CONTENTS

Course overview 1
Learning objectives 1
Prior knowledge 1
Knowledge assessment 1
Symbols 1

1. Types of financial risks 3
1.1 Introduction 3
   1.1.1 Topic overview 3
   1.1.2 Topic objectives 3
1.2 Types of financial risks 3
   1.2.1 What is financial risk? 3
   1.2.2 Types of financial risk 4
1.3 Other perspectives on financial risk 7
   1.3.1 Market risk 8
   1.3.2 Credit risk 9
   1.3.3 Liquidity risk 10
   1.3.4 Operational (or operating) risk 10
1.4 Interaction of risks 13
1.5 Types of financial risk under Islamic Law 14
1.6 Summary 14

2. Risk modelling 16
2.1 Introduction 16
   2.1.1 Topics 16
   2.1.2 Topic objectives 16
2.2 Characteristics of risk 16
2.3 Modelling market risk 19
2.4 Modelling credit risk 26
2.5 Modelling operational risk 28
2.6 Summary 29

3. Principles of effective risk management 31
3.1 Introduction 31
   3.1.1 Topics 31
   3.1.2 Topic objectives 31
3.2 Approach to financial risk management 32
3.3 Context and purpose 34
3.4 Risk criteria 36
3.5 Identifying risk 39
3.6 Assessing risk 40
3.7 Mitigating risk 43
3.8 Monitoring and reporting 46
3.9 Review 48
3.10 Summary 49

4. Risk principles and measures 50
4.1 Introduction 50
   4.1.1 Topics 50
1. TYPES OF FINANCIAL RISKS

1.1 INTRODUCTION
Managing financial risks is fundamental to almost everyone and especially to organisations of all sizes in both public and private sectors. Taking risk is essential for growth but requires a prudent balance between the prospect of increased value and the risk entailed to ensure success and sustainability. This is the field of financial risk management.

Financial risk is a matter relevant to most, if not all, levels and functions of an organisation, from Board level through executive and senior management, accounting and finance functions to supervisory and employee levels. At the top level of Australian public companies for example, Boards are required to oversee and regularly review the governance of financial and non-financial risks.

This topic outlines what financial risk is and the various types of financial risk most relevant to organisations (as distinct from investors or traders) in particular. This outline is primarily descriptive and non-mathematical, and is intended to provide a basis of key concepts and principles on which you can build.

1.1.1 Topic overview
This topic covers:
• what the terms ‘risk’ and ‘financial risk’ mean and provides definitions of these in current usage;
• the key types of financial risks in business activities and shows these in context;
• a fuller breakdown of the sub-categories of each general type of risk with concise examples;
• the interaction of different risks.
Activities located within this topic provide an opportunity for you to confirm your understanding of the principles and elements outlined.
Generally 40 minutes is expected to read and digest the topic and undertake the related activities satisfactorily.

1.1.2 Topic objectives
On completion of this topic, you should be able to:
• Identify the common types of financial risks;
• Recognize each of these risks in typical business activities;
• Understand how and where the different types of financial risk might interact.

1.2 TYPES OF FINANCIAL RISKS
1.2.1 What is financial risk?
There are many definitions of ‘risk’. Traditionally, ‘risk’ is thought of as something that can go wrong. When it comes to defining ‘financial risk’, there are two complementary characteristics:
• ‘Financial risk’ as an adverse or unfavourable event. Adverse events might be for example an announcement by the Reserve Bank of an increase in interest rate; a default on payment of an invoice by a customer; a fire at a warehouse leading to significant asset damage, loss of inventory and resultant harm to the financial condition of the business. Events may also be scenarios – that is, foreseeable future financial circumstances.
• ‘Financial risk’ as an adverse or unfavourable change or movement in a financial parameter such as price, quantity or term to maturity. Examples might be an adverse change in a currency exchange rate; a downward movement in property prices; a loss of market share; a reduction in client retention rate; and so on.
Against this background, ‘financial risk’ may broadly be thought of as adverse movements in financial price or other events that impair financial condition, financial performance or other financial outcomes. For example, financial risk may affect the adequacy of returns or accessibility to finance at reasonable cost.

These characteristics have clear implications for financial risk management. Considering financial risk in terms of adverse events and scenarios highlights the protection of value and thus, avoids or prevents the occurrence of risky events in the first place, as well as limiting or containing the impact should the event actually arise.

Considering financial risk in terms of volatility or uncertainty highlights, for example, the minimization of downward variability in price movements achieved by understanding the limits of variability that can be sustained, absorbed or tolerated by the organisation and doing something about any potential for variability beyond these limits, like offsetting, spreading or transferring it to other parties.

Considering financial risk in terms of these characteristics also highlights another feature of ‘risk’: risk and reward are related. Someone’s loss is someone else’s gain; what is ‘risk’ for one is ‘gain’ or ‘reward’ for another. For example, as a currency exchange rate changes, one side loses and the other benefits. A reduction in property price harms the owner but benefits the buyer. Similarly, as an organisation loses market share or clients, others pick these up.

More broadly, to seek growth and value creation (gain or reward or ‘upside’) is to take on risk (‘downside’). For example, directors of an organisation are expected to take risk in order to grow the value of that organisation. The implicit relationship between risk and reward makes this understandable. The risk they take should however be reasonable – that is, competent and prudent – not reckless or excessive.

In turn, this highlights the risk management concepts of ‘appetite for risk’ (how much risk to willingly take in pursuit of growth or other reward), ‘attitude to risk’ (degree of risk aversion) and ‘risk tolerance’ (how much risk overall the organisation can absorb whilst remaining profitable, or solvent). These terms are considered in more detail later in this course.

### 1.2.2 Types of financial risk

The definition of financial risk outlined above covers a very broad scope. It is therefore common to breakdown financial risk into more defined categories, or types of financial risk in order to better recognize, address and communicate about financial risk exposures.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market risk</strong></td>
<td>Risk that a change in market price or market value will have an adverse effect on financial condition, performance or other financial outcomes.</td>
</tr>
<tr>
<td><strong>Credit risk</strong></td>
<td>Risk that a counterparty will not meet their financial obligations as to timing or amount. Credit risk is also often called ‘counterparty risk’.</td>
</tr>
<tr>
<td><strong>Liquidity risk</strong></td>
<td>Risk of an inability to access funding, or of having insufficient funds to repay creditors and other debt like leases (‘funding risk’). Risk of reduced value of an asset, or an inability to buy or sell an asset (‘asset liquidity risk’).</td>
</tr>
<tr>
<td><strong>Operational (or operating) risk</strong></td>
<td>Financial risk due to failure or inadequacies of people and procedures, technology and systems; or resulting from external events (for example, crime, regulatory effects, or natural hazards).</td>
</tr>
</tbody>
</table>

This breakdown is based on common usage, especially by financial institutions and corporate treasury functions. There is no rigorous, singular, universally-agreed set of categories for financial risk. A
further breakdown into the specific types of financial risk within each of these general categories is then commonly made, and this will be done in the following sections.

For context, financial risk can be seen in the broader range of the types of risks commonly faced by an organisation, like that illustrated below:

**Figure 1.1**

<table>
<thead>
<tr>
<th>Strategic</th>
<th>Business</th>
<th>Financial</th>
<th>Operational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand, reputation</td>
<td>Commercial</td>
<td>Credit</td>
<td>Personnel and Procedures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Market</td>
<td>Technology and Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Liquidity</td>
<td>Hazards and Special Risks</td>
</tr>
</tbody>
</table>

‘Strategic risks’ relate to the potential risks applicable to directions, plans and decisions made by an organisation. ‘Business risks’ involve potential risks in commercial areas like business partnerships and alliances, logistics, contractual arrangements, products and services and risks to the organisation’s brand, image or reputation. Though both these clearly relate to the financial performance and value of an organisation, they are not typically defined as ‘financial risks’ per se.

Liquidity risk might well be included within market risk, and this is common. However it is shown above as a distinct type of risk for two reasons:

- Liquidity risk is often regarded as the most fundamental of risks – that is, in the case of financial distress for example, all risks manifest as a liquidity risk in the end;
- Insolvency is a key issue for business, regulators, investors and directors as accounting and finance professionals well know. A separate category for liquidity risk helps emphasize this importance.

The type and extent of exposure to financial risk will depend on such factors as the nature of the underlying business, organisational structure, business model, debt and funding arrangements and so on. Examples of the possible relative exposure in terms of economic capital to these general types of financial risks in different organisations are illustrated below. Do you agree with the relative financial risk exposure shown in each case? Why? If not, what relative exposure would you show?

**Figure 1.2**
Activity 1.1

Draw a diagram like that above to illustrate the relative exposure to market, credit, liquidity and operational risk of:

- Your organisation (as a whole):

- An important business unit of yours:

- An important service or product line or investment of yours:

No suggested answer is provided for this activity.