The Evolving Concept of Operational Risk and Its Regulatory Treatment

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I. INTRODUCTION

OPERATIONAL risk (OpR) is one of the main risks that financial institutions face and has been given significant attention in recent years. Traditionally, management of OpR was viewed as a function of a specific section of a financial institution, namely, the back office. The ill functioning of back offices did contribute to some of the largest OpR failures. Nevertheless, OpR is a managerial issue which requires institution-wide attention.

The importance of OpR is made apparent from its increasing recognition by regulators. The Basel Committee on Banking Supervision (Basel Committee) proposed new guidelines for capital adequacy purposes in 1999, and risk assessment of OpR is an important component of their new capital adequacy regime. Financial institutions are also dedicating more financial resources and risk management tools to address OpR.

The difficulty in managing OpR is compounded by the fact that its main cause is human error. While eradicating human error is nearly impossible, controlling it often requires greater resources. Further, OpR does not enjoy the benefit of market discipline that other risks may have and there exist a variety of definitions reflecting individual financial insti-
tutions' approaches to OpR management.5

Until recently, the absence of sufficient attention to OpR could be explained partly as a result of the difficulties in its identification, and partly because the benefit of a better managed OpR profile was not apparent to financial institutions. Ideally, managing OpR encompasses the efforts of the entire financial institution to maintain a capital charge against the OpR.6 Having "better OpR" management was not regarded as a value that shareholders would embrace or investors would consider in their investment decisions. Financial institutions preferred to maintain OpR as minimally as permissible. There was a race to the bottom of OpR until discussions on revising the Capital Accord of the Basel Committee started in 1999. Other factors that have worked towards increased attention to OpR include: greater use of insurance towards OpR; greater outsourcing of services; higher capital adequacy and regulatory requirements for OpR; and stricter requirements by providers of payment, clearing and settlement services.7

The significance of OpR is only beginning to be understood. The current level of research on the subject is minimal,8 and one pundit has described academic research as "impractical."9 The Basel Committee's work has already resulted in a surge in OpR research and discussion, and it is likely to result in greater emphasis on regulating OpR and an increase in the regulatory burden.10

To form a constructive view on OpR and its regulatory implications, it is necessary to review the concept of OpR and related issues. This paper aims to consider the various concepts of OpR and the emerging regulatory focuses. While the importance of OpR is abundantly clear, the ensuing regulatory burden can be viewed with some skepticism, since OpR is likely to incur real term monetary consequences as a result of the Basel Committee's capital adequacy requirements.

In order to better understand OpR, the next section reviews the vari-

5. Credit risk and market risk are risks that the market can assess with the information disclosed and analyzed by market participants.
8. In a search conducted on March 14, 2002 on Westlaw and Lexis for the terms "operation risk" and "operational risk," not one document could be found written exclusively on operational risk. Further, not one of the documents that were retrieved had more than a section dedicated to operational risk.
10. Operational risk has been the subject of a conference at the Federal Reserve Bank of Chicago and various consultancies are offering their services on it as well. See Fed. Reserve Bank of Chicago, Operational Risk, at www.chicagofed.org/bankinfo/reg/bankregulation/opsrisk.cfm (last visited Mar. 13, 2003).
ous concepts of OpR.\textsuperscript{11} The third section analyzes the Basel Committee’s recent endeavors to assess OpR. In the fourth section, a series of regulatory approaches to OpR are examined. The fifth section appraises the issues related to the regulatory treatment of OpR. This paper concludes by providing a subjective view on OpR and proposing measures that may enhance the safety and soundness of the financial system through adequate evaluation of OpR.

I. THE CONCEPT OF OpR

A. Definitions of OpR

OpR is generally defined as “the risk of losses resulting from inadequate systems, controls or human error.”\textsuperscript{12} The Basel Committee has redefined OpR as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.”\textsuperscript{13} The problem with OpR is that the definitions are broad and overlap with other risks that a financial institution faces.\textsuperscript{14} Many financial institutions do not manage OpR as an independent risk, instead classifying any risk not categorized as credit or market risk, as OpR.\textsuperscript{15} Some financial institutions may include model risk in the definition of OpR, enlarging OpR in a comprehensive conceptual framework. Model risk is the risk of loss that may emanate from the inappropriate use of modeling techniques for non-vanilla\textsuperscript{16} and highly structured transactions.\textsuperscript{17} This may be appropriate for financial institutions whose transactions are heavily geared towards highly structured products.

When OpR is defined as risks that are not credit risk or market risk, the equation would be as follows:

\[
\text{OpR} = \text{Total risk} - \text{Credit risk} - \text{Market risk}
\]

This definition of OpR includes risks such as strategic risk and reputational risk that are not included in the proposed Basel definition. This is because the definition of the Basel Committee focuses on the cause of

\textsuperscript{11} Some writers refer to operational risk as “operation risk” but for the sake of consistency, this paper uses the term “operational risk” following the example of the Basel Committee.
\textsuperscript{12} GROUP OF THIRTY, GLOBAL DERIVATIVES: PRACTICES AND PRINCIPLES (July 1993).
\textsuperscript{13} BASEL COMMITTEE ON BANKING SUPERVISION, WORKING PAPER ON THE REGULATORY TREATMENT OF OPERATIONAL RISK 2 (Sept. 2002).
\textsuperscript{14} This was recognized in the early stage of Basel’s work on operational risk. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 3, at 3.
\textsuperscript{15} Id.
\textsuperscript{16} Non Plain Vanilla Swaps are an agreement between two or more parties to exchange a fixed rate of interest (cash flows equal to interest at a predetermined fixed rate on a notional principal amount) for a floating rate of interest over a specified period of time. The market level of the floating rate is typically LIBOR (London Interbank Offered Rate). The currencies of the two sets of interest cash flows are the same. This is also known as a pay-fixed swap.
\textsuperscript{17} Operational Risk Management Issues, CAPITAL MARKETS NEWS (Federal Bank of Chicago), June 2001, at 6.
operational losses.\textsuperscript{18} It is likely that the above equation that led to a simplified definition of OpR was the result of the Basel Committee's previous bundling of all risks other than credit and market risk into one. The 1988 Capital Accord\textsuperscript{19} of the Basel Committee can be interpreted as belittling the significance of OpR by, in practice, defining it as the residual of total risks from credit and market risk.\textsuperscript{20} To rectify this position, the Basel Committee put forward the view that the 8 percent capital adequacy ratio was meant to cover operational risk as well, although no explicit measurement was provided until it proposed an amendment to the Capital Accord in 1999.\textsuperscript{21}

Ultimately, the definition that each financial institution adopts in terms of operational risk will depend on the risk profile of each institution. It is likely that provided the Basel Committee's definition of OpR is accepted, no financial institution will use a narrower definition such as "risk that is managed by the risk management office."\textsuperscript{22} Giving OpR such a narrow definition would lead to insufficient capital coverage relative to the proposed Basel capital requirement. Individual financial institutions may adopt a broader definition than that of the Basel Committee, depending on their activities and their riskiness.

B. RATIONALE FOR REGULATING OpR

The regulatory treatment of OpR is part of the "preventive regulation" that regulators require for the safety and soundness of the financial system. By maintaining a reasonable level of OpR, financial institutions are able to enjoy the confidence of the markets, and the financial system will benefit from less systemic risk posed by financial institutions. The regulation of OpR is viewed as forming part of this preventive regulation as opposed to the regulation for the management of financial fragility.\textsuperscript{23}

Bank regulation is aimed at preserving the safety of the financial system and managing any systemic risks. Prudential regulation seeks to safeguard the safety and soundness of financial institutions vis-à-vis

\begin{itemize}
\item \textsuperscript{18} BASEL COMMITTEE ON BANKING SUPERVISION, CONSULTATIVE DOCUMENT: OPERATIONAL RISK – SUPPORTING DOCUMENT TO THE NEW BASEL CAPITAL ACCORD 2 (Jan. 2001).
\item \textsuperscript{19} BASEL COMMITTEE ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (July 1988) [hereinafter INTERNATIONAL CONVERGENCE]. The 1988 Basel Accord only included credit risk but subsequent agreements led to the inclusion of market risk in 1996. BASEL COMMITTEE ON BANKING SUPERVISION, AMENDMENT TO THE CAPITAL ACCORD TO INCORPORATE MARKET RISK (Jan. 1996) [hereinafter AMENDMENT TO THE CAPITAL ACCORD].
\item \textsuperscript{20} The 1988 Capital Accord requires an overall capital adequacy level of 8 percent of total risk-weighed assets for internationally active banks.
\item \textsuperscript{21} BASEL COMMITTEE ON BANKING SUPERVISION, supra note 6.
\item \textsuperscript{22} See Doerig, supra note 9.
\item \textsuperscript{23} Regulation for the management of financial fragility consists of prompt correct action and early structural intervention, as well as bank restructuring measures. See Mamiko Yokoi-Arai, Financial Stability Issues: The Case of East Asia § 2.2 (2002).
\end{itemize}
depositors. Systemic regulation ensures the safety and soundness of financial institutions for systemic concerns, especially in relation to the social cost that a failure of a financial institution can cause. OpR is primarily regulated for the purpose of prudential reasons. It is necessary for a financial institution to maintain a level of OpR that will not deplete its profits and subsequently its capital base. Appropriate OpR management will also enhance the confidence of the financial and capital markets.

It is not often that OpR leads to a systemic threat, but it is not unheard of. When a financial institution accumulates losses as a result of bad OpR management and this results in the failure of that institution, there may be systemic repercussions. If the failed institution is large or if its OpR management problem is viewed as common among others, the failure could lead to loss of confidence in other institutions. For example, if the risk culture prevailing in the market is not prudent, the OpR management of other institutions may be tainted by this tendency. The failure of Barings could have been described as such an occasion. Although the failure of Barings did not lead to intervention by the Bank of England, as either a lender of last resort function or with a bail-out package, there were significant systemic concerns at the Bank of England. This indicates the possibility that if OpR is not managed appropriately, it might spin into a systemic risk.

C. Elements of OpR

OpR can be categorized into five elements: people, structure, processes, systems, and external. Large losses that result from OpR are usually not the result of a single element but a combination of multiple elements.

People are a key factor for OpR management. The understanding of those involved in OpR management is essential, and the risk culture of an institution to seek unnecessary risk needs to be contained. Both employer and employee are required to work with integrity and honesty, and the underlying corporate culture will strongly influence their attitudes.

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25. Id.
26. When banks experience losses, the first source of liquidity it will resort to is its profits, and subsequently its capital. Then the capital is eroded sufficiently, the bank will be in threat of insolvency given that banks are operated on a fractional reserve system. See Yokoi-Arai, supra note 23, at Ch. 2, II.A.1(a).
27. Barings, which was one of the oldest establishments in the City of London, collapsed as a result of massive losses incurred by Baring Futures (Singapore) Pte Ltd. in 1995. The losses were a result of unauthorized proprietary trading in exchange financial derivatives by Nick Leeson. Joseph J. Norton & Christopher D. Olive, *Globalization of Financial Risks and International Supervision of Banks and Securities Firms: Lessons from the Barings Debacle*, 10 INT’L L. 301, 305 (1996).
OpR also involves control of remuneration to employees, which in recent years has maintained a steady rise with the boom in the stock markets.\textsuperscript{29} It is essential that financial institutions retain high caliber staff to manage OpR appropriately.\textsuperscript{30} At the same time, remuneration plans that are too closely linked with profits can cause increased OpR.\textsuperscript{31} The strong link between profitability and bonuses is said to have contributed to the failure of Barings.\textsuperscript{32} While employees need the incentive to make profits, there is an equally felt need to balance that with the knowledge that bonuses can create significant short-term risks. Financial institutions can control this risk by balancing the compensation system so as to reward medium to longer-term profits.

Structure encompasses corporate governance, communication, and outsourcing. Financial institutions have tended to leave the management of OpR to line managers which, in effect, limits the risk exposure of senior management.\textsuperscript{33} This is now evolving with the recognition of the importance of OpR management. Generally, a two-level management framework is recommended: business line ownership (bottom-up approach), and centralized macro-management by the risk management department (top-down approach).\textsuperscript{34} Structuring OpR control over the two levels is important for sound management.

A good operational structure will influence the incentive structure of the financial institution. It has been identified that poor internal governance was a factor for most instances of unsound operations of banks.\textsuperscript{35} When internal controls of financial institutions are weak and prudential regulation lax, line managers and senior management have less incentive to operate soundly. The scope of this moral hazard will increase when management is not responsible for controlling OpR and governments have a policy of “non-failure” or “too big to fail” for financial institutions. For OpR to be well managed, senior management need to be “bought-in” or participate in OpR management.\textsuperscript{36} Regulators need to scrutinize management with the “fit and proper” test.\textsuperscript{37}

\begin{itemize}
  \item \textsuperscript{29} A remuneration policy has a large role as a management tool. “If large bonuses are paid to employees who make money but have a cavalier approach to compliance, it is likely to encourage similar behaviour in others.” Daniel Davies, \textit{Remuneration and Risk}, Fin. Stability Rev. (Bank of England), Spring 1997, at 18.
  \item \textsuperscript{30} \textit{Basel Committee on Banking Supervision, Risk Management Guidelines for Derivatives} ¶ 20 (July 1994).
  \item \textsuperscript{31} \textit{Basel Committee on Banking Supervision, Sound Practices for the Management and Supervision of Operational Risk} 6 (Dec. 2001).
  \item \textsuperscript{35} This was investigated through the analysis of banking vulnerabilities of IMF member countries. \textit{Carl-Johan Lindgren et al., Bank Soundness and Macroeconomic Policy}, 106-08 (1996).
  \item \textsuperscript{36} \textit{See Operational Risk Management Issues, supra} note 34, at 7.
  \item \textsuperscript{37} \textit{See infra} Part IV.A.
\end{itemize}
The restructuring of internal controls has been a key area of bank restructuring in countries that experienced banking crisis.\textsuperscript{38} Key elements of operational restructuring are listed as following:\textsuperscript{39}

- Formulating a business plan that focuses on core products and competencies;
- Reducing operating costs by cutting staff and eliminating branches where appropriate, ceasing unprofitable activities, and disposing of unproductive assets;
- Implementing new technology and improving systems of accounting, asset valuation, and internal controls and audits;
- Establishing and enforcing internal procedures for risk pricing, credit assessment and approval, monitoring the condition of borrowers, ensuring payment of interest and principal, and active loan recovery; and,
- Creating internal incentive structures to align the interests of directors, managers, and staff with those of the owners.

The role that processes play in OpR is great. With the daily, prudent processing of financial transactions, control of OpR can be greatly improved. Normally, financial transactions and their documentation are double checked to ensure their accuracy. This is standard practice not only by financial institutions but also in any corporate environment. The level of authorization for each transaction should be clearly noted in internal procedures. When these simple steps are not followed, OpR can become easily apparent. The simplicity of these steps belies the danger of skipping those steps. Lack of adequate processing can also lead to failure to comply with regulations.\textsuperscript{40} Legal risks become involved in procedure integrity.

The fact that finance is made dependent on information technology creates another form of OpR; OpR, or system risk, materializes when a breach of computer systems, networks or technologies occurs. This is well reflected in the Consultancy Paper of the Financial Services Authority.\textsuperscript{41} There it is pointed out that “the increasing automation of systems and our reliance on IT has the potential to transform risks from minor manual processing errors to major systematic failures.”\textsuperscript{42} Whereas OpR previously focused on the manual reconciliation of the front and back office, it now lies with the integrity of the operating system and its information security.\textsuperscript{43}

External causes of OpR can range from fraud to natural disasters.\textsuperscript{44} While the cause of external events involve other OpR elements, such as

\textsuperscript{38} William E. Alexander et al., \textit{Systemic Bank Restructuring and Macroeconomic Policy} 61 (1997).
\textsuperscript{39} Id. at 62.
\textsuperscript{40} See Doerig, \textit{supra} note 9, at 20.
\textsuperscript{41} Fin. Servs. Auth., \textit{Operational Risk Systems and Controls} (Consultative Paper No. 142, July 2002).
\textsuperscript{42} Id. at 14.
\textsuperscript{43} See Operational Risk Management Issues, \textit{supra} note 34, at 7.
\textsuperscript{44} See Doerig, \textit{supra} note 9, at 21.
system and procedure failure, the primary cause is often the external event itself.

D. Measurements of OpR

Measurement of OpR has been carried out by various financial institutions, but a consensus on methodology has yet to emerge.\textsuperscript{45} Measuring OpR has become an important focus of OpR as a result of the proposed capital charges on OpR by the Basel Committee\textsuperscript{46} and because of the desire to reduce operational costs.\textsuperscript{47} If a financial institution is capable of developing a credible measurement of OpR, it may be able to use the Advanced Measurement Approach of the Basel Committee.\textsuperscript{48} This will allow financial institutions to minimize the capital charges for OpR according to their risk profile. Measuring OpR can be roughly categorized into the top-down approach and the bottom-up approach.\textsuperscript{49} The top-down approach is measured by the use of a variable such as financial indexes and profit.\textsuperscript{50} Data can be easily collected for this approach. The bottom-up approach is based on collecting data of loss events in each business line. The bottom-up approach consists of the matrix approach that has been adopted by the Basel Committee.\textsuperscript{51} The matrix approach enables financial institutions to identify which event entails the greatest impact and which business line is most susceptible to OpR.\textsuperscript{52} The data is then analyzed, enabling models to be created according to that data.

However, the nature of OpR and the immaturity of measurement methodology make it difficult for financial institutions to depend solely on quantitative measurement tools to assess OpR. Qualitative assessment of OpR will remain a key component of supervision;\textsuperscript{53} some regulators have already explicitly stated this in their policy.\textsuperscript{54}

II. BASEL TREATMENT OF OPERATION RISK

A. Proposal for a New Capital Accord

In June 1999, the Basel Committee on Banking Supervision embarked on a revision of its Capital Accord,\textsuperscript{55} publishing a consultative package on

\textsuperscript{45} JOSE A. LOPEZ, WHAT IS OPERATIONAL RISK? (FRBSF Economic Letter Number 2002-02, Jan. 25, 2002).
\textsuperscript{46} See infra Part III.
\textsuperscript{48} See infra Part III.
\textsuperscript{49} See e.g., MORI, supra note 47.
\textsuperscript{50} Id.
\textsuperscript{51} See infra Part III. B.
\textsuperscript{52} See LOPEZ, supra note 45.
\textsuperscript{53} The Basel Committee makes the test of qualitative assessment the condition for using the more sophisticated approaches to capital adequacy for OpR. See infra Part III.
\textsuperscript{54} FIN. SERVS. AUTH., supra note 41, at 17.
\textsuperscript{55} AMENDMENT TO THE CAPITAL ACCORD, supra note 19.
the new proposed Accord. The objective of the proposals was to provide a framework that is more sensitive and responsive to risks. In view of the complexity and sophistication of internationally active banks, it proposed a menu of approaches to measuring regulatory capital. This was intended to offer greater flexibility and comprehensiveness to regulatory capital while simplifying the framework of its measuring.

The proposals related to OpR are part of the First Pillar of the new Accord. The first pillar consists of menus of approaches to measure credit risk and OpR. The measurement for market risk remains unchanged. The three risks comprise the denominator of the equation that calculates the capital adequacy ratio.

Previously, OpR was not proposed as part of the Capital Accord. While the 1988 Capital Accord only set a capital requirement for credit risk, it was intended that the overall capital requirement cover other risks as well. In 1996, market risk was given separate capital charges. This revision was the first attempt by the Basel Committee to introduce specific capital charges for OpR.

**B. OpR IN THE FRAMEWORK OF THE NEW PROPOSALS**

The Basel Committee initiated work on OpR in 1998. The Risk Management Sub-group conducted research by interviewing major international banks on the treatment of OpR, and it concluded that allocating regulatory capital charges to OpR was an effective means to create an incentive for better management of OpR. This conclusion is also deemed as the Basel Committee's recognition that OpR can be substantial. The approaches to OpR are intended to make a better approximation of the actual level of OpR rather than create a buffer for overall banking risks.

56. See Basel Committee on Banking Supervision, supra note 6.
57. The Basel Committee has admitted that while the new Accord has resulted in being less prescriptive, it has also increased the complexity of the framework. See Basel Committee on Banking Supervision, supra note 2, at 2.
58. Of the three pillars that construct the new Accord, the first pillar consists of minimum capital requirement, the second pillar of supervisory review process, and the third pillar of market discipline.
59. Capital adequacy ratio is calculated by: bank's capital ratio (minimum 8%) = (total capital) / (credit risk + market risk + operational risk)
60. The 1988 Capital Accord set forth the method of measuring capital, the numerator of the capital adequacy ratio and only mentions that risks other than credit risk should be taken into account when assessing capital adequacy. See International Convergence, supra note 19, ¶ 8. Operational risk and market risk are not specifically mentioned, but were subsequently examined by the Basel Committee. Operational risk was first considered by the Basel Committee in 1994. See Basel Committee on Banking Supervision, supra note 30.
61. Amendment to the Capital Accord, supra note 19.
63. Basel Committee on Banking Supervision, supra note 18, at 1.
64. The capital buffer introduced by the 1988 Capital Accord implies that the buffer covers credit and other risks.
Through the study in 1998, various aspects of OpR were identified. The new Capital Accord proposals build upon the findings of the 1998 report. The findings of this report stress the need for data on the cost of loss events related to OpR. This data would be used to measure OpR, which requires the estimation of the "probability of an operational loss event and the potential size of loss." The activities of the Risk Management Group of the Basel Committee have concentrated on collecting from banks data relative to the losses experienced for operational incidents in order to reach an agreement on the definition of OpR, and to contemplate the appropriate risk exposure for each component of OpR. This was conducted though the "Quantitative Impact Study" (QIS) distributed by the Basel Committee in April 2001. The objective of the QIS was to grasp the impact that the newly proposed capital requirements would have upon banks.

The OpR component of the QIS identified OpR losses over the period of 1998 to 2001. Banks were obliged to classify operational losses into eight business lines and seven categories of loss events. Loss events were further categorized into twenty-one sub-categories of loss event types.

The detail of loss events makes clear the intent of the regulators to have banks scrutinize their operations and identify the weak and strong areas that call for appropriate capital charges depending on the risk exposure to each loss event.

The data collected creates a vast database on the losses that banks have experienced in each business line. Through this information, the Basel Committee is attempting to develop the appropriate framework for measuring OpR and the subsequent regulatory capital within the overall framework of capital adequacy.

C. CAPITAL CHARGE FOR OpR

It was initially proposed that OpR would compose 20 percent of the overall regulatory capital. However, as a result of industry comments, the ratio of OpR to the overall regulatory capital charge has now been

65. The 1998 report discusses management oversight, risk management and role of supervisor. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 3.
66. See id. at 4.
67. Id.
68. BASEL COMMITTEE ON BANKING SUPERVISION, QUANTITATIVE IMPACT STUDY (QIS): QIS QUESTIONNAIRE (Apr. 10, 2001) (The Quantitative Impact Study was carried out in a more limited style in 2000).
69. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 13, Annex 2, at 21.
70. Although this database is not comprehensive enough to provide an adequate picture of the operational risk losses, it is perhaps one of the widest ranging databases available.
71. Through the QIS, the Basel Committee intends to identify the appropriate regulatory capital for operational risk and at the same time specify the level of capital required for credit and market risk. As a result, it is intended that the capital charges for credit and market risk will decrease. BASEL COMMITTEE ON BANKING SUPERVISION, QIS2-OPERATIONAL RISK LOSS DATA-4 MAY 2001 2 (May 4, 2001).
72. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 18, at 5.
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reduced to 12 percent, which is envisaged to reflect a more realistic view of OpR. This implies that for every asset, 0.96 percent of capital must be put aside to satisfy the regulatory requirement for OpR. This is the minimal level, provided that the minimum regulatory capital for OpR is 12 percent of the overall regulatory capital and a capital adequacy ratio of 8 percent. Because internationally active banks usually maintain a higher level of capital adequacy ratio, they are likely to put 1.1 to 1.3 percent of their asset aside for regulatory capital purposes. This is a significant risk factor for OpR, demonstrating a considerable level of losses experienced by banks from OpR.

D. Three Approaches to Measuring OpR

The Basel Committee has proposed three frameworks for measuring OpR: the basic indicator approach (BIA), the standardized approach, and the advanced measurement approach (AMA). The BIA is envisaged for use by smaller banks with a simple range of business activities. OpR capital is calculated by linking a single indicator to a fixed percentage. The Basel Committee has proposed to use gross income for the indicator and 17 to 20 percent as the capital requirement for OpR. Due to the simplicity of the BIA, supervisors are not likely to permit internationally active banks and banks with significant OpR exposure to apply the BIA for their OpR capital.

The Standardized Approach goes a step further in refining the approach to OpR losses specific to the bank. The bank's activities are divided into business lines, and for each business line an indicator to reflect the size or volume of the bank's activity is identified. For the sake of simplicity and lack of evidence of greater risk sensitivity in other indica-

73. Basel Committee on Banking Supervision, supra note 13, at 3.
74. This is calibrated for internationally active banks that have a capital requirement of 8 percent of assets, and provided that operational risk is 12 percent of this overall capital.
75. This is based on the assumption that internationally active banks have a capital adequacy ratio of 9 to 11 percent.
76. The Advanced Measurement Approach (AMA) was initially proposed as the Internal Measurement Approach (IMA) in the Consultative Document, but was subsequently modified to AMA. This was due to the lack of measurement experience of operational risk in the industry and the lack of data to support any specific approach to internal measurement of operational risk was inappropriate. Basel Committee on Banking Supervision, supra note 13, at 5.
77. Basel Committee on Banking Supervision, supra note 18, at 6.
78. Id. The Basel Committee initially proposed a 30 percent of gross income for operational risk capital in its Consultative Document. However, as a result of the QIS, many banks commented that this would actually lead to an increased level of overall capital. As a result, the Basel Committee is now proposing a 17 to 20 percent level of gross income. Basel Committee on Banking Supervision, supra note 13, at 4.
79. Id. at 11.
For each business line, the supervisor determines a capital charge that would be a percentage of the indicator, in this case gross income, reflecting the OpR loss experienced in the given business line. The summation of the capital charges across the business lines is the total capital charge for OpR. In order to qualify for the Standardized Approach a bank must meet the qualifying criteria set out by the supervisor. The qualifying criteria consist of effective risk management and control, and of measurement and validation of OpR.81

The AMA is the most sophisticated among the three proposed approaches, and it relies on the internal risk measurement of OpR losses by the bank. It is the most risk sensitive and is likely to decrease the regulatory capital requirement for OpR. Banks would be permitted to use their internal OpR measurement system, subject to qualitative and quantitative standards. The risk estimated would be subject to a floor level, which is a certain percentage of the OpR capital of the Standardized Approach. It is proposed that the floor will be set at 75 percent of the Standardized Approach’s capital charge subject to periodic revisions.82

The qualifying and quantitative standards form an important requirement of the AMA. The qualifying criteria would address the bank’s OpR management environment, processes, and risk control efforts.83 The quantitative standards would include a supervisory soundness standard that all internally generated risk estimates would be required to meet.84 The bank would have to be able to identify the losses from OpR over the past five years.85

E. Qualitative Management of OpR

To supplement the new Capital Accord proposals and the process of calibrating OpR losses, the Basel Committee has proposed a paper on the “Sound Practices for the Management and Supervision of Operational Risk” (Sound Practices).86 This guideline is part of both Pillars 1 and 2 of

80. Initially in the Consultative Document, the indicator for each business line varied between gross income, annual average assets, annual settlement throughput, and total funds under management. Basel Committee on Banking Supervision, supra note 18, at 7. However, as a result of the QIS, the proposal was simplified to only use gross income as the indicator for the Standardized Approach. Id.
81. Id. at 11.
82. Id. at 6.
83. See id. Annex 1 at 16.
84. See id. Annex 1 at 18.
85. See id. Annex 1 at 19, point (1).
86. See Basel Committee on Banking Supervision, Sound Practices for the Management and Supervision of Operational Risk (July 2002) [hereinafter Sound Practices] (revises an early version of this paper, titled the same, dated December 2001). The revisions made in the July 2002 version reflect industry concern over being tied to adopt strategies or taking specific actions. Also, the “measurement” of OpR has been changed to “assessment” so as to eradicate the use of quantitative measurements which to date are not satisfactory. See supra Part II.D.
the new Capital Accord proposals. It provides a process of supervisory review of OpR and clarifies the OpR management system required by a bank.

Developing an OpR management system and creating an environment that adheres to safety and soundness standards is essential for banks to qualify for any of the three approaches to measure OpR. Further, the principles in Sound Practices encourages banks to dedicate greater resources for effective OpR management and compliments the work on minimum regulatory capital for OpR. The principles of the Sound Practices are provided in the Annex of this paper.

The Sound Practices stress the role of management in overseeing an adequate risk management system for OpR. The culture of management is viewed as essential for banks to continuously develop a robust risk management system for any risk. This is related to the structure of corporate governance for OpR management and the human element discussed above.

Various elements crucial in developing a robust OpR management system are identified in Principles 4-7. OpR should be identified not only for all business lines, but also for all products, activities, processes, and systems of banks. Banks need to implement systems and processes that adequately monitor and control these aspects on an ongoing basis. This is related to the element of processes and systems discussed above.

The roles of supervisors are provided in Principles 8 and 9. Supervisors need to examine the appropriateness of the banks' approaches to those issues raised in Principles 1-7, namely, the management involvement in OpR monitoring and the development of an adequate OpR management system. Supervisors are recommended to require banks to manage OpR in these aspects and to establish a section managing OpR.

Principle 10 is related to disclosure of OpR exposure, which is a contentious issue in relation to Pillar 3 of the new Capital Accord proposal. While banks are required to publicly disclose their OpR exposure and quality of their OpR management system in Principle 10, there has been strong opposition to the disclosure of OpR loss data.

Pillar 3 of the new Capital Accord proposal seeks to introduce greater market discipline into capital adequacy regulations by enhanced disclosure. For OpR, the following risk disclosure requirements have been set out:

This precludes any information on OpR losses although the inclusion could be subject to future discussion.

87. Pillar 2 of the new Capital Accord proposal requires supervisors to 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. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 2, at 5.
88. See SOUND PRACTICES, supra note 86, at 4-5.
89. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 13, at 13.
90. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 2, at 5.
FIGURE 2: DISCLOSURE REQUIREMENTS FOR OpR*

<table>
<thead>
<tr>
<th>QUALITATIVE DISCLOSURES</th>
<th>The approaches for OpR capital assessment that the bank is qualified for.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The OpR management objectives and policies, including:</td>
</tr>
<tr>
<td></td>
<td>- strategies and processes;</td>
</tr>
<tr>
<td></td>
<td>- the structure and organization of the risk management function;</td>
</tr>
<tr>
<td></td>
<td>- the scope and nature of risk reporting and/or measurement systems;</td>
</tr>
<tr>
<td></td>
<td>and</td>
</tr>
<tr>
<td></td>
<td>- policies for hedging and/or mitigating risk and strategies and</td>
</tr>
<tr>
<td></td>
<td>processes for monitoring the continuing effectiveness of hedges/</td>
</tr>
<tr>
<td></td>
<td>mitigants.</td>
</tr>
<tr>
<td>DESCRIPTION OF THE AMA</td>
<td>Description of the AMA used by the bank.</td>
</tr>
</tbody>
</table>

| QUANTITATIVE DISCLOSURES | OpR capital charge per business line (if available). |

* Basel Committee on Banking Supervision, supra note 13, at 13.

F. PROGRESS MADE BY THE NEW CAPITAL ACCORD

Collecting OpR loss data results in greater awareness among the bank management of the level of OpR risk exposure that banks face. The loss data of the QIS indicates that most OpR loss events arise in the retail banking unit.\(^{91}\) The primary reason why the OpR of retail banking is so large is that the event type entailing the greatest number of loss event is external fraud. However, when the aggregate loss of each business line is analyzed, the losses are more balanced, although the loss in retail banking is still the greatest.\(^ {92} \)

While the findings of the QIS in terms of loss data have been viewed with caution,\(^ {93} \) the overview is consistent with the general impression of OpR. Loss events that occur frequently have a smaller loss in each event, while loss events that occur infrequently have a greater loss in each individual incident. Nevertheless, both frequent and infrequent events are significant because the gross loss is largely similar. The focus of OpR management will be on a judgment by management based on loss data.

The development of loss data will enable a bank to develop the appropriate strategy for its operations. If the loss is concentrated in one business line, OpR management needs to be enhanced in this area. Principles 1-3 of Sound Practices and the findings of the QIS, although crude, allow banks to reconsider their OpR management strategy so as to devise the strategy most appropriate to the overall management approach.

The progress in terms of agreement on the new Capital Accord framework has not been substantial. The date of agreement has been post-

\(^{91}\) Id. at 8.

\(^{92}\) Id. at 6.

\(^{93}\) The limitation is related to number of banks and consistency of the reporting. Id. at 6.
poned to allow further discussion within each country.  

III. REGULATORY TREATMENT OF OPR

While the Basel Committee is in the process of consulting the regulatory treatment of OpR, in this section, OpR is considered in terms of current regulation and supervision.  

In terms of international standards, the International Organization of Securities Commissions (IOSCO) proposed the role of regulators for OpR management in 1994. The significance of this document is that it puts forth the view that while certain risks can be regulated by market discipline, operational and financial risk need to be regulated and adequately managed. This is consistent with the view that the difficulty in managing OpR poses limitations on market discipline. The IOSCO document hesitates to be prescriptive, given the diversity of practices in the various jurisdictions. Its approach is rather to list various regulatory approaches that can be adopted by securities regulators.  

The supervisory trend of industrialized countries is evolving from balance sheet assessments to risk-based analysis. The Federal Reserve has moved towards a risk-based approach for its large and complex banking organizations. The Interim Prudential Sourcebook for Banks of the Financial Services Authority has a risk-based approach, and the Japanese Financial Services Agency’s supervisory manual is categorized by risk. This risk-based approach to supervision has prompted various regulators to re-examine their approach to OpR. 

Through the examination of the supervisory manuals of various countries, regular components subject to OpR supervision emerge. The main items are essentially those subject to regulation by most supervisors. The additional items refer to other items whose practice varies among supervisors. 

It is important to note that although OpR is increasingly the focus of supervision, OpR is not explicitly addressed in supervisory manuals. For

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94. On July 10, 2002, the Basel Committee reached an agreement on the timetable of finalizing the new Capital Accord by the end of 2003 and for implementation by the end of 2006.
95. Considerations on regulatory treatment of operational risk by the Basel Committee on Banking Supervision since January 2001 are considered in Section III.
97. Id., ¶ 5.
98. See supra Part I.
99. TECHNICAL COMMITTEE OF IOSCO, supra note 96, ¶ 10.
100. Id., App. B.
102. FIN. SERVS. AUTH., INTERIM PRUDENTIAL SOURCEBOOK FOR BANS (June 2001).
103. FIN. SERVS. AGENCY JAPAN, SUPERVISORY MANUAL OF DEPOSITORY INSTITUTIONS (June 2001).
TABLE 3: ITEMS SUBJECT TO SUPERVISION FOR OpR*

<table>
<thead>
<tr>
<th>Main items</th>
<th>Role of Board member/senior management</th>
<th>Recognition of role related to examining OpR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedural adequacy</td>
<td>To ensure OpR is examined regularly and the independence of each section is secured.</td>
<td></td>
</tr>
<tr>
<td>Internal audit</td>
<td>The role and plans of internal audit.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional items</th>
<th>Staffing</th>
<th>Quality of staff in terms of integrity.</th>
</tr>
</thead>
<tbody>
<tr>
<td>External audit</td>
<td>The role and plans of external audit.</td>
<td></td>
</tr>
<tr>
<td>Systems</td>
<td>Integrity of systems and information security.</td>
<td></td>
</tr>
<tr>
<td>Business continuity management</td>
<td>Contingency plan for various internal and external events.</td>
<td></td>
</tr>
</tbody>
</table>


example, CAMEL rating system of the Federal Reserve System does not include the adequacy of OpR per se,104 while the more recently developed CAMELOT contemplates this aspect.105 CAMELOT has been developed by the Canadian Office of Superintendent of Financial Institutions, adding the quality of Operations and Treasury management to CAMEL.106 OpR regulation is embedded in the supervisory process in many cases.

A. BOARD OF DIRECTORS AND SENIOR MANAGEMENT

All supervisory manuals stress the importance of the role that board members play in controlling OpR. Board members (or directors) are primarily responsible for effective OpR controls, and they should have a clear understanding and recognition of OpR. They have a duty to install an internal control environment that adheres to OpR management.107 In

104. CAMEL was developed in 1979 by the Federal Reserve System (FRS) and the Office of Currency Comptroller (OCC) to rate the financial performance of banks in the U.S. and is formally called the Uniform Financial Institutions Rating System. CAMEL is an acronym of its five items, namely Capital adequacy, Asset quality, Management, Earnings, and Liquidity. Each item is assigned a rating of 1-5 which is aggregated into a composite rate. See Rebel A. Cole et al., FIMS: A New Monitoring System for Banking Institutions, 81 Fed. Res. Bull. 1 (1995).

105. CAMELOT rates operational risk from the aspect of the fit and properness of management.


common law jurisdictions, it is considered a fiduciary duty of board members to act in the best interest of the company, which is concurrent with this supervisory requirement.\textsuperscript{108}

It is also the duty of board members to ensure compliance with laws, regulations, and rules.\textsuperscript{109} It is obvious that this task should form the basis of any institution’s safety and soundness policy. Any OpR control policy should be formulated to enhance the objectives of laws, regulations, and rules.

Senior management assumes the important function of implementing the OpR controls decided by the board, with its responsibility for ensuring the day-to-day running of the OpR controls.\textsuperscript{110} Some manuals state the qualities required of senior management accountable for OpR.\textsuperscript{111} This is related to the “fit and proper” test for the banking management.

B. PROCEDURAL ADEQUACY

Setting out procedures appropriate to the OpR profile of the financial institution is an essential part of internal controls. An effective OpR environment includes not only routine checks, but also reporting to management on any irregularities.\textsuperscript{112} The existence of procedures does not in itself ensure an effective internal control. The procedure must be carried out by competent persons on a daily basis.\textsuperscript{113}

Procedures should be formally codified and documented.\textsuperscript{114} This includes the task of defining the level of authority of each person, establishing the division of functional responsibilities to ensure the independence of each section, and developing an effective management information system that encompasses appropriate accounting and record-keeping controls.\textsuperscript{115}

\textsuperscript{108} Office of the Superintendent of Fin. Insts. Canada, supra note 107, at 3.
\textsuperscript{111} Qualities required of senior management responsible for operational risk include: competence, expertise in banking and auditing, integrity and prudence of management. See Div. of Banking Supervision and Regulation, Bd. of Governors of the Fed. Reserve Sys., supra note 109, § 2020.1; Office of the Superintendent of Fin. Insts. Canada, supra note 107 at 5.
\textsuperscript{113} Office of the Superintendent of Fin. Insts. Canada, supra note 107, at 6.
\textsuperscript{114} Id.
C. INTERNAL AND EXTERNAL AUDITS

In order for both internal auditing and external auditing to make an objective assessment of the OpR controls of the institution, both need to be independent from each section. Not all companies will have an external auditor, and some smaller institutions will not have a dedicated internal audit section. Whatever the situation, auditors should have a clear mandate, be independent of the section they audit, and have qualified personnel to carry out the audits.116

The role of internal and external audit has come under extreme scrutiny as a result of the Enron failure. The apparent lack of effective monitoring has been discussed in depth. Empowering the audit committee with greater power to question the accuracy of financial reports will be a significant development. Some have proposed that non-financial indicators also be subject to audit.117 Those related to OpR management are: internal control,118 worker satisfaction, and education and experience of workforce and management.119 This would be an interesting development that would narrow the information asymmetry of the OpR of a financial institution.

D. OTHER ITEMS SUBJECT TO INTERNAL CONTROL

Hiring staff with the integrity and appropriate expertise is a key element in ensuring the appropriateness of internal controls. The personnel in charge of OpR management needs to have the incentive to act with integrity. Such incentives are created through regular reporting to senior management and the board, clear management information systems, and regular internal and external audits. Acquiring competent and reliable staff is vital for OpR management, and this can be guaranteed by long-term human resource plans, development and regular review of compensation programs, and regular personnel evaluation and review.120 The number of staff employed to manage OpR should be commensurate to the size and scope of the financial institution.

Here, systems refer mainly to IT systems and information security. Not all regulators have sections on systems in their regulator guidance. The

116. Id. at 16-7; Div. of Banking Supervision and Regulation, Bd. of Governors of the Fed. Reserve Sys., supra note 107, § 2010.1.
118. Walker statement, supra note 117.
119. Litan statement, supra note 117.
120. All of these considerations are necessary to employ experienced and skilled persons. Id. at 10.
Financial Services Authority and the Financial Services Agency have explicit sections in their guidance stating the regulatory stance.\textsuperscript{121}

As discussed above,\textsuperscript{122} on the one hand the automation of processes and systems through computer systems and information technology have reduced human errors. On the other hand, it has made financial institutions susceptible to system failures. To prevent possible losses posed by the system, financial institutions need to report the structure of technology operations, the appropriateness of system acquisitions, development and maintenance, and appropriateness of activities supporting the operation of IT systems.\textsuperscript{123} Further, the establishment of redundant back-up systems and integrity of information security will have to be supervised.\textsuperscript{124}

Business continuity management is related to the contingency management system to cope with external events.\textsuperscript{125} Various internal and external events that may disrupt the operation of the financial institution should be analyzed, and possible responses to them considered. The three UK financial regulators have been working together to ensure that business continuity is maintained in the London market since the September 11 attacks. The regulators have a website dedicated to the various regulatory efforts and corporate responses that should be considered.\textsuperscript{126} The FSA has directed most of its focus on high impact firms which, individually or collectively, would create the maximum risk to the FSA’s objectives. The main areas of FSA’s focus have been:

- Physical concentration of principal and backup sites;
- Firms’ own business continuity planning including testing;
- Identification of critical business units;
- IT resilience;
- Staffing issues, including identification of key staff, clarification of responsibilities and succession planning; and
- Communications issues, including the ability to maintain internal communications as well as the capacity to communicate effectively with the authorities and market counterparties.

It is likely that business continuity will be a key component that regulators will take into consideration to protect the financial stability of their market and to prevent systemic risk.

**IV. ISSUES RELATED TO OPERATION RISK**

The significance of OpR is only starting to be realized. When the Basel Committee’s capital requirement for OpR is taken into context, it becomes evident that OpR does pose a real risk to financial institutions. The
proposed capital charge for OpR will require a capital cost of 0.96 percent to each asset. This is a considerable cost to financial institutions. Investigation of supervisory practices reveals the gap between sound practices for OpR management and the actual supervisory process. OpR is mainly examined in the context of internal controls and audits for most regulators. This does not reflect the overall picture of OpR, which covers various aspects of asset and liability management as well as fraud. While some regulators have proposed detailed guidelines for OpR regulation, this is also not necessarily desirable given the problems involved in prescriptive regulation.

A. Compliance Cost and Regulatory Burden of Capital Charge

The compilation of loss data related to OpR is an important step in comprehending the nature and costs of OpR in each financial institution. However, the burden on financial institutions to compile such data is vast. While not denying that QIS conducted by the Basel Committee has been extremely useful in understanding the real cost effects of OpR, this has been an expensive exercise for cooperating institutions. Smaller institutions will probably not have the resources available to compile such data. This justifies the different approaches the Basel Committee has taken towards OpR, although this may also result in smaller institutions having to pay a higher capital cost.

The compliance cost to implement OpR regulation has been estimated within the United Kingdom. The IT costs are estimated to be between GBP 25,000 and 250,000, depending on the size and complexity of the institution. For staffing and consultancy costs, some larger institutions have already spent GBP 1,250,000 to improve their OpR management. It is evaluated that small to medium institutions will require GBP 25,000 to 30,000. While the variation of total short-term implementation costs is between GBP 5,000 to GBP 2,000,000, it is likely that financial institutions will require higher expenditure than the minimal estimates. There are also ongoing fixed costs, which will be required to maintain an improved OpR regime, estimated at 10 to 20 percent of the initial implementation cost. The cost is not insignificant and needs to be carefully weighed by regulators. Further, there will be capital charges for OpR when the Basel Committee has agreed on a regulatory charge. Some predict that the overall capital adequacy ratio will increase as a result of a

127. See Figure 1, supra, for reference to the various business lines involved in operational risk.
128. The guideline that the Financial Services Authority has proposed is detailed and focused on OpR instead of internal controls. However, many of the banks that are regulated by the guidelines seem to have opposed the detail in which it is written. FIN. SERVS. AUTH., supra note 41, at 20.
129. Id. at 37.
130. Id. at 38.
new Capital Accord.\footnote{131. See \textit{Doerig}, supra note 9, at 7.}

While capital charges have aimed at balancing market discipline and competition, this may be more difficult for OpR. OpR is essentially an internal issue of an institution, with less apparent rewards for good conduct. Disclosure will not necessarily improve the standards of this good conduct because procedures will only be beneficial if competently carried out.

One method of bringing in market discipline and competition will be the disclosure requirements for institutions using Basel’s AMA.\footnote{132. See supra Part III.D.} If institutions are able to identify their qualitative and quantitative standards, these would be an indication of better OpR management. This may not be possible for smaller institutions, but gradual disclosure would signify the efforts that smaller institutions are investing for a safer operational environment.

\section*{B. Risk Culture and Individual Fitness and Propriety}

As OpR is essentially human error related, assessing the OpR of each institution entails a subjective element. This assessment can be enhanced by the degree to which corporate culture affects human behavior within the institution. Corporate culture is an implicit factor, but it clearly affects corporate behavior as a result OpR.\footnote{133. Corporate culture had a strong negative effect on the behavior of Enron employees. \textit{See} Joshua Chaffin & Stephen Fidler, \textit{Enron Revealed to be Rotten to the Core}, \textit{FIN. TIMES}, April 19, 2002, at 30.} Some claim corporate culture to be the “single most important criterion in establishing the effectiveness of operational risk management function.”\footnote{134. Thompson & Frost, supra note 7, at 26.} Risk culture encompasses the general awareness of and attitude to risk on the part of the employees of financial institution.\footnote{135. \textit{Financial Servs. Auth.}, supra note 41, Annex, at 4.} To curb excessive risk taking tendencies in the institution, various measures can be taken.

The attitude of members of the board towards OpR is a key factor determining the manner in which OpR is managed. In a recent study of FTSE 250 companies, it was perceived that board members did not have a good understanding of risk in general and regard it as an operational matter.\footnote{136. \textit{Robert Baldwin} \& \textit{Richard Anderson}, \textit{Rethinking Regulatory Risk} 15, 17 (London School of Economics, DLA 2002).} Without the security of full board backing on improving the risk management strategy, there is little hope that OpR management will be given adequate consideration.

To address some of these issues, greater compensation for better operational conduct could be contemplated. This would involve internal audits assessing the internal control function in greater depth. Second, sanctions should be introduced for inappropriate risk taking. The FSA has intro-
duced a stricter sanction regime that will be discussed below. Third, the remuneration policy of an institution should not be excessive, as this may encourage excessive risk taking. By introducing remuneration packages that reward good conduct at a later date, for example, one to two years ahead, this would, in theory, encourage better OpR management. Remuneration packages that penalize would also be more beneficial than simply resorting to dismissing employees. This has been an issue that has been the subject of discussion in various testimonies related to the Enron failure.

The regulatory authorities are also beginning to focus on revamping corporate culture so as to encourage greater ethical standards within financial institutions. The FSA has published a discussion paper on improving the ethical standards of financial services. It is apparent from the speeches of the Chairman that the FSA has begun to look at the “spirit” in which the financial industry operates and not merely compliance of regulations. This development is also taking place in the United States with GAO proposing an ethical code for companies to follow.

Reading the ethical standard proposed by FSA reminds one of brainstorming sessions of business schools. But perhaps this is what the financial industry lacks; guidance on what is good and bad behavior. For one not accustomed to the litigious nature of Anglo-Saxon culture, the contentious relationship between the consumer and supplier is always surprising. To a non-Anglo-Saxon, it seems the lack of harmony in this relationship creates a corporate culture that attempts to minimize the benefits to the consumer. This in turn leads to dwindling ethical standards.

The FSA has also taken a step in ensuring that those who hold a controlling role in financial institutions are required to be “approved persons.” The “Statement of Principle and Code of Practice for Approved Persons” is part of the FSA’s Handbook of Rules and Guidance within the High Level Standard. This requires approved persons to be of in-

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137. See discussion infra Part V.F.
138. This has also been advocated by the Conference Board, the business research organization. Andrew Hill, US Panel Launches Executive Pay Fight, FIN. TIMES, Sept. 18, 2002, at 28.
140. FIN. SERVS. AUTH., AN ETHICAL FRAMEWORK FOR FINANCIAL SERVICES (Discussion Paper No. 18, Oct. 2002).
142. Walker statement, supra note 117.
143. Financial Services and Markets Act 2000, c.8, §§ 57, 62(13) (Eng.).
144. The “Approved Persons regime” is referred to in statute as “APER.”
tegrity, act with due skill, care, and diligence. These standards reflect the ethical discussions that the FSA is leading.

C. OUTSOURCING OPERATIONS

Outsourcing of operations has the effect of both reducing risks and increasing other risks at the same time. Outsourcing has the benefit of tapping specialized expertise that is enhanced by economies of scale. To remove the cost of certain operations from the balance sheet of financial institutions, outsourcing has been an effective means of cutting costs. However, OpR concerns have sparked discussion on the advantages and disadvantages of outsourcing.

Outsourcing has been increasingly used for operations that are traditionally performed by internal personnel, such as computer application development, audit, and mortgage processing. This enables financial institutions to dedicate staff to core activities and to change operational costs from fixed costs to variable costs, the method suitable for changing market conditions.

However, outsourcing does not necessarily outsource the OpR involved in the operation. There are various risks induced by outsourcing. The greatest risk involved is legal risk related to the contractual nature of outsourcing. Unless the contract with the service provider is well drafted, the control over the operations of the service provider may be limited, and the flexibility of outsourcing lost. It is also possible that the legal liability may still remain with the financial institution. It is important to recognize that outsourcing will not contract out the regulatory obligations placed on certain operations. This is explicitly set out in the draft Guideline of the Financial Services Authority.

Another risk is that the dependency on third party service providers may lead to the inability of a financial institution to conduct these activities in-house as a result of lost expertise. It will threaten the continuity of business when the operation of a service provider fails. This risk is also related to maintaining adequate control over the outsourced operations. The reporting structure, the extent to which outsourcing arrangements support the business strategy, and the ensuring of prompt response of

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145. Statement of Principle, APER1.2.1G.
147. FIN. SERVS. AUTH., supra note 41, at 16.
148. If the duration of the contract is lengthy and the business environment changes during this period, financial institutions may be locked into the outsourcing arrangement. FED. RESERVE BANK OF NEW YORK, OUTSOURCING FINANCIAL SERVICES ACTIVITIES: INDUSTRY PRACTICES TO MITIGATE RISKS 5 (Oct. 1999).
149. This is illustrated with personnel management where legal liability due to lawsuits. For example, sexual harassment will not exempt the financial institution. Harris, supra note 146, at 7.
150. FIN. SERVS. AUTH., supra note 41, Draft Guideline 3A.7.1.
151. Id. at 16.
152. Id. Draft Guideline 3A.7.4.
the service provider, are part of what needs to be taken into consideration to efficiently control the service provider.

The third risk is the information security that may be compromised as a result of outsourcing. Outsourcers are prohibited from disclosing non-public information learned through their work. Nevertheless, violations of confidentiality by service providers can lead not only to OpR but also to legal and reputational risks.

The fourth risk is related to the transition phase of outsourcing. As processes and management structure are being modified to the new outsourcing arrangement, training needs to cover for internal staff. If staff are transferred to the service provider, morale and labor law issues may arise.

In order to adequately manage the OpR of outsourcing, it is crucial to understand the result of operations being outsourced, the service provider’s structure and the arrangement with the service provider. The Financial Service Authority provides a non-exhaustive checklist when drafting the contract with the service provider. Various phases of outsourcing should be considered through a scenario analysis.

D. Insuring Against OpR

It has been recognized in the Basel Committee’s Working Paper, “Regulatory Treatment of Operational Risk,” that insurance against operational losses can mitigate OpR. The insurance community has published a paper to address the issues of how to deal with insurance of OpR and how it might be incorporated into the measurement of regulatory capital.

Various concerns are related to insurance of OpR when considering regulatory capital. The first concern is the credit risk of the insurance company itself. This would result from the insurance company’s failure; therefore it may be necessary to limit the risk mitigation effect to those insurance companies that meet a minimum credit rating.

Second is the time within which an insurance company needs to pay claims. The financial strength of the insurer also determines the ability to pay claims. The insurance industry’s response has been that:

153. FED. RESERVE BANK OF NEW YORK, supra note 148, at 5.
154. See Harris, supra note 146, at 6.
155. FED. RESERVE BANK OF NEW YORK, supra note 148, at 5.
156. Id. at 6.
157. FIN. SERVS. AUTH., supra note 41, Draft Guideline 3A.7.5-8.
158. BASEL COMMITTEE ON BANKING SUPERVISION, supra note 13, at 4.
160. Mori, supra note 47.
161. Id.
162. FIN. SERVS. AUTH., supra note 41, Draft Guideline 3A.8.1.(1).
163. Id., Guideline 3A.8.1.(2).
164. INSURANCE OF OPERATIONAL RISK UNDER THE NEW BASEL CAPITAL ACCORD, supra note 159.
The New Accord should recognize standard, commonly purchased insurance contracts as well as more comprehensive, alternative contracts depending on a qualifying criteria.

Explicit recognition of insurance should be made under each OpR measurement approach.

Certain residual risks, such as counterparty risk, scope of coverage, and timing of insurance payment, should be accounted for within the capital measurement.

Financial institutions have used insurance as an effective means to cover and compensate for operational losses. The issue is not whether insurance should be taken into account for capital charge calculations but rather the extent of the charge. The Basel Committee is likely to take a more conservative approach to insurance than the insurance industry or individual banks. The compilation and sharing of loss information will facilitate the task of grasping a more accurate picture of insurance to mitigate OpR.

With personal liability of executives being increasingly legislated in the United Kingdom, the scope of insurance against any operational problems is likely to increase. This is an even greater reason for insurance to be contemplated for any capital charge.

E. THE EFFECT OF MERGERS AND ACQUISITIONS

The consolidation of operations as a result of mergers and acquisitions may be an occasional happening for most financial institutions, but it has the potential of great OpR. This becomes evident when the computer system fails to consolidate at the merger date, as evidenced in the experience of Mizuho Bank, one of the largest banks in the world in terms of asset size. The consolidation of Mizuho's retail computer system was not accomplished by its merger date on April 1, 2002, resulting in large-scale problems in the computer system.

OpR related to mergers and acquisitions are not limited to system risks, although these are more conspicuous. The policies and processes of merging institutions need to be consolidated, with the management agreeing on a viable internal structure. The reporting structure also has to be clarified so as to avoid any potential conflicts.

David Sherman has drawn up a comprehensive list of some of the OpR involved in consolidating operations:

165. For a list of some of common insurance contracts that cover operational losses see Id., Annex 4.
166. See discussion infra Part V.F.
167. Direct debits for utilities failed to take place and double debiting was taking place in some accounts. 2.5 million transactions failed to take place on the first day alone. Many of the utilities companies are planning to claim damages, which might cost Mizuho trillions of yen.
1. A comprehensive plan covering the entire consolidation process should be drawn at the outset (for example, decision on accounts, training, implementation of new software, contingencies).

2. "Consistent approval procedures and multiple approvals for each task improve the planning process"169 (for example, financial impact, staffing needs, degree of difficulty, risk, internal control, compatibility with existing programmes, process flows, contingencies, qualitative and quantitative projections).

3. Clear lines of accountability, an overall manager, and a senior committee provide an effective control framework.

4. The ability of the management information system to track all tasks through completion is critical to senior management oversight.

5. The use of consultant to augment the technical expertise of staff and to provide third-party validation of the plan adds considerable control to risk management programme.

6. A comprehensive reconciliation programme covering all accounts before and after consolidation is one of the most effective control techniques.

7. Mapping, testing and mock conversions are required for control.

8. A pre-launch checklist, a detailed timetable, and formal and frequent communication practices constitute a good control environment for the actual consolidation weekend.

9. Audit's involvement throughout the planning/implementation process significantly reduces internal control surprises.

10. A post-consolidation study improves future consolidations.

It is also important that the internal structure be adequately consolidated. One of the major barriers to bank mergers of Japanese banks has been the lack of consolidation of the personnel system. In some merged banks, CEOs have been alternatively selected from the merged institutions.170 Bank regulators should closely supervise the consolidation process since a merging financial institution itself will generally not have the experience of the process and problems entailed.

F. Sanctions

Sanctions against non-compliance to OpR related regulations are becoming increasingly strict. This reflects a general trend of stronger sanction regimes, greater administrative enforcement, and criminal sanctions.171 Increased personal liability is also part of this develop-

169. See id.
171. The UK is continuing this trend with the Company Bill including greater personal liability. Institute of Chartered Secretaries and Administrators, Response to the Consultation on Modernizing Company Law 47 (Presented to Parliament by the Secretary for Trade and Industry, Cm. 5553-I, July 2002).
The FSA spells out the enforcement measures in its “Enforcement Manual.” Individuals will be personally liable only when he or she is personally culpable. If “due and reasonable care was exercised when assessing information, [and a person] has reached a reasonable conclusion and has acted on it” that person would not be in breach of the rules.

OpR breaches that would invoke personal liability would have to be outright fraud or market abuse, which could also entail criminal sanctions. However, the FSA is equipped with a variety of enforcement tools that could have reputational consequences such as public censure, financial penalties, or withdrawal of approval. More generally, the FSA would use disciplinary actions against firms and approved persons for ill managed OpR. Disciplinary measures include public statements of misconduct and public censures, as well as financial penalties. When the FSA considers it inappropriate to take formal disciplinary action, a private warning can also be made. When the fitness and propriety of a firm or an approved person is under question, the firm’s authorization can be cancelled or withdrawn. Alternatively, the individual’s status can be withdrawn or that individual can be prohibited from performing specified regulated activities.

The reputational risk of any disciplinary measure can have grave negative effects on the firm. The threat of enforcement is real since the FSA’s enforcement regime has been extremely proactive.

V. CONCLUSION: THE REGULATORY IMPLICATION

OpR regulation has been a relatively discrete area as explained above, but the real monetary losses that stem from OpR and the increasing complexity of financial business have given rise to a fresh impetus to control OpR. It is also an area where regulation is accepted, even by the ardent free marketers, for the prevention of fraud and money-laundering. Fraud has been the principal contributor to bank failures in

175. Id.
177. FIN. SERVS. AUTH., supra note 173.
178. Id. ch. 12.
179. Id. ch. 13.
180. Id. ch. 14.
181. Id. ch. 15.
182. Id. ch. 16.
183. Id. chs. 8, 9.
184. See supra Part I.
185. ROSS CRANSTON, PRINCIPLES OF BANKING LAW 73 (1997).
the United States.\textsuperscript{186}

The significance of OpR is also reflected in the increased emphasis of internal controls and systems by regulators. The Federal Reserve System has changed its focus of supervision on internal systems and controls.\textsuperscript{187} In addition, the Basel Committee has proposed the inclusion of OpR in the calculation of capital adequacy. These changes are the result of greater reliance on information technology, and the awareness of increased OpR due to compromised information security and the threat posed to business continuity at times of system failure.

The focus on OpR is a necessary step to improve the safety and soundness of the financial system, and although OpR may not often lead to systemic risk, it is an important part of financial stability and continuity.\textsuperscript{188} It is a crucial part of preventive and prudential regulation of the financial system.

Financial institutions have been cutting costs of operations mainly through disposing of excess employees, the greatest fixed cost, and instead relying on computers where possible. This trend may be reversed if OpR management is strengthened. The management and control of OpR does, after all, require greater investment in human resources. The renewed regulatory regime that is emerging towards OpR is likely to have some financial impact on financial institutions in terms of not only regulatory compliance cost but also of the review of internal structures. On top of this will be the regulatory changes that will come in effect in a few years time. The Basel Committee’s QIS has already had a great regulatory burden on cooperating financial institutions. While the identification of loss events will be an important step in OpR management, the initial burden on financial institutions is likely to be considerable.

The main focus of financial institutions in relation to OpR management, at least for the larger institutions, is likely to be on compiling quantification methodologies of OpR. This is relevant to the Basel Committee’s effort because it would enable them to use approaches geared towards the individual institution. However, this focus may not necessarily be the right way to proceed in the immediate future.

Revision of management involvement and improved internal audit and controls are the key to a good OpR management framework. These are main items in all the supervisory manuals, and they reflect the importance of addressing these issues. Risk culture is also a significant factor

\textsuperscript{186} \textsc{Federal Response to Criminal Misconduct and Insider Abuse in the Nation’s Financial Institutions,} H.R. \textsc{Rep.} \textsc{No.} 98-1137, a 5 (1984) \textit{cited in} \textsc{George Benston et al, Perspectives on Safe and Sound Banking: Past, Present and Future} 254 (1986).

\textsuperscript{187} Letter from Division of Banking Supervision and Regulation, Board of Governors of the Federal Reserve System, to the officer in charge of supervision and appropriate supervisory and examination staff at each federal reserve bank and to certain domestic and foreign banking organizations supervised by the Federal Reserve, (June 23, 1999) (SR Letter 99-15).

\textsuperscript{188} The UK regulators have been focusing on “business continuity.” \textit{See supra} Part IV.D.
that needs to be taken into consideration when contemplating the structure of OpR control. Given the cost factor of good OpR controls, the inclusion of insurance and outsourcing into the calculation of the capital charge for OpR would be crucial for the Basel Committee to reach an agreement on OpR.

A gradual regulatory approach is essential to ensure that financial institutions do not take a piecemeal approach to the sound practices that are encouraged. While it is recognized that a prescriptive approach to OpR would be an appropriate regulatory regime, it would be useful for supervisors to develop questionnaires that identify the key elements upon which financial institutions would need to improve.
ANNEX

SOUND PRACTICES FOR THE MANAGEMENT AND SUPERVISION OF OPERATIONAL RISK

DEVELOPING AN APPROPRIATE RISK MANAGEMENT ENVIRONMENT

PRINCIPLE 1: The board of directors should be aware of the major aspects of the bank's operational risks as a distinct and controllable 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.

PRINCIPLE 2: The board of directors should ensure that the bank's operational risk management framework is subject to effective and comprehensive internal audit by operationally independent, appropriately trained and competent staff. The internal audit function should not be directly responsible for operational risk management.

PRINCIPLE 3: Senior management should have responsibility for implementing the operational risk management framework approved by the board of directors. The strategy should be implemented throughout the whole banking organization, 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 products, activities, processes and systems.

RISK MANAGEMENT: IDENTIFICATION, MEASUREMENT, MONITORING, AND CONTROL

PRINCIPLE 4: 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.

PRINCIPLE 5: Banks should implement a process to regularly monitor operational risk profiles and material exposure 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.

PRINCIPLE 6: Bank should have policies, processes and procedures to control or mitigate operational risks. Banks should assess the feasibility of alternative risk limitation and control strategies and should adjust their operational risk profile using appropriate strategies, in light of their overall risk appetite and profile.
PRINCIPLE 7: Banks should have in place contingency and business continuity plans to ensure their ability to operate as going concerns and minimize losses in the event of severe business disruption.

ROLE OF SUPERVISORS

PRINCIPLE 8: Banking supervisors should require that all banks, regardless of size, have an effective system in place to identify, assess, monitor and control or mitigate operational risks as part of an overall approach to risk management.

PRINCIPLE 9: 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 reporting mechanisms in place which allow them to remain apprised of developments at banks.

ROLE OF DISCLOSURE

PRINCIPLE 10: Banks should make sufficient public disclosure to allow market participants to assess their approach to operational risk management.
Comparative Analysis