INTRODUCTION

According to the guidelines of the Islamic Financial Services Board (IFSB), financial institutions are exposed to operational risks when losses occur due to failures in their internal controls involving processes, people, and systems. In addition, institutions should also incorporate possible causes of losses resulting from Shariah non-compliance and the failure in their fiduciary responsibilities. A special characteristic in applying Islamic financial contracts is the strong engagement between the institution and the counterparties. In addition, when applying partnership agreements (i.e. in Mushārakah and Mudārabah), both sides may share profits and losses. There is, therefore, an involvement from all parties (banks, buyers, renters, business partners, etc.) in the cause of the operational risk.

This chapter presents all the main elements of operational risk analysis. It shows the three different approaches for operational risk identification analysis, including the self-assessment analysis, the quantitative operational risk indicators, and the operational risk losses. The latter two approaches are extensively discussed as they are mostly used in quantitative operational risk assessment and identification analysis. The definition of the identification factors and the design of the operational risk mapping are also discussed. The detection of causes, events, and consequences and their interactions are presented, illustrating cases of different types of risks that may appear within this chain. A particular emphasis in operational risks arising from the employees and/or IT systems is also given. Two techniques for measuring operational risks via the key risk indicators and the actual losses are also discussed. Specifically, for the former technique, the identification and data accessing issues are highlighted; whereas, for the latter technique, the internal operational risk loss event data, the external operational risk loss event data, and the losses based on scenario-simulation analysis are...
covered. Finally, the key issues in the evaluation and management of operational risks are also examined in this chapter.

**MAIN ELEMENTS IN OPERATIONAL RISK ANALYSIS**

The main drivers in market risk analysis are the commodity price risk, the equity price risk, the FX rate risk, and the mark-up risk market risk factors. Any change in these factors has a computed impact on the value of the bank’s trading portfolio. On the other hand, the actual losses (their probability and coverage) resulting from the defaults of the counterparties are considered as the main drivers in credit risk evaluation analysis. Operational risk analysis, however, can be based on risk factors that affect the institution’s business performances and objectives; it can also be based on the actual operational risk losses (Figure 6.1). Identification and measurement of the actual risks and their resulting losses is a process that requires a special framework and effort from the institution.

There are three different approaches (see Figure 6.2) for operational risk identification analysis:

1. Self assessment analysis
2. Quantitative operational risk indicators
3. Operational risk losses.

The self-assessment approach is mainly based on internal assessment that involves people’s contribution (i.e. the employees of the institution) for reporting any possible risks and resulting losses within the actual business

![Figure 6.1](image_url)  
**Figure 6.1** Operational risk analysis based on operational risks and losses