

The Changing Nature  
of **Operational**  
**Risk**  
in Foreign Exchange

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# The Changing Nature of **Operational** **Risk** in Foreign Exchange<sup>1</sup>

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The rapid pace of change in the foreign exchange market has created many new opportunities for profit. New trading methods, new customers, and new products reflect the dynamism of what continues to be the largest marketplace in the world. The heady pace of innovation shows no signs of slowing, and taking advantage of these emerging opportunities requires agility and speed.

However, while innovative products and ways of trading create new possibilities for profit, they also introduce novel and sometimes unfamiliar operational risks that must be identified and managed. Failure to do so can result—and in recent years has resulted—in large and publicized losses entailing financial and reputational consequences that linger long after the loss is recognized in financial statements.

The Foreign Exchange Committee has published a variety of documents outlining what it views as “best practices” to mitigate operational risks. Although banks and other financial firms are at the heart of the foreign exchange market, entities such as hedge funds, corporations, central banks, and other end users are equally exposed to operational risks and should be vigilant about adopting best practices to guard against the possibility of loss.

## **Operational Risk Defined**

Traditionally, operational risk in financial institutions has been defined as the risk of loss from breakdowns associated with the confirmation, netting, settlement, and accounting of financial transactions. In short, this definition was about “back-office”



risks. However, in recent years the concept of operational risk has broadened. For example, the Basel Committee has defined operational risk as the risk of direct or indirect loss resulting from inadequate or failed internal procedures, people, and systems or from external events.<sup>2</sup> While this definition was developed specifically for a regulatory capital requirement, private institutions have also moved toward a more holistic concept of operational risk.

A review of recent events highlights the many ways that operational risk exposures can manifest themselves. The events of September 11 and the 2003 blackout in the United States directly affected financial institutions' front- and back-office capabilities—disrupting or delaying trade execution, confirmation, settlement, and netting services. Other examples include the large foreign exchange trading losses at Allfirst Bank and the National Australia Bank (NAB), which resulted from the breakdown of fundamental internal control processes, including weaknesses in the segregation of duties, trade confirmation, control of system access, and review of off-market trades.<sup>3</sup>

These events reflect the traditional concept of operational risk, driven by internal control lapses or external incidents. However, the

more inclusive definition of operational risk would incorporate a number of additional critical events that have occurred in recent years. For example, the potential and realized losses related to corporate failures, such as Enron, meet the broader definition of operational risk. In situations such as these, weaknesses in corporate governance, compliance, and ethics were the factors leading to a firm's losses and, in some cases, even bankruptcy. With respect to financial institutions, not only did banks record direct credit losses from Enron, but those firms that engaged in complex structured financings with the company also reached significant settlements with various government agencies and remain exposed to civil litigation.<sup>4</sup>

While reputational risk is not considered part of operational risk for Basel risk capital purposes, the two types of risk have become increasingly intertwined as the just-mentioned corporate failures have unfolded. Lapses in the operational control environment generally result in immediate and direct losses—as demonstrated by the Allfirst and NAB cases.<sup>5</sup> However, the damage to a firm's reputation and the potential decline in business activity associated with such lapses could persist and potentially outstrip the original "headline" cost. Thus, an investment in control and

<sup>1</sup> A slightly different version of this article appeared under the title "Management of Operational Risk in Foreign Exchange" in *The Euromoney Foreign Exchange & Treasury Management Handbook 2005*, 13th ed. (London: Euromoney Yearbooks, 2005), pp. 65-70.

<sup>2</sup> Bank for International Settlements, Basel Committee on Banking Supervision, *Operational Risk Supporting Documentation to the New Basel Capital Accord* (Basel: BIS, 2002), p. 2.

<sup>3</sup> PricewaterhouseCoopers, *Investigation into Foreign Exchange Losses at the National Australia Bank* (PricewaterhouseCoopers, 2004), pp. 1-2; Promontory Financial Report and Wachtell, Lipton, Rosen & Katz, *Report to the Boards of Directors of Allied Irish Banks, P.L.C., Allfirst Financial Inc., and Allfirst Bank Concerning Currency Trading Losses* (Promontory Financial Report and Wachtell, Lipton, Rosen & Katz, 2002), pp. 1-2.

<sup>4</sup> William Rutledge, *Remarks before the ABA/Forward Financial Operations Conference* (New York: Federal Reserve Bank of New York, 2004), p. 1.

<sup>5</sup> PricewaterhouseCoopers, *Investigation into Foreign Exchange Losses*, pp. 1-2; Promontory Financial Report and Wachtell, Lipton, Rosen & Katz, *Report to the Boards of Directors*, p. 29.



operational risk capacities can more than pay for itself.

## **Operational Risk in Foreign Exchange**

Operational risk in the foreign exchange context centers on processing, product pricing, and valuation.<sup>6</sup> Failure to appropriately manage operational risk can reduce an institution's profitability. Incorrect settlement of foreign exchange transactions, for example, can have direct costs in improper payments and receipts. In addition, trade processing and settlement errors can lead to significant indirect costs, such as compensation payments to counterparties for failed settlements or losses in a firm's portfolio from managing the wrong position. Furthermore, investigating problems and negotiating a resolution with a counterparty may carry additional costs.

Operational risk has another unique characteristic. In contrast to credit and market risk, operational risk has proved very difficult to quantify. Clearly, an institution can measure some of the losses either associated with operational errors or resulting from a failure of the operational process to catch sales and trading function mistakes or fraud. Many institutions also employ additional operational risk management tools, such as key risk indicators and control self-assessment programs. However, determining expected losses, given the uncertainty of those losses, is

much more complicated for operational risk than for other risk categories. Basel II represents an effort by the industry and regulators to develop creative approaches to capture this elusive concept.

Given the challenges of identifying, quantifying, and controlling the full range of operational risks, senior management vigilance, a robust control culture, and individual ethics assume heightened importance. The management of operational risk requires those at the top of the organization chart to focus on the issue. Together, the board of directors and senior management should develop—and periodically review—the operational risk framework. Moreover, senior management must reinforce an institution's formal policies and procedures with a strong control culture. An independent, accountable, and sophisticated audit and/or risk control function with direct reporting lines to senior management is a critical element in fostering a climate of control. Incorporating the results of audit and compliance reviews into a manager's compensation can also demonstrate that operational risk management is an institutional priority. Of course, individual decisions form the basis for an institution's activities. Thus, the importance of attracting ethical staff and developing (and enforcing) an appropriate code of conduct cannot be overstated. As noted in the supervisor's and auditor's reports regarding the recent events at NAB, significant costs are associated with weaknesses in any or all of these factors.

<sup>6</sup> Foreign Exchange Committee, "Management of Operational Risk in Foreign Exchange," in *2003 Annual Report* (New York: Federal Reserve Bank of New York, 2004), pp. 11- 66.

## Recent Trends and Challenges Ahead

The foreign exchange market exhibits constant change and remarkable innovation. Going back only fifteen years, one can see that the very nature of how risk is intermediated has changed. Paper-based systems have been supplanted by automated ones. Electronic trading platforms have transformed the inter-bank market, while greater transparency has created a more level playing field among different groups of market participants.

The changes in the foreign exchange marketplace are exceptional in both nature and number. On the business front, intense competition among financial institutions has heightened pressures to consolidate over the last decade. The most recent *Euromoney* poll indicates that market share remains heavily concentrated, with roughly half of the total market in the hands of a small number of players. Another reflection of this consolidation trend is the number of dealers participating in the Bank for International Settlements' Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity. At its peak, 180 firms responded to the survey of the U.S. market in 1992, while only about 40 institutions participated in 2004. At the same time, average daily volume in traditional foreign exchange instruments reached \$1.9 trillion in 2004, compared with \$820 billion in 1992.<sup>7</sup> As a higher volume of

transactions flows through a smaller number of participants, operational risk has become more concentrated.

With respect to operational and processing developments, the introduction of CLS Bank in 2002 marked a major milestone in the private sector's effort to minimize foreign exchange settlement risk, with gross trades settled through CLS averaging \$1.6 trillion per day in November 2004. CLS has certainly increased efficiency of settlement by introducing a mechanism for simultaneous exchange of currencies on an intraday and multilateral basis.

The growth of electronic trading in the foreign exchange market is one of the most significant trends of recent years, and it is clear that more trades will be conducted electronically in the future as single bank and multibank electronic trading portals continue to gain traction. With the advent of single trade entry capabilities, screen-based systems have both enhanced the efficiency of the trading process and reduced errors. Electronic execution also allows for straight-through processing to update credit limit usage, intraday P&L, confirmation processing records, settlement instructions, and general ledger activity—thereby reducing operational risk. However, while the introduction of more advanced technology and systems minimizes some risks, it requires a more sophisticated approach to operational risk management.

<sup>7</sup> Bank for International Settlements, *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 2004—Preliminary Global Results* (Basel: BIS, 2004), p. 9.



Events in recent years have highlighted the importance of robust contingency planning for all foreign exchange market participants. Overall, the industry responded quickly and efficiently to the events of September 11, and the scope of disruptions was surprisingly limited. However, the experience emphasized that contingency planning could be improved. The increased interdependency among market participants has heightened the need for firms to integrate their business continuity plans with those of key liquidity providers, utilities, and clearing and third-party settlement banks to ensure that everyone is operating under the contingency assumptions.<sup>8</sup>

Financial institutions' interest in outsourcing continues to expand beyond the outsourcing of mainframes and data networks to include various business processes, such as back-office and accounting and finance functions. While a firm may outsource day-to-day processes, its responsibilities for complying with internal, industry, and regulatory standards are in no way diminished. Moreover, relationships with outside service providers expose firms to new risks that must be managed. For example, an institution should establish procedures to monitor service providers to ensure that they are performing functions according to agreed-upon standards and practices.

The pace of change shows no sign of abating. Technology continues to advance rapidly, while systems are becoming more

standardized. Technological advances have facilitated the introduction and proliferation of new services such as prime brokerage and white labeling. In addition, traders and salespeople continue to develop new and more exotic types of transactions, particularly foreign exchange derivative products. These require special, often manual, operational processing until they can be incorporated in the main processing cycle. As reflected in the most recent BIS survey, emerging market currency trading volume has continued to rise. This increase in emerging market volume is coupled with new and evolving settlement procedures for these currencies. Finally, the foreign exchange market continues to attract new types of participants, a trend that requires the development of new operational procedures.

## **The Foreign Exchange Committee and Operational Risk**

All of these developments, and many others, will continue to change and challenge the market, eliminating some risks while introducing others. The identification and management of operational risk have always been priorities of the Foreign Exchange Committee's work. The Committee has provided guidance and leadership to the global foreign exchange market since 1978. Composed of representatives from major financial institutions engaged in foreign currency trading in the United States and sponsored by the Federal Reserve Bank of

<sup>8</sup>Foreign Exchange Committee, "Contingency Planning: Issues and Recommendations," in *2001 Annual Report* (New York: Federal Reserve Bank of New York, 2002), pp. 45-7.

New York, the Committee has set the following goals for itself: 1) serving as a forum for the discussion of good practices and technical issues in the foreign exchange market, 2) fostering improvements in risk management in the foreign exchange market by offering recommendations and guidelines, and 3) facilitating greater legal certainty for all parties active in foreign exchange through the development of standard documentation such as master agreements and confirmation templates.

Over the years, the Foreign Exchange Committee has worked with the industry through many events critical to the development of financial markets, including the market dislocations associated with the currency crises in Asia and Latin America, the introduction of the euro, the preparation for Y2K, the rise in currency and interest-rate derivatives trading, the proliferation of electronic foreign exchange trading platforms, and events such as September 11 and the 2003 blackout.

The importance the Committee places on the management of operational risk is reflected in its structure, publications, and projects. In 1995, the Committee formally established the Operations Managers Working Group, composed of several senior operations managers from committee member institutions. The group proactively identifies emerging operations-related issues, develops recommendations and best practices associated with operational policies and procedures, and facilitates the understanding of and improvements in operational risk management.

The group's collective experience is encapsulated in one of the Foreign Exchange

Committee's primary publications, the *Management of Operational Risk in Foreign Exchange*. First published in 1996 and updated in 2004, this document identifies a series of practices that may mitigate some of the operational risks specific to the foreign exchange industry. The best practices cited in the document are designed to assist industry managers as they develop internal guidelines to improve the quality of risk management. As individual firms benchmark their existing practices against this checklist and, where appropriate, adopt the recommended best practices, their overall systemic risk is reduced. The Committee regularly reviews these practices to ensure that they remain relevant and address emerging issues. For example, last year the Committee introduced additional guidance addressing foreign exchange derivatives.

The Foreign Exchange Committee recognizes that the range of participants and the nature of their activities in the foreign exchange market have broadened in recent years as institutional and leveraged investors' interest in foreign exchange as an asset class has intensified and as corporate hedging strategies have become increasingly sophisticated. In an effort to share the experiences of financial institutions and to promote risk awareness, the Committee in 2004 updated its document *Foreign Exchange Transaction Processing: Execution-to-Settlement Recommendations for Nondealer Participants*. Although the document addresses the entire foreign exchange trade process, recommendations aimed at reducing operational risk figure prominently given the challenges of processing transactions with more limited resources.



The Foreign Exchange Committee strongly encourages the use of standard documents to provide a sound mutual basis for conducting financial market transactions and to reduce operational and legal risk for all parties. Over the years, the Committee has developed a variety of master agreements covering market practice and convention and establishing terms for netting, termination, and liquidation. The Committee has also worked with the International Swaps and Derivatives Association, Inc., and EMTA to introduce standard trading documentation for non-deliverable forwards and related emerging market transactions. Moreover, the introduction of the *Master Agreement Supplement for Non-deliverable Forwards* has contributed to a more efficient and error-resistant confirmation process by eliminating the need for long-form faxed confirmations.

## **Conclusion**

Like the market itself, operational risk in foreign exchange is fluid and dynamic. As the nature of the industry's participants, products, and technology evolves, it is critical that managers understand the operational cycle, commit to adopting best practices to manage operational risk, and instill a culture of awareness and control throughout their institutions. Whether it's a major dealer, hedge fund, corporation, or central bank, a firm that thinks that it cannot afford, or can skimp on, appropriate risk management infrastructure should expect to pay a price in the long run. Investment in risk control on an individual-firm level will also benefit the market as a whole. As participants pursue their common self-interest, the overall efficiency and effectiveness of the market will be served by the implementation of sound operational risk management practices.