1 The Regulatory Context

1.1 PRECAUTIONARY SURVEILLANCE

One of the aims of precautionary surveillance is to increase the quality of risk management in financial institutions. Generally speaking:

- Institutions whose market activity is significant in terms of contribution to results or expenditure of equity fund cover need to set up a risk management function that is independent of the 'front office' and 'back office' functions.
- When the establishment in question is a consolidating business, it must be a decision-making centre. The risk management function will then be responsible for suggesting a group-wide policy for the monitoring of risks. The management committee then takes the risk management policy decisions for the group as a whole.
- To do this, the establishment must have adequate financial and infrastructural resources for managing the risk. The risk management function must have systems for assessing positions and measuring risks, as well as adequate limit systems and human resources.

The aim of precautionary surveillance is to:

- Promote a well-thought-out and prudent business policy.
- Protect the financial stability of the businesses overseen and of the financial sector as a whole.
- Ensure that the organisation and the internal control systems are of suitable quality.
- Strengthen the quality of risk management.

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1.2 THE BASLE COMMITTEE

We do not propose to enter into methodological details on the adequacy[1] of equity capital in relation to credit, market and operational risks.

On the other hand, we intend to spend some time examining the underlying philosophy of the work of the Basle Committee[2] on banking controls, paying particular attention to the qualitative dynamic (see 1.2.2 below) on the matter of operational risks.

1.2.1 General information

> The Basle Committee on Banking Supervision is a committee of banking supervisory authorities, which was established by the central bank governors of the Group of Ten countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Belgium,

[1] Interested readers should read P. Jorion, *Financial Risk Manager Handbook (Second Edition)*, John Wiley & Sons, Inc. 2003, and in particular its section on regulation and compliance.

[2] Interested readers should consult http://www.bis.org/index.htm.

Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States. It usually meets at the Bank for International Settlements in Basle, where its permanent Secretariat is located.[3]

1.2.1.1 The current situation

The aim of the capital adequacy ratio is to ensure that the establishment has sufficient equity capital in relation to credit and market risks. The ratio compares the eligible equity capital with overall equity capital requirements (on a consolidated basis where necessary) and must total or exceed 100 % (or 8 % if the denominator is multiplied by 12.5). Two methods, one standard and the other based on the internal models, allow the requirements in question to be calculated.

In addition, the aim of overseeing and supervising major risks is to ensure that the credit risk is suitably diversified within the banking portfolios (on a consolidated basis where necessary).

1.2.1.2 The point of the 'New Accord'[4]

> The Basle Committee on Banking Supervision has decided to undertake a second round of consultation on more detailed capital adequacy framework proposals that, once finalised, will replace the 1988 Accord, as amended.
>
> The new framework is intended to align capital adequacy assessment more closely with the key elements of banking risks and to provide incentives for banks to enhance their risk measurement and management capabilities.

The Committee's ongoing work has affirmed the importance of the three pillars of the new framework:

1. Minimum capital requirements.
2. Supervisory review process.
3. Market discipline.

A. First aspect: minimum capital requirements

> The primary changes to the minimum capital requirements set out in the 1988 Accord are in the approach to credit risk and in the inclusion of explicit capital requirements for operational risk. A range of risk-sensitive options for addressing both types of risk is elaborated. For credit risk, this range begins with the standardised approach and extends to the "foundation" and "advanced" internal ratings-based (IRB) approaches. A similar structure is envisaged for operational risk. These evolutionary approaches will motivate banks to continuously improve their risk management and measurement capabilities so as to avail themselves of the more risk-sensitive methodologies and thus more accurate capital requirements.

B. Second aspect: supervisory review process

> The Committee has decided to treat interest rate risk in the banking book under Pillar 2 (supervisory review process). Given the variety of underlying assumptions needed, the Committee

[3] The Bank for International Settlements, Basle Committee on Banking Supervision, *Vue d'ensemble du Nouvel accord de Bâle sur les fonds propres*, Basle, January 2001, p. 1.

[4] Interested readers should also consult: The Bank for International Settlements, Basle Committee on Banking Control, *The New Basle Capital Accord*, January 2001; and The Bank for International Settlements, Basle Committee on Banking Control, *The New Basle Capital Accord: An Explanatory Note*, January 2001.

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believes that a better and more risk-sensitive treatment can be achieved through the supervisory review process rather than through minimum capital requirements. Under the second pillar of the New Accord, supervisors should ensure that each bank has sound internal processes in place to assess the adequacy of its capital based on a thorough evaluation of its risks. The new framework stresses the importance of bank's management developing an internal capital assessment process and setting targets for capital that are commensurate with the bank's particular risk profile and control environment.

C. Third aspect: Market discipline

The Committee regards the bolstering of market discipline through enhanced disclosure as a fundamental part of the New Accord.[5] The Committee believes the disclosure requirements and recommendations set out in the second consultative package will allow market participants to assess key pieces of information on the scope of application of the revised Accord, capital, risk exposures, assessment and management processes, and capital adequacy of banks. The risk-sensitive approaches developed by the Committee rely extensively on banks' internal methodologies giving banks more discretion in calculating their capital requirements. Separate disclosure requirements are put forth as prerequisites for supervisory recognition of internal methodologies for credit risk, credit risk mitigation techniques and asset securitisation. In the future, disclosure prerequisites will also attach to advanced approaches to operational risk. In the view of the Committee, effective disclosure is essential to ensure that market participants can better understand banks' risk profiles and the adequacy of their capital positions.

1.2.2 Basle II and the philosophy of operational risk[6]

In February 2003, the Basle Committee published a new version of the document *Sound Practices for the Management and Supervision of Operational Risk*. It contains a set of principles that make up a structure for managing and supervising operational risks for banks and their regulators.

In fact, risks other than the credit and market risks can become more substantial as the deregulation and globalisation of financial services and the increased sophistication of financial technology increase the complexity of the banks' activities and therefore that of their risk profile.

By way of example, the following can be cited:

- The increased use of automated technology, which if not suitably controlled, can transform the risk of an error during manual data capture into a system breakdown risk.
- The effects of e-business.
- The effects of mergers and acquisitions on system integration.
- The emergence of banks that offer large-scale services and the technical nature of the high-performance back-up mechanisms to be put in place.

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[5] See also Point 1.3, which deals with accounting standards.

[6] This section is essentially a summary of the following publication: The Bank for International Settlements, Basle Committee on Banking Control, *Sound Practices for the Management and Supervision of Operational Risk*, Basle, February 2003. In addition, interested readers can also consult: Cruz M. G., *Modelling, Measuring and Hedging Operational Risk*, John Wiley & Sons, Ltd, 2003; Hoffman D. G., *Managing Operational Risk: 20 Firm-Wide Best Practice Strategies*, John Wiley & Sons, Inc., 2002; and Marshall C., *Measuring and Managing Operational Risks in Financial Institutions*, John Wiley & Sons, Inc., 2001.

- The use of collateral,[7] credit derivatives, netting and conversion into securities, with the aim of reducing certain risks but the likelihood of creating other kinds of risk (for example, the legal risk – on this matter, see Point 2.2.1.4 in the section on 'Positioning the legal risk').
- Increased recourse to outsourcing and participation in clearing systems.

1.2.2.1 A precise definition?

Operational risk, therefore, generally and according to the Basle Committee specifically, is defined as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events'. This is a very wide definition, which includes legal risk but excludes strategic and reputational risk.

The Committee emphasises that the precise approach chosen by a bank in the management of its operational risks depends on many different factors (size, level of sophistication, nature and complexity of operations, etc.). Nevertheless, it provides a more precise definition by adding that despite these differences, clear strategies supervised by the board of directors and management committee, a solid 'operational risk' and 'internal control' culture (including among other things clearly defined responsibilities and demarcation of tasks), internal reporting, and plans for continuity[8] following a highly damaging event, are all elements of paramount importance in an effective operational risk management structure for banks, regardless of their size and environment.

Although the definition of operational risk varies *de facto* between financial institutions, it is still a certainty that some types of event, as listed by the Committee, have the potential to create substantial losses:

- Internal fraud (for example, insider trading of an employee's own account).
- External fraud (such as forgery).
- Workplace safety.
- All matters linked to customer relations (for example, money laundering).
- Physical damage to buildings (terrorism, vandalism etc.).
- Telecommunication problems and system failures.
- Process management (input errors, unsatisfactory legal documentation etc.).

1.2.2.2 Sound practices

The sound practices proposed by the Committee are based on four major themes (and are subdivided into 10 principles):

- Development of an appropriate risk management environment.
- Identification, assessment, monitoring, control and mitigation in a risk management context.
- The role of supervisors.
- The role of disclosure.

[7] On this subject, see 2.1.1.4.
[8] On this subject, see 2.1.1.3.

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Developing an appropriate risk management environment

Operational risk management is first and foremost an organisational issue. The greater the relative importance of ethical behaviour at all levels within an institution, the more the risk management is optimised.

The first principle is as follows. The board of directors should be aware of the major aspects of the bank's operational risks as a distinct risk category that should be managed, and it should approve and periodically review the bank's operational risk management framework. The framework should provide a firm-wide definition of operational risk and lay down the principles of how operational risk is to be identified, assessed, monitored, and controlled/mitigated.

In addition (second principle), the board of directors should ensure that the bank's operational risk management framework is subject to effective and comprehensive internal audit[9] by operationally independent, appropriately trained and competent staff. The internal audit function should not be directly responsible for operational risk management.

This independence may be compromised if the audit function is directly involved in the operational risk management process. In practice, the Committee recognises that the audit function at some banks (particularly smaller banks) may have initial responsibility for developing an operational risk management programme. Where this is the case, banks should see that responsibility for day-to-day operational risk management is transferred elsewhere in a timely manner.

In the third principle senior management should have responsibility for implementing the operational risk management framework approved by the board of directors. The framework should be consistently implemented throughout the whole banking organisation, and all levels of staff should understand their responsibilities with respect to operational risk management. Senior management should also have responsibility for developing policies, processes and procedures for managing operational risk in all of the bank's material products, activities, processes and systems.

Risk management: Identification, assessment, monitoring and mitigation/control

The fourth principle states that banks should identify and assess the operational risk inherent in all material products, activities, processes and systems. Banks should also ensure that before new products, activities, processes and systems are introduced or undertaken, the operational risk inherent in them is subject to adequate assessment procedures.

Amongst the possible tools used by banks for identifying and assessing operational risk are:

- *Self- or risk-assessment.* A bank assesses its operations and activities against a menu of potential operational risk vulnerabilities. This process is internally driven and often incorporates checklists and/or workshops to identify the strengths and weaknesses of the operational risk environment. Scorecards, for example, provide a means of translating qualitative assessments into quantitative metrics that give a relative ranking of different types of operational risk exposures. Some scores may relate to risks unique to a specific business line while others may rank risks that cut across business lines. Scores may address inherent risks, as well as the controls to mitigate them. In addition, scorecards may be used by banks to allocate economic capital to business lines in relation to performance in managing and controlling various aspects of operational risk.

[9] See 2.2.1.3.

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- *Risk mapping*. In this process, various business units, organisational functions or process flows are mapped by risk type. This exercise can reveal areas of weakness and help prioritise subsequent management action.
- *Risk indicators*. Risk indicators are statistics and/or metrics, often financial, which can provide insight into a bank's risk position. These indicators tend to be reviewed on a periodic basis (such as monthly or quarterly) to alert banks to changes that may be indicative of risk concerns. Such indicators may include the number of failed trades, staff turnover rates and the frequency and/or severity of errors and omissions.
- *Measurement*. Some firms have begun to quantify their exposure to operational risk using a variety of approaches. For example, data on a bank's historical loss experience could provide meaningful information for assessing the bank's exposure to operational risk.

In its fifth principle, the Committee asserts that banks should implement a process to regularly monitor operational risk profiles and material exposures to losses. There should be regular reporting of pertinent information to senior management and the board of directors that supports the proactive management of operational risk.

In addition (sixth principle), banks should have policies, processes and procedures to control and/or mitigate material operational risks. Banks should periodically review their risk limitation and control strategies and should adjust their operational risk profile accordingly using appropriate strategies, in light of their overall risk appetite and profile.

The seventh principle states that banks should have in place contingency and business continuity plans to ensure their ability to operate on an ongoing basis and limit losses in the event of severe business disruption.

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Role of supervisors

In the eighth principle banking supervisors should require that all banks, regardless of size, have an effective framework in place to identify, assess, monitor and control/mitigate material operational risks as part of an overall approach to risk management.

In the ninth principle supervisors should conduct, directly or indirectly, regular independent evaluation of a bank's policies, procedures and practices related to operational risks. Supervisors should ensure that there are appropriate mechanisms in place which allow them to remain apprised of developments at banks.

Examples of what an independent evaluation of operational risk by supervisors should review include the following:

- The effectiveness of the bank's risk management process and overall control environment with respect to operational risk;
- The bank's methods for monitoring and reporting its operational risk profile, including data on operational losses and other indicators of potential operational risk;
- The bank's procedures for the timely and effective resolution of operational risk events and vulnerabilities;
- The bank's process of internal controls, reviews and audit to ensure the integrity of the overall operational risk management process;
- The effectiveness of the bank's operational risk mitigation efforts, such as the use of insurance;
- The quality and comprehensiveness of the bank's disaster recovery and business continuity plans; and

- The bank's process for assessing overall capital adequacy for operational risk in relation to its risk profile and, if appropriate, its internal capital targets.

Role of disclosure

Banks should make sufficient public disclosure to allow market participants to assess their approach to operational risk management.

1.3 ACCOUNTING STANDARDS

The financial crisis that started in some Asian countries in 1998 and subsequently spread to other locations in the world revealed a need for reliable and transparent financial reporting, so that investors and regulators could take decisions with a full knowledge of the facts.

1.3.1 Standard-setting organisations[10]

Generally speaking, three main standard-setting organisations are recognised in the field of accounting:

- The IASB (International Accounting Standards Board), dealt with below in 1.3.2.
- The IFAC (International Federation of Accountants).
- The FASB (Financial Accounting Standards Board).

The International Federation of Accountants, or IFAC,[11] is an organisation based in New York that combines a number of professional accounting organisations from various countries. Although the IASB concentrates on accounting standards, the aim of the IFAC is to promote the accounting profession and harmonise professional standards on a worldwide scale.

In the United States, the standard-setting organisation is the Financial Accounting Standards Board or FASB.[12] Although it is part of the IASB, the FASB has its own standards. Part of the FASB's mandate is, however, to work together with the IASB in establishing worldwide standards, a process that is likely to take some time yet.

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1.3.2 The IASB[13]

In 1998 the ministers of finance and governors of the central banks from the G7 nations decided that private enterprises in their countries should comply with standards, principles and good practice codes decided at international level. They then called on all the countries involved in the global capital markets to comply with these standards, principles and practices.

Many countries have now committed themselves, including most notably the European Union, where the Commission is making giant strides towards creating an obligation for all quoted companies, to publish their consolidated financial reports in compliance with IAS standards.

The IASB or International Standards Accounting Board is a private, independent standard-setting body based in London. In the public interest, the IASB has developed

[10] http://www.cga-canada.org/fr/magazine/nov-dec02/Cyberguide_f.htm.
[11] Interested readers should consult http://www.ifac.org.
[12] Interested readers should consult http://www.fasb.org.
[13] Interested readers should consult http://www.iasc.org.uk/cmt/0001.asp.

a set of standardised accounting rules that are of high quality and easily understandable (known as the IAS Standards). Financial statements must comply with these rules in order to ensure suitable transparency and information value for their readers.

Particular reference is made to Standard IAS 39 relating to financial instruments, which is an expression of the IASB's wish to enter the essence of balance-sheet items in terms of *fair value*. In particular, it demands that portfolios derived from cover mechanisms set up in the context of asset and liability management be entered into the accounts at market value (see Chapter 12), regardless of the accounting methods used in the entries that they cover.

In the field of financial risk management, it should be realised that in addition to the impact on asset and liability management, these standards, once adopted, will doubtless affect the volatility of the results published by the financial institutions as well as affecting equity capital fluctuations.

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