Operational Risk Management Table of Contents



This section on operational risk explores operational risk and how it is effectively managed and measured in financial institutions. Chapters 1,2 and 3 will explore the regulatory and business drivers for operational risk frameworks, and will identify opportunities to add value to an organization through operational risk management.

The various elements of an operational risk framework will be considered and evaluated, with a particular emphasis on the practical steps that can be taken to ensure their successful adoption within a firm.

In addition, this section will explore the cultural challenges that can face the deployment of an operational risk function, and will address the reporting challenges that can arise.

Measurement of capital for operational risk requires a blend of qualitative and quantitative skills and tools, and these will be explored in some depth.

Operational risk plays a key role in the development of integrated risk management programs that include compliance, business continuity planning, information security and other operational risk related data. These programs are referred to as 'governance, risk and compliance' (GRC) or 'convergence.' The role of operational risk in these programs will be considered and discussed.

Towards the end of the section, examples will be given of the many types of operational risk events that can, and have occurred, along with the controls that can be implemented to mitigate these risks.

On completion of this section the candidate will have an improved understanding of:

- The place of operational risk management in the context of risk management
- The difference between operational risk management and operational risk measurement
- The role of operational risk in Governance, Risk and Compliance and Enterprise Risk Management frameworks
- Good practice for operational risk management
- The role of Basel II and other regulations in the rise of operational risk management as a discipline
- The practical application and cultural impact of operational risk on the effective governance of an organization
- The policies and procedures needed to support operational risk management

- The array of operational risk management tools available to implement an effective operational risk management framework, including:
 - Loss data collection
 - Risk and control self assessments
 - Scenario analysis
 - Key risk indicators
- The benefits and challenges of different governance structures for operational risk management
- Designing and selecting reporting that can drive decision making and risk behavior
- Modeling techniques for the calculation of economic capital for operational risk
- Best practices in managing:
 - New product approval
 - Vendors and third party risks
 - Legal risk
 - Regulatory risk
 - People risk
 - Fraud risk
 - Technology risk
 - Weather risk
 - Pandemic risk
 - Strategic risk
 - Reputational risk

1.1 THE DEFINITION OF OPERATIONAL RISK

Operational risk management had been defined in the past as all risk that is not captured in market and credit risk management programs. Early operational risk programs, therefore, took the view that if it was not market risk, and it was not credit risk, then it was operational risk. However, today a more concrete definition is used, for example the Basel II definition of operational risk is:

Operational risk is defined as the risk of loss resulting from inadequate or failed processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk. The Basel II definition of operational risk has been adopted or adapted by many firms, but it is just one of many possible definitions that can be used.

Basel II is the common name used to refer to the 'International Convergence of Capital Measurement and Capital Standards: A Revised Framework,' which was published by the Bank for International Settlements in Europe in 2004.

The Basel II framework set out new risk rules for internationally active financial institutions that wished to continue to do business in Europe. These rules related to the management and capital measurement of market and credit risk, and introduced a new capital requirement for operational risk. In addition to the capital requirement for operational risk, Basel II laid out qualitative requirements for operational risk management, and so a new era of operational risk management development was born.

JPMorgan Chase, a firm subjected to Basel II rules, has adapted the definition as follows:

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

There are four main causes of operational risk that are identified in standard operational risk definitions. Operational risk events can occur when there are inadequacies or failures due to:

- people (human factors)
- processes
- systems, or
- external events

While the language is a little awkward (what exactly are 'failed people' for example), the meaning is clear. There are four main causes of operational risk events: the person doing the activity makes an error, the process that supports the activity is flawed, the system that facilitated the activity is broken, or an external event occurs that disrupts the activity.

Under the Basel II definition, legal events are specifically included in the definition of operational risk and a footnote is added to further clarify this. Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

This is a helpful clarification, as there is often some initial tension with the legal department when the operational risk function first requests information on legally related events. This is something that will be considered in more detail later in the section on loss data collection.

The Basel II definition also specifically excludes several items from operational risk:

This definition includes legal risk, but excludes strategic and reputational risk.

These nuances in the Basel II definition are often reflected in the definition adopted by a firm, whether or not they are governed by that regulation. However, these exclusions are not always applied in operational risk frameworks, as will be explained below.

1.1.1

Operational Risk Management and Operational Risk Measurement

There are two sides to operational risk—operational risk management and operational risk measurement. There is often a tension between these two activities, as well as frequent overlap. Basel II requires capital to be held for operational risk, and offers several possible calculation methods for that capital, which will be discussed later in this chapter. This capital requirement is the heart of the operational risk measurement activities, and requires quantitative approaches.

In contrast, firms must also demonstrate that they are effectively managing their operational risk, and this often requires qualitative approaches. A successful operational risk program combines qualitative and quantitative approaches to ensure operational risk is both appropriately measured and effectively managed.

1.1.2

Operational Risk Management

Helpful guidelines for appropriate operational risk management activities in a firm can be found in Pillar 2 of Basel II:

736. Operational risk: The Committee believes that similar rigor should be applied to the management of operational risk, as is done for the management of other significant banking risks.

737. A bank should develop a framework for managing operational risk and evaluate the adequacy of capital given this framework. The framework should cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent and manner in which operational risk is transferred outside the bank. It should also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

There are several important things to note in these sections. First, operational risk should be managed with the same rigor as market and credit risk. This is an important concept, and has many implications when considering how to embed an operational risk management culture in a firm, as will be explored later in this chapter.

Second, policies regarding risk appetite are required. This is no easy task as articulating a risk appetite for operational risk can be very challenging. Most firms would prefer to have no operational risk, and yet these risks are inherent in their day to day activities and cannot be completely avoided. Recently, regulators have been very interested in how firms are responding to this challenge and there is much debate about how to express operational risk appetite or tolerance, and how to manage against it. This will be explored further in each of the framework sections later in the chapter.

Finally, policies must be written that outline the bank's approach to 'identifying, assessing, monitoring and controlling/mitigating' operational risk. This is the heart of the definition of operational risk management, and the elements of an operational risk framework need to address these challenges. Does each element contribute to the identification of operational risks, the assessment of those risks, the monitoring of those risks and the control or mitigation of those risks? To be successful, an operational risk framework must be designed to meet these four criteria for all operational risk exposures, and it takes a toolbox of activities to achieve this.

In the operational risk management toolbox are loss data collection programs, risk and controls self-assessments, scenario analysis activities, key risk indicators and powerful reporting. Each of these elements will be considered in turn in this chapter.

1.1.3

Operational Risk Measurement

Operational risk measurement focuses on the calculation of capital for operational risk, and Basel II provides for three possible methods for calculating operational risk capital which will be discussed later in the chapter. Some firms choose to calculate operational risk capital without being subject to a regulatory requirement, as they wish to include the operational risk capital in their strategic planning and capital allocation for strategic and business reasons.

1.1.4

The Relationship between Operational Risk Management and Other Risk Types

Operational risk often arises in the presence of other risk types, and the size of an operational risk event may be dramatically impacted by market or credit risk forces.

EXAMPLE

One of Gamma Bank's business lines offers retail customers the ability to trade bonds. One of the customers calls the broker at Gamma Bank and instructs the broker to buy Andromeda Corporation bonds for the customer's account. The trade is executed, but it is mistakenly booked as a sell, instead of a buy; this will result in a significantly larger loss if the market moves up.

The cost of making the customer whole will now be much higher than if the market had remained stable. In fact, there could be a gain if the market drops. It is clear then that market risk can magnify operational risk.

Chapter 1: Operational Risk

There are also events which include both credit and operational risk elements. If a counterparty fails, and there was an operational error in securing adequate collateral, then the credit risk event is magnified by operational risk.

While market risk, credit risk and operational risk functions are usually run separately, there are benefits in integrating these functions where possible. The overall risk profile of a firm depends not on the individual market, credit and operational risks, but also on those elusive strategic and reputational risks (or impacts) and the relationships between all of these risk categories. Strategic and reputational risk will be considered at the end of this chapter.

Additional risk categories also exist: for example geopolitical risks and liquidity risk. For these reasons, some firms adopt an enterprise risk management (ERM) view of their risk exposure.

The relationship between these risks can be illustrated in the ERM Wheel.

Figure 1: ERM Wheel

This ERM wheel illustrates that all risk types are interrelated and that some central risk types can impact those on the outer spokes of the wheel. For example a geopolitical risk event might result in risks arising in market risk, credit risk, strategic risk, liquidity risk and operational risk.



Operational Risk

• The Definition of Operational Risk

- Operational Risk Management and Operational Risk Measurement
- Operational Risk Management
- Operational Risk Measurement
- The Relationship between Operational Risk Management and Other Risk Types

Drivers of Operational Risk Management

Operational Risk Framework Overview

- Governance
- Who should own the operational risk function?
- Operational risk is owned by the Chief Risk Officer
- Operational risk is owned by the Chief Operating Officer, or the Chief Financial Officer
- Operational risk is owned by the Chief Compliance Officer
- What should the operational risk function own?

Culture and Awareness

- Marketing and Communication
- Planning
- Training
- Policies and Procedures

CHAPTER FOCUS

- The place of operational risk management in the context of risk management
- The difference between operational risk management and operational risk measurement
- The role of operational risk in Governance, Risk and Compliance and Enterprise Risk Management
- Good practice for operational risk management
- The role of Basel II and other regulations
- The policies and procedures needed to support operational risk management
- The array of operational risk management tools available to implement

- The benefits and challenges of different governance structures for operational risk management
- Designing and selecting reporting that can drive decision making and risk behavior
- Modeling techniques for the calculation of economic capital for operational risk

THE DEFINITION OF OPERATIONAL RISK

- Basel II defines operational risk
- Operational risk is defined as the risk of loss resulting from inadequate or failed processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk.
- Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements
- JPMorgan Chase defines operational risk
- Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events

OPERATIONAL RISK MANAGEMENT AND OPERATIONAL RISK MEASUREMENT

Operational Risk Management

• Qualitative assessment of operational risk

Operational Risk Measurement

Quantitative assessment of operational risk

Similar rigor should be applied to the management of operational risk, as is done for the management of other significant banking risks. —Basel Committee

Management

• Operational risk management is as important as credit and market risk

Risk Appetite

- Developing risk appetite for operational risk can be challenging
- Bank has to understand the level of exposure

Policies

 Should outline the bank's approach to identifying, assessing, monitoring and controlling/mitigating operational risk

OPERATIONAL RISK MANAGEMENT TOOLBOX

In the operational risk management toolbox are loss data collection programs, risk and controls self-assessments, scenario analysis activities, key risk indicators and powerful reporting

THE RELATIONSHIP BETWEEN OPERATIONAL RISK MANAGEMENT AND OTHER RISK TYPES

Operational risk is often present with other risk types

Credit and operational risk events can overlap

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One of Gamma Bank's business lines offers retail customers the ability to trade bonds. One of the customers calls the broker at Gamma Bank and instructs the broker to buy Andromeda Corporation bonds for the customer's account. The trade is executed, but it is mistakenly booked as a sell, instead of a buy, this will result in a significantly larger loss if the market moves up.

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