Implementation of an Operational Risk Framework

Basel Committee’s Risk Management Group Conference on Leading Edge Issues in Operational Risk Measurement

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Operational Risk is emerging as a new risk discipline in the financial services industry

- Risks that traditionally have been considered as market, credit, or “other” are increasingly being evaluated in a disciplined framework as “operational risk”
Operational Risk

- IS NOT:
  - New
  - Just in the back-office

- IS:
  - A significant risk exposure
  - A risk that can be managed and controlled (but, generally, not eliminated)
Operational Risk Management Framework

Four Stages of Implementation

Awareness

What were our operational risk losses last year?

How much operational risk do we have?
Citigroup has implemented an operational risk management framework to ensure that operational risks are consistently and comprehensively identified, assessed, mitigated/controlled, monitored, measured, and reported.
Stages of Implementation

- Policy
- Procedures
- Governance Structure
Definition

- Citigroup has developed and implemented a corporate Operational Risk Policy
  - Establishes consistent definitions, minimum standards and clear roles and responsibilities
  - Includes standards for Risk and Control Self-Assessment (RCSA)

- Each business, globally, is required to:
  - Adopt the Citigroup policy and develop and release business-specific policies and procedures as needed
  - Establish a governance structure for operational risk
Three Core Principles Embedded in the Policy

- Clear ownership of operational risks by the business line managers
- Independent operational risk management function
- Independent review by internal audit
Definition

- Citigroup’s definition of Operational Risk includes reputation and franchise risk associated with business practices or market conduct.

- Note: Reported operational risk losses exclude opportunity costs.
Definition

- The boundary between operational and other risk types is not always clear

Credit
Market
ALM
Liquidity
Insurance
Business / Strategic

- Duplicate capture of loss information for “boundary events” may not be worth the cost if risks are already comprehensively identified and managed
Stages of Implementation

- **Awareness**
  - Policy
  - Procedures
  - Governance Structure

- **Definition**
  - Risk and Control Self-Assessment
  - Data Collection
  - Quantification
  - Reporting

- **Measurement**
Implementation Actions Required in Each Business

- Conduct comprehensive Risk and Control Self-Assessment
- Identify and assess Key Operational Risks and Controls
- Identify and report Key Risk Indicators
- Collect Operational Risk Loss Data (utilizing technology platform)
- Measure (using methods including economic capital)
- Report (with process to assure quality)
Technology Platform

- A Loss database that provides an effective interface with all businesses is a critical tool for loss data collection

- Citigroup has built a loss data collection system that is deployed globally via the intranet
  - Approach has been to run pilots with selected businesses followed by staged implementation
  - Now fully deployed
Approach to Economic Capital
Desired End State: Adjusted LDA

- Simulate an aggregate potential loss distribution for operational risk
- Drivers of the simulation model include:
  - Probability distribution
  - Potential loss distribution given an event
- Economic Capital requirement calculated as the potential unexpected loss at the target confidence level and time horizon
- Split by business line and (if possible) by risk category
- Adjust for quality
- Calculate a correlated sum across business lines and risk types
- Full implementation depends on a robust data set, the collection of which is well underway
  - Some business lines may require a different model framework
Economic Capital
Adjustments to Baseline Capital

- Quality Adjustment Factor (QAF) produces changes that are under the control of the business and a function of the following internal audit information:
  - Risk Level
  - Number of Business Issues
  - Severity of Business Issues
  - Number of days resolution is past due

- Control Quality Indicator (under development) will be a function of:
  - Quality Adjustment Factor
  - Qualitative data on business risk and control self-assessment
  - Key Risk Indicators
  - Scorecard methodology
Economic Capital: Interim State

- Interim approach implemented for use during current data collection phase
- Assess potential losses due to unexpected operational loss events using external historical loss data
- Base initial capital figures on largest relevant loss events for each line of business, with some adjustments
- Total allocated according to the size of each business (Revenue) and its risk and control environment (Qualitative Adjustment Factor)
- Correlated sum is calculated across all business lines and risk types
- Each period, the allocation is adjusted as a function of the square root of the change in size of the business and the change in the QAF
- End result: sound, simple estimate of the “worst case” loss, with periodic changes driven by factors under the control of the business
Operational Risk Management Framework

Stages of Implementation

- Awareness
  - Policy
  - Procedures
  - Governance Structure

- Definition
  - Risk and Control
  - Self-Assessment

- Measurement
  - Data Collection
  - Quantification

- Management
  - Reporting
Actions Required in the Businesses to Support the Management Stage

- Identify forum to
  - Review and monitor operational risk exposure and loss experience
  - Establish tolerance for operational risk exposure
  - Review exposure versus tolerance
Operational Risk Framework

Independent Operational Risk Function

Citigroup Head of Operational Risk

Citigroup Operational Risk Policy (Including RCSA Standards)

Independent Assessment by ARR

RCSA Standards developed and established jointly

Citigroup Controller and Chief Accounting Officer

Decentralized Ownership and Management of Operational Risk by Business Units

Business-Specific Governance Structure, Policies and Procedures

Operational Risk Management, Including Risk & Control Self-Assessment

Comprehensive Reporting of Operational Risk

Citigroup Risk Management Committee

Citigroup Board of Directors
How long does it take?

Hint: Can’t be accomplished overnight if it is to become part of the culture of the business

- Citigroup developed its operational risk policy and consulted with Senior Business and Functional Management over the course of one year
  - Rushing this stage could result in a policy that is not accepted by the businesses
- All of the major businesses achieved initial compliance with the Policy over the course of 9 – 12 months
- The second year has included expanded implementation and a formal review of every business by internal audit
- The operational risk database and reporting system is being developed in phases with 1 or 2 major releases a year
Critical Factors for Success

- Senior Management Support
- Multi-Functional Participation
  - (Finance, Risk, O&T, Audit, etc.)
- Business Level Buy-In
Achieving Business Level Buy-In

- Involve the businesses up-front

- Work with and complement existing processes

- Demonstrate clear benefits
What are the Benefits of the Framework?

- Foundation on which to comprehensively and effectively manage (identify, assess, mitigate / control, monitor, measure and report) operational risks

- Improved understanding and ownership of operational risks by the businesses

- Collection of data to support quantification of operational risk for both economic and regulatory capital purposes

- Use of diagnostic information to improve processes and controls, reduce losses, and reduce earnings volatility