others.* I would argue that the only way to measure if a bank is performing its financial intermediation role well is to observe sustained real profitability (no phoney accounting tricks) over the business cycle. This ensures that credit is being priced appropriately, and that too much credit is not being extended to unworthy borrowers.

*That is not to say I like unethical bankers, or those who put their personal interests ahead of their banks.

Contrary to popular perception, bank supervisors realise that banking organisations must take risks if they are to generate acceptable economic returns. As a fundamental principle, however, supervisors want banks to take risks that they can understand and measure and also earn enough income to adequately compensate for those risks. We at the Federal Reserve tend to break down risks into six key areas: credit risk, market risk, liquidity risk, operational risk, legal risk and reputational risk.

Of these, credit risk and operational risk are the most important at small and medium-sized institutions in the United States. By operational risk, I mean primarily the risk of loss from internal control breakdowns. As Danièle Nouy mentioned, the Basel Committee is actively engaged in the study of credit risk, operational risk and liquidity risk, and in the past year has published papers on interest rate risk and internal controls. I am glad Michael Pomerleano said that credit risk was the biggest risk facing the Chinese banking community, because today I will focus on credit and operational risk. I would note, however, that every institution, whether large or small, faces each of the six risks I listed above to some degree.

Credit risk

Let me begin with credit risk. Given banks' traditional focus on extending credit and loans to customers, credit risk has been – and remains – the most important risk for banks. In the US economy, small and medium-sized banks mainly take deposits and provide banking and credit-related services to local customers, and extend credit to small to medium-sized local and regional businesses and to consumers. One of the main risks for the bank in serving as an intermediary of credit between depositors and borrowers is that its borrowers will be unable to fully meet their loan obligations and default.

In our experience, a key to effective credit risk management is a well thought out business strategy. Who are the customers the bank wants to serve? What types of credit and other services do those customers need? How much risk do the customers present and, therefore, what interest rate does the bank need to charge to ensure that the bank earns an adequate rate of return on its capital? Once the credit strategy is developed, we think it is important to put the strategy in writing and ensure that all bankers with lending authority understand it.

While these questions seem basic, in our experience many banks run into trouble because they lack a carefully chosen credit strategy. We have seen that when banks set goals to be the fastest growing bank or have the largest market share in their area, they later find that they lent to customers they did not really know and took on credit risks they did not really understand to achieve those goals. More often than not, substantial credit losses were the first signal that the bank's strategy was flawed. This does not mean that growth and market share are not important considerations for banks – they are. But carefully selecting the potential customer base and understanding the risk characteristics of the bank's credit activities are even more important.

For any bank, the management of credit risk should begin when a potential customer asks for credit. In our experience, it is typically during this first step – making the decision whether to extend a loan – where many mistakes are made. The decision to lend should be based on the borrower's ability and willingness to repay the loan. These characteristics are indicators of risk, which should be reflected in the pricing of the loan. However, some banks have tried to rely only on the value of collateral or some other guarantee offered by the customer, which are secondary sources of repayment for loans but should never be the primary factor in deciding to extend a loan. The primary factor should be a company's ability to repay the loan from its internal operations. This calculation can only be based on forward-looking financial projections – something we call "spreading the numbers".

As Larry Lau alluded to, the ability to accurately project financial performance is highly dependant on accurate, rigorously applied accounting standards. The only way a counterparty can assess the creditworthiness of another is through transparent financial statements. Transparent, rigorously applied accounting standards strengthen the confidence parties have when dealing with each other.

Relying on collateral or guarantees alone rarely insulates banks from losses if the borrower defaults. Often, when a customer defaults on a loan, the bank may be left with collateral or a guarantee that does not fully cover its credit losses. While this problem has often been noted in the banking sectors of many emerging markets, the need to maintain strong underwriting standards is key to the success of any bank – large or small, sophisticated or basic – in extending credit profitably and safely.

Supervisors and bankers have learned that to control credit risk, it is critical to know your customer; that is, you should know your customer's business, financial condition and industry. To understand these factors, a banker should research the customer's past performance and reputation. This is particularly important for small and medium-sized institutions that are entering new product areas, markets, or geographic regions. Collateral and guarantees may not be enough to prevent financial losses when customers fail to repay their loans.

While the management of credit risk begins with the decision to underwrite a credit, management's responsibility to control risk continues throughout the life of the credit. When a bank has exposure to a local or regional business, for example, it must continue to monitor the creditworthiness of the borrower until the credit has been repaid in full. There should be an ongoing assessment of the financial health and stability of the obligor by loan officers, as well as periodic independent evaluations of the credit risk of the bank's loan portfolio.

Collecting and analysing the most current financial statements issued by the obligor, as well as understanding industry trends and macro-economic developments, help loan officers and bank managers to understand the different levels of risk associated with each credit and use this information to assign a "risk rating" to each credit. Sophisticated banks in the developed world have up to 18 internal risk grades. Such an internal credit risk rating system can be a valuable tool for tracking and responding to changes in the creditworthiness of obligors. Additionally, in many developed countries, this forward-looking analysis forms the basis for establishing adequate credit reserves, instead of the practice of only reserving for loans once they are legally impaired. Picking up on Nick Lardy's presentation, a thorough risk rating process would have identified the decrease in profitability at many state-owned institutions – which would have led to lower ratings and higher credit risk reserves.

The bank should also monitor the size of its exposure to any one customer or industry. This helps to avoid concentrations of credit, which increase the bank's vulnerability to shifts in the financial health of any one company or industry. In addition, management must monitor the growth of its overall lending portfolio. Excessively rapid growth in lending may indicate either that underwriting standards are not strict enough or that credit risk is not being priced appropriately.

When extending credit, both supervisors and bankers should acknowledge that some borrowers experience problems. Banking, like any other business, has risks. When problems arise, the bank should recognise and disclose its losses in a timely manner. By international standards, loans typically are impaired when payments are 90 days past due. There are many banks throughout the world today that have been slow to recognise losses and begin the process of working out bad debts. This has left banks and, in some cases, entire banking systems saddled with a mountain of bad debts, which continue to restrict their growth. The bank, therefore, should have a system in place to not only recognise risks but also respond effectively if problems develop. While it is an important role of the banking sector to sometimes help borrowers work out of problems, banks must be exceedingly careful not to throw away "good money after bad". In the United States, the accrual of interest on impaired loans and the capitalisation of interest are practices that are frowned upon and usually avoided at all costs.

Operational risk

Operational risk, especially the potential for breakdowns in internal control, is among the most important risks at any bank, large or small. Some of the most spectacular losses at financial institutions have involved one or a few managers in a bank taking actions that involved errors of judgement or fraud that could have been prevented or detected by an effective framework of internal control. But the benefits of an internal control process are not just in preventing a spectacular problem, but more generally in increasing efficiency and effectiveness in meeting business objectives, while at the same time ensuring the reliability of financial and management information and compliance with laws and regulations.

Why do regulators care so much about operational risk? As I said earlier, we want banks to make money by taking risks that they can understand and measure. Unlike some other risks, operational risk is extremely difficult to measure, and as such should be avoided.

Any approach to risk management should be integrated with both the right tools to identify risk and also the organisational structure and processes to effectively deal with these factors. In September 1998, the

Basel Committee on Banking Supervision issued a paper, titled the "Framework for Internal Control Systems in Banking Organisations", which outlines fundamentals of internal controls for managing operational risk and how supervisors should evaluate them. It stresses the importance of having solid internal control mechanisms such as documentation of policies, procedures, and controls for risk management, and ways to test and validate the procedures and controls to ensure that they are being followed and understood throughout the institution. I would now like to talk more in-depth about what some of the characteristics of an effective internal control process are.

Supervisory experience as well as considerable work in many countries on internal controls have led to a few widely agreed key principles to use in evaluating a bank's internal control system. The Basel paper organises the basic principles of a bank's internal control system in five categories. They are:

1. Management and control culture.
2. Risk assessment and recognition.
3. Segregation of duties and control activities.
4. Monitoring activities and correcting deficiencies.
5. Information and communication.

All of these areas are important and an internal control framework needs to cover every area for the control environment to operate efficiently and effectively.

Management and control culture

The starting point for effective internal controls at a bank is the role of the executive management and the board of directors. Together, they are responsible for the bank's business strategy, the incentives within the bank that motivate the officers and employees, and for the risk management and internal control environment of the bank.

In the United States, the board of directors has a fiduciary responsibility to ensure the safe and sound operation of the banking organisation. The board has two important duties: choosing and compensating executive management and providing guidance and oversight to management's activities. While the day-to-day operations of the company are management's responsibility, the board of directors must review the overall business strategies and significant policies of the bank. This requires the directors to understand the risks the bank faces, to set acceptable levels of risk, and to ensure that senior management takes the appropriate steps to establish, as well as continually monitor, internal control mechanisms. Many of these directors are independent – they are not members of the executive management of the bank, but often experienced executives from business or government. Their independence and business judgement, and above all their willingness to ask questions of management, can help management better understand the risks and the rewards of proposed strategies or policies. In short, the board of directors is ultimately responsible for the financial health of the organisation.

Senior management, in turn, is responsible for developing and executing the bank's strategies, while also limiting the associated risks and ensuring compliance with all rules and regulations. The executive management as well as the heads of the bank's various businesses, therefore, must have the necessary depth of expertise and knowledge to cover the business lines and their relevant risks, in order to carry out the day-to-day operations of the company in a satisfactory manner. Put simply, no management team should be wholly reliant on one person who commands all the banking expertise. Each member of senior management should have the ability to adequately supervise the activities of the bank's officers and employees, as well as respond to risks, in order to ensure the safe and sound operations of the financial institution.

For any internal control process to be effective, staff and managers at all levels must participate. This means that a bank should have a culture that emphasises and demonstrates the importance of internal control. Senior management and the board of directors, in particular, play a crucial role in establishing the importance of internal controls. Their attitudes and actions shape the bank's control culture and promote respect for the policies and procedures in place.

A major challenge for executive management is to ensure that business heads have the freedom to achieve the greatest possible success for their business line, while making sure that they do not take on excessive risk, incur costly errors or fraud, or violate regulations. The more profitable the business line, the harder it is for executive managers to say no to the business head's proposals to increase risk levels or defer addressing a problem. And part of the freedom business managers need is the choice of the most effective risk management techniques for their business line.

The incentive system within the bank – the system of rewards, such as compensation, promotion and business opportunities – is the means by which executive management persuades business managers to seek business success while carefully managing risks and promoting internal control. If business managers are rewarded for asset growth or attracting prestige clients, but not for business profitability, profits may fall short. If managers who advance rapidly generate profits, but ignore control problems and internal auditors, the internal control environment will likely suffer. Setting the appropriate incentives for officers and staff is one of the most difficult tasks of executive management.

Segregation of duties and control activities

Let me now turn to discussing the importance of segregating duties in maintaining a safe and sound operating environment. Under an effective internal control system, staff and managers should not be assigned to conflicting responsibilities. For example, the person or department that controls a bank's disbursement and payments should not also be responsible for reconciling payments to the bank's general ledger. Otherwise, mistakes – or outright fraud – could easily be concealed.

Control activities in general should be an integral part of a bank's day-to-day operations. The control system should define the measures available at each business level to contain risks, such as top-level reviews of transactions, independent checks on exposure limits, or a system of authorisation and verification.

Monitoring activities and correcting deficiencies

In addition to creating controls, it is important to verify that controls are followed. This is the essential principle under the third category of controls, monitoring activities and controls. While boards of directors and senior management are responsible for overseeing the entire bank's adherence to sound policies and procedures, it is important for someone from outside each business line to verify that every manager and every staff member in every business line adheres to the bank's internal controls. This critical task is carried out by the independent audit function, which ensures that everyone is playing by the rules. This is an important principle outlined in the Basel paper, which states that a comprehensive internal audit of the internal control system should be carried out by an independent and well trained staff.

Internal audit also has the broader responsibility of seeing that a bank is complying not only with its own internal policies but also national banking laws and regulations, as well as accounting standards. For internal audit to see that these rules are being followed, it must have the authority to ask questions and get answers from personnel at all levels of the bank. Moreover, for it to be truly independent, the audit function must be able to report its findings directly to the board of directors, free from the influence of the business line leaders or senior management. It is important to remember that all areas of the bank should be audited, whether profitable or not. Experience suggests that activities that are new or rapidly growing or unusually profitable often may pose the greatest risk to the financial stability and performance of the bank in the long run and deserve special attention from the auditors.

Information and communication

Information and communication form the nerve system of an internal control system. Managers make decisions based on the data they have available, and an effective internal control system ensures that accurate and comprehensive internal and external data are collected and disseminated. Those data include information on the risks, the performance, and the financial flows of the bank. Personnel at all levels, therefore, must be able to effectively monitor and measure risks, as well as quickly communicate changes in the overall risk profile to senior members of the bank. The information senior management receives must be reliable, timely, and accessible. The bank's ability to manage the flow of information between groups in the bank helps to promote a highly effective internal control environment.

To have this, managers also need reliable information systems within the bank to monitor the range of its activities. Today, information is increasingly transferred electronically. Although electronic information systems may provide more timely and accessible information, business can grind to a halt if the technology breaks down. Therefore, banks need to have a contingency or business resumption plan, in the event that computer systems fail or that natural disaster strikes.

Conclusion

Although many of the principles which I have discussed with you today are simple steps that can be taken to avoid losses, they should not be overlooked in developing a comprehensive risk management strategy for the bank. In this decade alone, many large and small banks have suffered significant losses because they did not have a sound credit risk management approach and solid internal control mechanisms to effectively manage and assess risks.

The principles of managing credit risk and promoting sound internal controls system, therefore, apply to banks of all sizes. And as banks continue to grow in size and in scope, credit risk management and internal controls become more critical to managing the bank's increasingly complex day-to-day operations. The challenge is to start today by developing and improving the internal controls and risk management processes and procedures that will help banks to maintain safe and profitable operations.