Module 5

Introduction

This and the remaining modules in this course are related to the finance topic. This module is designed as a high level overview of finance, financial markets and their participants and an introduction to the time value of money, a concept that lies at the heart of finance decision-making.

Upon completion of this module students will be able to:

Outcomes

- *Demonstrate* knowledge and understanding of the role of finance in providing information for decision-making purposes.
- *Demonstrate* knowledge and understanding of financial markets and institutions and the role of regulation.
- *Demonstrate* knowledge and application of a range of time value of money related tools and their use in finance decision-making.

Unit 11

Finance, financial markets and managers

Learning outcomes

Outcomes

Upon completion of this unit students will be able to:

- *Understand* the difference between accounting and finance.
- *Explain* the role of financial institutions in an economy.
- *Describe* the different types of financial institutions.
- *Explain* the difference between a primary and secondary market.
- *Describe* how financial markets operate.
- *Explain* the role of the financial manager.
- *Understand* the conflicts that can arise due to agency theory.

Activity 5.1

Activity

1. For your country, describe the main financial institutions.
2. Again for your country, list and describe the main sources of funding that are available for businesses.

Activity 5.2

Activity

1. Discuss the two basic differences between finance and accounting.
2. Who are the key participants in the transactions of financial institutions? Who are the net suppliers of funds and who are the net demanders of funds?
3. Who are the key participants in the transactions of financial institutions? What relationship exists between financial institutions and financial markets?
4. Discuss the suggestion that the threat of a hostile takeover can motivate management to act in the best interests of the firm's owners.
5. Discuss the role of the primary and secondary segments of the financial markets.
6. Explain what the two primary activities of the financial manager are that relate to the firm's balance sheet.
7. What is the goal of the firm and therefore of all managers and employees? Discuss how the achievement of this goal is measured.

Activity 5.1 Feedback

Your responses will depend on the organisation you choose.

Activity 5.2 Feedback

1. Discuss the two basic differences between finance and accounting.

   The two differences are in relation to the emphasis on cash flows and decision-making. Accountants use the accrual basis which recognises revenues at the point of sale and expenses when incurred. The financial manager places primary emphasis on cash flows, recognising revenues and expenses only with respect to actual inflows and outflows of cash.

The accountant devotes the majority of his/her attention to the collection and presentation of financial data, whereas the financial manager evaluates the accountant's statements, develops additional data and makes decisions based on subsequent analyses.

2. Who are the key participants in the transactions of financial institutions? Who are the net suppliers of funds and who are the net demanders of funds?

   The key participants in financial transactions are individuals, businesses, and governments. These parties participate both as suppliers and demanders of funds. Individuals are net suppliers, which means that they save more dollars than they borrow, while both businesses and governments are net demanders since they borrow more than they save. One could say that individuals provide the excess funds required by businesses and governments.

3. Who are the key participants in the transactions of financial institutions? What relationship exists between financial institutions and financial markets?

   Financial markets provide a forum in which suppliers of funds and demanders of loans and investments can transact business directly.

   Financial institutions and financial markets are not independent of each other. It is quite common to find financial institutions actively participating in both the money market and the capital market as both suppliers and demanders of funds. Financial institutions often channel their investments and obtain needed financing through the financial markets. This relationship exists since these institutions must use the structure of the financial marketplace to find a supplier of funds.

4. Discuss the suggestion that the threat of a hostile takeover can motivate management to act in the best interests of the firm's owners.

   A hostile takeover is the acquisition of the firm (the target) by another firm or group (the acquirer) that is not supported by management. Hostile takeovers typically occur when the acquirer feels that the target firm is being poorly managed, and, as a result, is undervalued in the marketplace. The acquirer believes that by acquiring the target at its current low price and restructuring its management (by firing and replacing them), operations and financing, it can enhance the firm's value.

5. Discuss the role of the primary and secondary segments of the financial markets.

   The primary market is where securities are initially issued, and is the only market where the issuer is directly involved in the transaction. The secondary market is where pre-owned securities can be traded.

6. Explain what the two primary activities of the financial manager are that relate to the firm's balance sheet.

   The two key activities of the financial manager as related to the firm's balance sheet are:

- Making investment decisions: Determining both the most efficient level and the best mix of assets; and
- Making financing decisions: Establishing and maintaining the proper mix of short- and long-term financing and raising needed financing in the most economical fashion.

Making investment decisions concerns the asset side of the balance sheet (current and fixed assets). Making financing decisions deals with the funding or financing side of the balance sheet (current liabilities, long-term debt, and shareholders' equity).

7. What is the goal of the firm and therefore of all managers and employees? Discuss how the achievement of this goal is measured.

   The goal of the firm, and therefore all managers, is to maximise shareholder wealth. This goal is measured by share price; an increasing price per share of common shares relative to the stock market as a whole indicates achievement of this goal.

Unit 12

Regulation of markets

Learning outcomes

Upon completion of this unit students will be able to:

Outcomes

- *Explain* the need for statutory regulation.
- *Describe* the different forms of statutory regulation.
- *Explain* the role of central or reserve banks.
- *Understand* the functions of a central or reserve bank.
- *Explain* the role of a stock exchange.
- *Describe* the functions of a stock exchange.

Activity 5.3

Activity

1. For your country:
   a. List and describe the main participants in the regulation of financial institutions.
   b. Establish if the central bank is independent.
   c. List and describe the listing requirements for the principle stock exchange.
2. For the organisation that you are involved with, does it comply with best practice corporate governance guidelines in your country?
3. What actions did the regulatory authorities take in your country as a result of the recent global financial crisis?

Activity 5.4

Activity

1. The following are examples of companies that are listed on more than one stock exchange – BHP Billiton (United Kingdom and Australia), Investec Bank (South Africa and United Kingdom), Rio Tinto Group (United Kingdom and Australia) and Unilever (United Kingdom and Netherlands). These are generally called dual-listed companies. List the reasons why companies might adopt this dual listing.

Activity 5.3 Feedback

Your responses will depend on the organisation you choose.

Activity 5.4 Feedback

1. Reasons why companies might adopt a dual listing.
   - Tax – there may be capital gains tax or tax issues related to dividends.
   - National pride – a company wish to keep a presence in a smaller stock exchange as it is seen as an important national symbol but may wish to list in a larger exchange to access capital.
   - Investors – investors in the country of origin may be prevented from owning shares in the company should it list solely in another jurisdiction.
   - May not require regulatory (anti-competition) consent and also may not require foreign investment approval.

Unit 13

Financial mathematics

Outcomes

Upon completion of this unit students will be able to:

- *Understand* the importance of the time value of money in decision-making.
- *Calculate* both simple and compound interest.
- *Understand* the concept of future value and present value, their calculation for single amounts, and the relationship between them.
- *Calculate* the future value and the present value of both an ordinary annuity and an annuity due, and the present value of a perpetuity.
- *Calculate* both the future value and the present value of a mixed stream of cash flows.
- *Understand* the effect that compounding interest more frequently than annually has on future value and the effective annual rate of interest.

Activity 5.5

Activity

1. Calculate the future value of $4,600 received today if it is deposited at 9 per cent for three years.
2. Calculate the present value of $89,000 to be received in 15 years, assuming an opportunity cost of 14 per cent.
3. John has deposited $33,000 today in an account which will earn 5 per cent semi-annually. He plans to leave the funds in this account for seven years earning interest. If the goal of this deposit is to cover a future obligation of $70,000, what recommendation would you make to John?
4. Eco Limited is preparing a five-year plan. Today, sales are $1,000,000. If the growth rate in sales is projected to be 10 per cent over the next five years, what will the dollar amount of sales be in year five?
5. Fred has inherited $6,000. He would like to use this money to go on a cruise with Wilma costing $7,000 for their 10th anniversary celebration which will take place in two years from now. Will Fred have enough money to buy the gift if he deposits his money in an account paying 8 per cent compounded semi-annually?
6. Kay and Arthur are newlyweds and have just purchased a flat for $70,000. Since the flat is very small, they hope to move into a single-family house in five years. How much will their flat be worth in five years if house prices are expected to rise by 8 per cent per annum?
7. Calculate the future value of an annuity of $5,000 each year for eight years, deposited at 6 per cent.
8. Calculate the present value of an annuity of $3,900 each year for four years, assuming an opportunity cost of 10 per cent.

Activity 5.5 Feedback

1. Calculate the future value of $4,600 received today if it is deposited at 9 per cent for three years.

   $FV = \$4,600 \text{ x } (1.09)^3 = \$4,600\ (1.295) = \$5,957$

2. Calculate the present value of $89,000 to be received in 15 years, assuming an opportunity cost of 14 per cent.

   $PV = \$89,000 \text{ x } (1/(1.14)^{15}) = \$89,000 \text{ x } 0.14 = \$12,460$

3. John has deposited $33,000 today in an account which will earn 5 per cent semi-annually. He plans to leave the funds in this account for seven years earning interest. If the goal of this deposit is to cover a future obligation of $70,000, what recommendation would you make to John?

   $FV = \$33,000 \text{ x } (1.05)^{14} = \$33,000\ (1.980) = \$65,340$

John will only have \$65,340 at the end of seven years under the stated arrangement. He must find an account with a higher interest rate or deposit a larger sum today.

4. Eco Limited is preparing a five-year plan. Today, sales are \$1,000,000. If the growth rate in sales is projected to be 10 per cent over the next five years, what will the dollar amount of sales be in year five?

   $FV = \$1,000,000 \times (1.10)^5 = \$1,000,000\ (1.611) = \$1,611,000$

5. Fred has inherited \$6,000. He would like to use this money to go on a cruise with Wilma costing \$7,000 for their 10th anniversary celebration which will take place two years from now. Will Fred have enough money to buy the gift if he deposits his money in an account paying 8 per cent compounded semi-annually?

   $n = 2$, $m = 2$, $i = 8\%$

   $FV = PV(1+i/m)^{n*m} = 6,000 \times (1.04)^4 = \$6,000\ (1.170) = \$7,020$

   Yes, Fred will have enough money to afford the cruise.

6. Kay and Arthur are newlyweds and have just purchased a flat for \$70,000. Since the flat is very small, they hope to move into a single-family house in five years. How much will their flat be worth in five years if inflation is expected to be 8 per cent?

   $PV = \$70,000$, $i = 8\%$, $n = 5$

   $FV = \$70,000 \times (1.08)^5 = \$70,000\ (1.469) = \$102,830$.

7. Calculate the future value of an annuity of \$5,000 each year for eight years, deposited at 6 per cent.

   $FVoa = PMT\ [((1 + i)^n - 1) / i]$

   $FV = 5,000[((1+0.06)^8-1/0.06] = \$5,000\ (9.897) = \$49,485$

8. Calculate the present value of an annuity of \$3,900 each year for four years, assuming an opportunity cost of 10 per cent.

   $PVoa = PMT\ [(1 - (1 / (1 + i)^n)) / i]$

   $PV = \$3,900((1 - (1/(1.1)^4))/0.1) = \$3,900\ (3.170) = \$12,363$