



## Financial Risk Management

### Learning Outcomes

**By the end of this unit the learner will be able to:**

- ✓ Explore the scope of Financial Risk Management
- ✓ Outline the benefits of financial risk management.
- ✓ Explore the Implementation of financial risk management procedures

# Financial Risk Management

## Introduction

Financial risk is the exposure to negative occurrences that reduce profitability and in extreme situations bring about company closure. These events may be bad debt, loss of an important customer, loss of overseas investments, the failure of financial systems, regulatory non-conformances or compliance issues, poor hedging choices, adverse fluctuations in exchange rates, and overdependence on a single supplier.

Other possibilities include poor investment judgments concerning buildings, plants, and machinery. The most important feature of an investment decision is time. Investing in a new manufacturing plant, railway or ship, for example, involves making a huge economic outlay at one point in time, which is expected to show economic profits at some other point in time for the investor.

### Scope of Financial Risk

The sources of risk included within the term *financial risk* are wide-ranging:

- Liquidity risk arises from not being able to meet financial obligations in the short-term, such as payment of staff salaries, suppliers or rent;
- Interest rate risks, which affects the consumers' disposable income, results in a decline of trade for many companies, like manufacturers, retailers and house builders. It also causes inflation on investment projects in terms of cash flows and the discount rate over the life of the project;
- Credit risk arises due to the inability of customers to pay for goods supplied to them;
- Currency risk in terms of changes in exchange rates affects expected cash flows from overseas investments;
- Foreign investment risk includes limits on the right to repatriate funds, high levels of taxation on profits sent overseas, the expropriation of assets or the short-term freezing of bank account balances;
- Funding risk for borrowers refers to the inability to meet instalments on capital and interest payments and having to pay fixed charges on the business assets;
- Outsourcing risk stems from a counterparty that has breached contract conditions, failed to deliver goods on time, or gone into liquidation;
- Systems risk is when a loss is caused by break down of business processes, procedures, systems, or controls; and

Derivatives risk is caused by speculation in the market or hedging, for example by buying forward with the purpose of buying a commodity at a price lower than the current price at the time.

### Benefits of Financial Risk Management

A company benefits from financial risk management in the following ways:

- Improves financial planning and control, which is the centre point of corporate governance;
- Encourages the practice of due diligence when dealing with counterparties and outsourcing;
- Improves more healthy investment choices;
- Advises hedging decisions; and
- Develops the habit of constantly monitoring the economy and markets, to assist in prudent decision making.

## Implementation of Financial Risk Management

Developing a reliable system of financial risk management will depend on several issues including some of the following:

- Developing healthy internal controls and financial systems;
- Creating to-the-point, understandable reporting tools;
- Preparing a cash budget plan to reduce the possibility of liquidity risk;
- Securing credit insurance for protection against bad debt or non-payment of goods or services;
- Using established methods for assessing planned investments;
- Monitoring projected fluctuations in interest rates so that company activities can be altered to reduce negative effects; and
- Implementing comprehensive due diligence on counterparties if their default might damage the company completely.

## Liquidity Risk

Liquidity is the risk that a company will not be able to acquire funds to meet its obligations as and when they are due, either by increasing liabilities or by converting assets into cash without losing value. A more liquid asset can be converted into money more easily. *Near money* is an example of an asset that can be converted into liquid cash more quickly and at little cost.

In the UK, *time deposits* with banks and building societies are the best types of near money and pay higher interest rates than current accounts. Investors must give notice before they can withdraw money from the account, thus the term *time* deposit. As the outcome of extreme liquidity is bankruptcy, liquidity risk can be a *fatal* risk. Extreme conditions leading to bankruptcy are often caused by other risks, for instance, substantial losses due to a key customer defaulting can raise liquidity issues and concerns about the future of the organisation. Companies can only stay solvent by making sure that all cash obligations, such as salaries, rents, tax, etc. can be paid through a combination of investment liquidity, contingent liabilities, liabilities that can be terminated quickly, and funding sources.

## Current and Quick Ratios

A simple way to measure liquidity is by using the *current ratio*, which measures the correlation between current assets and current liabilities. *Current assets* are the assets that are either in cash form or can be turned into cash within a year of the date of the balance sheet.

Current assets consist of cash and bank balances, debtors or *accounts receivable*, and stock or *inventories*. The figure for debtors is generally calculated at net of an allowance or provision for doubtful debts. *Current liabilities* are liabilities that must be paid within one year from the date of the balance sheet.

Liabilities are generally made up of creditors or accounts payable, dividends payable, short-term borrowing and tax owed. Therefore, current ratio is the relationship between current assets and current liabilities and is defined as:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

## Credit Risk

In terms of the size of potential loss, credit risk is the oldest and probably, the most significant of all risks. Credit risk is the monetary loss suffered when borrowers or counter parties default. Banks describe credit risk as risk where customers default, i.e. failure to meet their obligations to pay their debt. On the other hand, credit risk for professional consultancies like lawyers, architects or town planners is when customers default on payment of invoices. Manufacturers who sell goods on credit face the risk that customers will not pay.

Even a few defaults by large clients can create huge losses, which may lead to bankruptcy. The *quantity* of the risk is the outstanding balance given to the borrower. The *quality* of risk arises from the possibility that the default will occur and from the guarantee that reduces the loss if the client defaults. The *amount at risk* is the balance that is outstanding at the date of default and is different from the *total potential loss* in the event of default, due to the potential recoveries. The *recoveries* depend on credit risk mitigations, like the ability to negotiate with the borrower, collateral or third party guarantees, and if any funds are available to repay the debt after paying other lenders. Finally, possible *recoveries* from default cannot be predicted in advance, therefore, credit risk has three main elements: default, exposure and recovery. Each element is discussed below:

### a) Default Risk

Default risk is the possibility of the occurrence of default. Several definitions of *default* are present, including missing a payment obligation, economic default, breaking a covenant, or entering into a legal procedure.

*Payment default* is declared when scheduled payments have not been met for a minimum period, for example, three months after the due date.

*Breaking a covenant* stems from fixed upper and lower bounds of a financial ratio being breached and is called a technical default. This type of default generally starts legal proceedings initiated by negotiation.

*Economic defaults* are not linked to any specific event. An economic default arises when the economic value of assets falls below the value of the outstanding debts. The economic value of the assets is the value of future expected cash flows, which are discounted to the present day. If the market value of assets drops below that of the liabilities, it means that the present expectations of future cash flows are such that the debt cannot be repaid.

Default risks are measured by the possibility that defaults will occur during a specified time period. Default is subject to the credit standing of a borrower. Credit standing, in turn, depends on a number of factors, like the size of the company, its competitive context, the shareholders, market outlook and the quality of management. Default probability cannot be measured directly.

Banks and similar organisations use historical statistics. The ratio of defaults in a specified period over the total sample of borrowers can be calculated from the statistical records of observed defaults. It is a default rate, which is generally a historical proxy for the possibility of default.

#### **b) Exposure Risk**

Exposure risk relates to the uncertainty of the payment of future amounts. The exposure risk is considered to be minimal for lines of credit where there is a repayment schedule, yet this is not true for all lines of credit. Committed lines of credit allow the borrower to draw on those lines when they need to, which are subject to a limit fixed by the bank. Project financing suggests uncertainty in the scheduling of outflows and repayments. Other exposure risks arise with derivatives where the source of uncertainty is in market movements rather than in the borrower's behaviour. The liquidation value of the derivatives depends upon the movements and fluctuates constantly. If the liquidation value is positive, the bank faces credit risk, because it loses money if the counterparty defaults.

#### **c) Recovery Risk**

Recovery risk is related to the insecurity over the possible recovery of outstanding amounts due. Recovery risk depends on this specific kind of default. A payment default is not about the borrower never paying, but it does cause other types of actions ranging from renegotiation to being required to repay all outstanding balances. If corrective action cannot be implemented, legal procedures may be initiated. In such situations, all borrower commitments will be suspended until legal proceedings reached a conclusion.

At best, recoveries are on hold till the end of the legal procedure. At worst, the business is liquidated or sold and there are no funds to repay an unsecured debt so there are no recoveries at all. The credit loss of any business deal is the product of three aspects:

$$\text{Loss} = \text{exposure} \times \text{default} \times \text{severity}$$

### **Credit Insurance**

Credit insurance is a risk mitigation strategy for credit risk. Relatively well priced credit insurance is available in many countries for covering payments for the sale of goods and services.

According to Holliwell (1998) credit insurances can offer:

- Protection against bad debts, typically up to a maximum of two years;
- The extent of the cover will be subject to negotiation; however, 90% is usual. The party taking out the insurance can generally select the risk that it wants to retain and the percentage to insure;
- Cover for all or only a selection of the buyers of your products or services;
- Insurance for either international or domestic trade or both;
- Cover for country risk, including delays in transferring money from the buyer's country, wars, and actions of governments that prevent delivery or payment, including those countries through which goods or funds have to pass;
- International debt recovery services, where the insurer may be prepared to contribute towards the costs of recovery and will have access to specialist lawyers and debt collectors in different countries;
- The benefit of the credit insurer's skills and experience, based upon their exposure in the markets;
- Pre-credit risk insurance for the costs incurred during the manufacture period before shipment;
- Cover for the seller's costs and expenses and for contractual interest due from the buyer;
- The opportunity to win business by offering attractive terms because credit risk is no longer a significant factor'
- The ability to argue for cheaper finance from the bank, as the potential negative impact of any bad debts on the business has been reduced and hence the ability to use the cost savings from cheaper finance to pay for the credit insurance; and
- Cover for the losses in meeting forward exchange commitments, where the buyer has defaulted.

### **Offer of Cover from an Insurer**

Insurers providing credit risk will take the following into account when reaching their decision:

- Industry sector of the business;
- Country risk, if applicable;
- The past performance of current buyers of the goods and services;

- The categories of services or goods being sold; and
- Terms of trade.

### **Conditions upon which Insurance Claims are Settled**

The common terms and conditions accepted by insurers will vary, depending on their policies.

These are described by Holliwell as follows:

- The goods or services have been delivered or otherwise provided;
- The debt is valid and that the buyer actually exists. The insured party would have to satisfy itself that the buyer was genuine;
- The buyer is not disputing payment and the insurance policy will state settlement terms if the buyer disputes, that is whether the insurer will pay anything, perhaps a reduced amount, or whether the goods have to be resold before the insurer will make any contribution to the loss;
- Credit limits have been respected. It is anticipated that businesses will set discretionary limits for individual buyers; and
- Insurance premiums have been paid as these normally comprise a basic fee plus a premium based on the level of activity.

## **Counterparty Risk**

Default risk discussed above occurs when other organisations that they trade with may not honour their obligations in terms of failing to pay for or deliver goods or services, or to repay a borrowing.

On the assumption that your business has fulfilled its obligations under the transaction, default on the part of the counterparty may arise as it:

- Is unable to obtain resources, such as plant, labour or materials, required to complete the transaction.
- Has been dropped by a trading partner.
- Is prevented from completing its under taking due to national trading controls.
- Has become bankrupt.

While dealing with counterparty it is important to really understand the risks and to implement risk response actions to limit risk exposure, with the understanding that not all risk can be removed completely.

Workable actions could include:

- Conducting adequate due diligence;
- Not relying on only one single customer or supplier;
- Understanding that situations change, especially those of long-term trading partners;

- Taking immediate action in case of a default or even, in light of the probability of one;
- Investigating a prospective counterparty in terms of its legal form, such as a limited liability company, partnership or sole trader, its activities, primarily in connection with natural resources, and secondary in terms of processing of materials e.g., manufacturing or tertiary services like banking and insurance, and their size, turnover, capitalisation, assets, number of employees; and
- Knowing the magnitude of your exposure at all times.

### Due Diligence

A company must undertake due diligence as part of the assessment process when considering an undertaking, such as lending money to a third party, entering into a major contract, committing to a joint venture or buying a business. What level of due diligence is required will depend upon the specific situation. Primarily, this will be judged on what harm could be done if the undertaking went *sour* and had a negative influence on the business.

Holliwell (1998) offers the following checklist of issues that require consideration as part of due diligence:

- Strategic plans and vision;
- Key financial ratios;
- Stock levels;
- Nature and diversification of products and services;
- Basis of funding and terms of borrowing;
- Operation and IT risks;
- Market potential and industry risks;
- Accounting, depreciation, and dividend policies;
- System costs and useful life;
- Product lifecycles;
- Off-balance-sheet transactions;
- Property, plant, and equipment;
- Technological risk;
- Control of treasury functions (i.e., are the exposures and risks understood?);
- Environmental issues;
- Research and development programmes and costs;
- Economic risks;
- Licences, goodwill, intellectual assets, and franchises;
- Market shares ;
- Terms of trade;
- Capital and contractual commitments;
- Competitors, positioning, and differentiations;

- Debtors and creditors, their spread and collection/payment periods;
- Contingent liabilities, including warranties and guarantees;
- Spread of client base and dependencies/continuity;
- Currency exchange rate exposures;
- Pension, health, and welfare commitments;
- Customer care policy and practice;
- Interest rate exposures;
- Group structure;
- Public relations;
- Lease and hire purchase agreements;
- Equity structure and holders, which includes warrants, options, and conversion rights;
- Trends such as turnover and costs;
- Security given and available;
- Legal entity and jurisdiction of business;
- Benchmarking of key factors;
- Borrowing covenants;
- Legal issues, including ownership of assets;
- Whether growth has been generic or by acquisition;
- Bases of valuations, including property, stock, and intellectual assets;
- Litigation;
- Changes in the nature of the business;
- Insurance, including assets, key man, and loss of profits;
- Regulatory issues;
- Intra-group trading and exposures;
- Human resources, including spread and depth of skills and experience, continuity and succession planning;
- Management information systems and knowledge management;
- Management style;
- Board and organisational structures;
- Ethics and culture;
- Executives' contracts, remuneration, and benefits;
- Political risks;
- Historic and management accounts;
- Subcontracting and outsourcing;
- Risk management culture, policy, and risk aversion;
- Financial strengths and weaknesses;
- Resources, including dependencies and threats to suppliers;

- Sensitivity analysis; and
- Disaster scenarios

### **Borrowing**

If a company borrows money, they would need to know the basis on which the interest rate is determined, the interest rate on the commencement of the borrowing, if the interest rate is fixed or variable, and when the interest will be payable.

The interest rate paid will be determined by some or all of the following elements:

#### **Amount**

The rate of interest often varies depending to the amount of money loaned, which is called the *principal* or *capital*. Borrowing larger amounts generally warrants preferred rates as the overhead and control costs may be proportionately lower.

#### **Term**

Term relates to the period of time for which the money is borrowed. The longer the term, the greater the possibility for something to happen that may prevent the borrower from repaying all or part of the loan. The current credit risk may be reduced if repayment is on demand or due within a short period of time. However, the situation may change drastically in perhaps three or four years.

#### **Forecasts**

If market interest rates are expected to increase or decrease, this will affect the fixed rates for medium and long-term loans or deposits.

#### **Inflation**

The organization providing the money expects to earn an interest rate that is at least equal to the inflation rate over the term of the loan. If not, the amount the provider receives at the outturn will, in current terms, be less than the original principal or capital loaned.

#### **Risk**

If lenders have greater concerns, especially that they might be unable to recover some or all of their money, they would expect higher rewards for putting their funds at risk.

#### **Opportunity Cost**

The interest rate charged may be influenced by the fund provider losing out on other business deals in order to take on the current transaction.

#### **Market**

Interest rate charges may be influenced by international competition, regulatory requirements, and publishing of available rates.

## Currency Risk

The risk that expected cash flows from overseas investments may be affected adversely by fluctuations in exchange rates is always present. When exchanged into the currency of the country where the business is located, the value of a foreign currency received or paid may be more or less than expected.

For example, a UK-based business may receive less than expected from a business deal with an Italian company because of a rise in the Sterling compared to the Euro. The types of business operations that will expose a business to exchange rate risk include raising finance from overseas sources, the import or export of goods or services, and investing in overseas assets, such as factories. An adverse change in exchange rates can be disastrous for a company engaged in overseas transactions involving large sums of money. Thus, such a company would normally adopt some form of *hedging* to minimise the risk.

## Foreign Investment Risk

When a business is considering various investment opportunities, it may investigate opportunities in overseas countries. However, these types of opportunities carry added risks when compared to domestic market opportunities. The first step in managing corporate foreign investment risk is to understand that such risk does exist and that managing it is in the best interests of the company and the stakeholders. The next step is far more complex, to identify the individual risks, understand their magnitude and decide what steps to take to manage them.

### Country Risk

Risks arise due to geographical distance of the market that can result in higher costs and time required for debt collection. Although a business can take legal action against a defaulting customer within a foreign jurisdiction, the costs of recovery are not guaranteed. Most governments encourage foreign business investment because of the economic benefits; however, some governments implement unfavourable policies which are rather discouraging. Policies such as restrictions on the rights of repatriating funds, high levels of taxes on profits remitted overseas, expropriation of assets and temporary freezing of bank balances. For this reason, risks must be thoroughly investigated before making investment decisions overseas.

To provide assistance in making these decisions, specialist agencies produce indices of *country risk*. While country risk indices with weighting applied to each criterion can be devised, the criteria used may not always be relevant to the investment being reviewed.

If the risks identified are considered to be significant, investing organisations have the option to abandon the proposal or attempt to develop strategies to reduce or overcome the risks. These strategies include using local labour, plant and materials to whatever extent possible, entering into a joint venture with a business in the host country or the country's government, or by becoming a *good corporate citizen* through generous charitable donations. In some instances, it is possible to transfer the risk outside the company by taking out insurance with a credit insurance business at a price against some of the risk, such as the expropriation of assets.

## Environment Risk

A company may not have sufficient experience of the business environment within the overseas market where it wishes to invest. There are likely to be different cultural and ethical norms, work practices, taxation regimes, and laws which are likely to have a profound effect on the feasibility of an investment proposal.

### Derivatives

Markets in derivative products or derivatives include such things as options and futures markets. The term *derivative* originates from the simple fact that they are financial products derived from some other existing product, such as shares, currencies, bonds and commodities, such as nickel and wheat. People are generally acquainted with these. Derivatives are based on existing products with which people are familiar. Their main purpose is to redistribute risk.

Customers using these markets fall into two main categories, clients who want to hedge or guard against a risk they face in the normal course of their business and the traders and speculators who take a high risk in return for the prospect of large rewards. Derivatives are contracts between two parties, the *buyer* and the *seller*, who are called counterparties.

Derivatives fall into three main categories: *options*, *futures* and *swaps* and are available to cover many types of risks, including:

- Interest rates;
- Equities;
- Foreign currency exchange rates; and
- Commodities, such as, agriculture, e.g. cocoa; energy, e.g. oil and gas; bullion, e.g. gold and silver; base metals, e.g. copper and zinc.

The gain or loss under a financial derivative depends on or *derives from* changes in the market price of the asset or index to which the contract relates known as the underlying.

### Exchange traded Derivatives

Exchange Traded Derivatives are bought and sold on recognised international exchanges all across the world and two of the best known Extreme Traded Derivatives are the London International Financial Futures Exchange (LIFFE) and the Chicago Board of Trade (CBOT).

### Over-the-Counter Derivatives

Over-the-Counter (OTC) Derivatives are contracts drawn up to meet the particular needs of individual clients, like governments, businesses, or banks. They cannot be traded on any exchange and are generally provided by banks or other financial institutions.

The contract document is normally based on the standard terms and conditions of an organisation, such as the International Swaps and Derivatives Association (ISDA). The most common OTC derivatives are *options* and *swaps*.

With an OTC contract, the pricing of the derivative is negotiated between the counterparties, which are generally a client and a bank.

The risks linked to OTC and exchange traded derivatives include:

- Aggregation risk;
- Concentration risk;
- Credit risk;
- Liquidity risk;
- Legal risk;
- Operational risk;
- Reputational risk; and
- Settlement risk

### Further Reading:

- ✓ *Linda S. Spedding, Adam Rose, (2008), Business Risk Management Handbook: a Sustainable Approach*
- ✓ *David Vose, (2008), Risk Analysis: a Quantitative Guide*
- ✓ *James Lam, (2003), Enterprise Risk Management: From Incentives to Controls*