Financial Management

Course Code: B21BB05DC

Bachelor of Business Administration
Discipline Core Course

SELF LEARNING MATERIAL

SREENARAYANAGURU
OPEN UNIVERSITY

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The State University for Education, Training and Research in Blended Format, Kerala

SREENARAYANAGURU OPEN UNIVERSITY

Vision

To increase access of potential learners of all categories to higher education, research and training, and ensure equity through delivery of high quality processes and outcomes fostering inclusive educational empowerment for social advancement.

Mission

To be benchmarked as a model for conservation and dissemination of knowledge and skill on blended and virtual mode in education, training and research for normal, continuing, and adult learners.

Pathway

Access and Quality define Equity.

Financial Management

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Semester - III

Discipline Core Course
Bachelor of Business Administration
Self Learning Material

(With Model Question Paper Sets)

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MESSAGE FROM VICE CHANCELLOR

Dear learner,

I extend my heartfelt greetings and profound enthusiasm as I warmly welcome you to Sreenarayanaguru Open University. Established in September 2020 as a state-led endeavour to promote higher education through open and distance learning modes, our institution was shaped by the guiding principle that access and quality are the cornerstones of equity. We have firmly resolved to uphold the highest standards of education, setting the benchmark and charting the course.

The courses offered by the Sreenarayanaguru Open University aim to strike a quality balance, ensuring students are equipped for both personal growth and professional excellence. The University embraces the widely acclaimed "blended format," a practical framework that harmoniously integrates Self-Learning Materials, Classroom Counseling, and Virtual modes, fostering a dynamic and enriching experience for both learners and instructors.

The university aims to offer you an engaging and thought-provoking educational journey. The Bachelor of Business Administration programme is highly coveted due to the current demand for skilled professionals in the field. This factor was central to our approach while designing the curriculum for this course. It strikes a balanced combination, providing a profound understanding of theoretical concepts alongside a clear exposition of practical applications. We have been cautious in ensuring that the management modules are balanced, preserving the integrity and distinctiveness of the discipline. The Self-Learning Material has been meticulously crafted, incorporating relevant examples to facilitate better comprehension.

Rest assured, the university's student support services will be at your disposal throughout your academic journey, readily available to address any concerns or grievances you may encounter. We encourage you to reach out to us freely regarding any matter about your academic programme. It is our sincere wish that you achieve the utmost success.

Warm regards.
Dr. Jagathy Raj V. P.

01-12-2024

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BLOCK - 01 Introduction to Financial Management

Unit - 1
Introduction to Financial Management

Learning Outcomes

At the conclusion of this unit, the learner will be able to:

- ◊ comprehend the meaning, definition, and nature of financial management and its role in business operations
- ◊ analyse the scope of financial management, including investment, financing, and dividend decisions
- ◊ differentiate between profit maximisation and wealth maximisation as financial goals

Prerequisite

Once upon a time, there was a man named Mr. Ram who had a burning desire to start his own textile manufacturing business. He had a decent capital of Rs. 100,000 that he had saved up over the years, and he knew that he needed a solid financial plan to manage his funds and grow his business. Mr. Ram was a shrewd businessman and knew that the key to success was to maximize profits while minimizing costs. He also wanted his business to last for a long time, so he needed a financial plan that would not only help him in the short-term but also in the long-term. After much thought and consideration, Mr. Ram decided to use a combination of short-term and long-term capital to start his business. He knew that short-term capital would help him meet his immediate financial needs, such as paying for raw materials and salaries for his employees, while long-term capital would help him invest in equipment and expand his business.

But Mr. Ram's ambitions didn't stop there. He also wanted to maximize his wealth, which meant that he needed to consider several factors while implementing his financial plan. The first factor was the interest rate. Mr. Ram knew that he needed to get the best interest rate possible on his loans and investments to ensure that his money grew as quickly as possible. The second factor was inflation. Mr. Ram understood that inflation could erode his profits and wealth over time,

so he needed to make sure that his financial plan accounted for inflation and ensured that his money would grow faster than the rate of inflation. The third factor was risk management. Mr. Ram knew that every business had risks, such as market volatility and economic downturns, so he needed to have a solid risk management plan in place to protect his investments and ensure that his business could weather any storm. Finally, Mr. Ram knew that he needed to keep a close eye on his finances and regularly review and adjust his financial plan to ensure that he was on track to achieving his goals.

With all these factors in mind, Mr. Ram set to work on creating a financial plan that would help him achieve his goals of maximizing profits, minimizing costs, establishing a long- lasting business, and maximizing his wealth. And with his determination and sound financial planning, he was able to build a successful textile manufacturing business that thrived for many years to come.

Keywords

Finance, Financial Management, goals, SWM ,wealth maximization, profit maximization, capital budgeting, working capital management, market value, profit after taxes, earnings per share, risk, return

Discussion

Finance is one of the crucial prerequisites to start any business. Like most other resources, finance or money is always limited. But the need for money is never ending as it is an unavoidable element for performing any business activity. Therefore, it is very essential that businesses must manage their finances effectively. Further, a sufficient corpus of funds and efficient financial management is required throughout a business's lifetime and even when a company is sold or wound up. Therefore, funds need to be managed, regulated as per procedures, and monitored at every step of the business lifecycle. The purpose of financial management is to plan and control the firm's financial resources. Understanding financial management theory enables them to make competent financial decisions. In this unit, we will examine the basics of financial management with its meaning, definition, nature, scope, and goals.

1.1.1 Meaning and Definitions of Financial Management

Meaning

The planning, organising, directing, and controlling of financial activities such

as the acquisition and usage of funds carried out in an organisation, are referred to as financial management. It involves using general management principles to the company's financial resources. It is the responsibility of the business organisations to make sure that the procured funds are invested so that the return on investment exceeds the cost of financing. Regarding financial management, there are numerous theories that have been developed by professionals and researchers. Financial management, according to some experts, is all about giving a business the money it needs on the most advantageous terms possible while keeping its goals in mind. Therefore, this strategy's main focus is on raising money, which may need the use of tools, organisations, and routines. Additionally, it manages the founder's legal and financial obligations to the company. Another group of specialists defined finance as having everything to do with money. Finance includes everything a business does because every business transaction involves money, either directly or indirectly. The third and more comprehensive Perspective of financial management is that it involves raising money and ensuring its maximum utilisation. For instance, when a company decides to buy production equipment, thefinancial manager must confirm funds are available to do so. Profits must also sufficiently offset expenses and risks.

While most businesses in developed markets are able to raise capital through effective financial planning and control, the real challenge lies in its utilisation in an effective manner. Further, the business must ensure the availability, allocation, management and investment of fund. They also have to control costs, forecast financial requirements, estimate profits, and assess working capital of the business activities. Financial management, also known as managerial finance or corporate finance, has been defined by different financial experts as follows:

Definitions

According to H.Guthman and Dougall, Financial management is "the activity concerned with planning, raising, controlling and administering of funds used in the business."

According to J.F. Brandley, Financial management is "that area of business management devoted to a judicious use of capital and a careful selection of the source of capital in order to enable a spending unit to move in the direction of reaching the goals."

According to Massie, Financial management is "the operational activity of a business that is responsible for obtaining and effectively utilizing the funds necessary for efficient operations."

1.1.2 The Nature of Financial Management

The management of finance is an organic function of every business. It concerns with getting hold of tangible resources, running production, compensating suppliers, etc.

The nature or features of Financial Management is described below:

1. Estimates Capital Requirements

Financial management aids in anticipating need for fund by calculating the working capital and fixed capital requirements for conducting business activities.

2. Decides Capital Structure

Financial management helps in building Capital structure for the business. To minimize the cost of capital, a proper balance between debt fund and equity fund are needed which is possible through a well-designed capital structure with appropriate proportion of securities.

3. Select Source of Fund

Source from which fund is to be collected is one crucial decision in every organisation. Every organisation should properly analyse various source of funds such as shares, bonds, debentures etc., and must select appropriate funds which involves minimal risk and maximum return.

4. Select Investment Pattern

Financial Management aids to decide the appropriate investment pattern by analysing and evaluating the investment proposal based on its risk and return.

5. Raises Shareholders' Worth

One of the ultimate aims of financial management is

◊ Raises share value

It aims to increase the amount of return to its shareholders by decreasing its cost of operations and increase in profits.

Finance manager should focus on raising the funds from different sources and invest them in profitable avenues.

◊ Management of cash

Finance manager observes all cash movements (inflow and outflow) and ensures that the company does not face any deficiency or surplus of cash.

◊ Apply financial controls

Implying financial controls helps in keeping the company's actual cost of operation within limits and earning the expected profits.

The different approaches includes developing certain standards for business in advance, comparing the actual cost or performances with pre-established standards and taking all required remedial measures.

1.1.3 The Scope of Financial Management

Financial management plays a crucial role in an organization by ensuring that

financial resources are efficiently utilized to achieve business goals. The scope of financial management includes various critical areas that impact the financial health of a company. Below are the key areas of financial management explained in detail with examples.

1. Investment Decisions (Capital Budgeting)

Investment decisions involve selecting the right projects or assets in which a company should invest its funds for long-term growth. These decisions include acquiring fixed assets such as machinery, land, and buildings. Companies use techniques like Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period to evaluate potential investments. For example, if a manufacturing company is considering purchasing a new production line, it must analyze whether the expected future cash flows will justify the initial cost of investment.

2. Financing Decisions (Capital Structure)

Financing decisions focus on determining the optimal mix of debt and equity to fund the company's operations and growth. A company must decide whether to raise capital by issuing shares (equity financing) or by borrowing funds (debt financing). The choice between debt and equity affects the company's risk and return. For instance, a startup may opt for venture capital or angel investment instead of taking a loan, as it may not have the financial stability to repay debt.

3. Dividend Decisions

Dividend decisions involve determining how much profit should be distributed to shareholders and how much should be retained for future expansion. Companies that consistently pay dividends may attract investors looking for stable returns, while others may reinvest profits to drive growth. For example, a tech company like Tesla often reinvests its profits in research and development rather than distributing dividends, whereas traditional companies like Coca-Cola offer regular dividends to shareholders.

4. Working Capital Management

Working capital management ensures that a company has sufficient short-term assets to meet its day-to-day operational expenses. This includes managing cash, inventory, accounts receivable, and accounts payable. Effective working capital management helps maintain liquidity and operational efficiency. For example, a retail business must ensure that it has enough stock to meet customer demand without overstocking, which could tie up cash unnecessarily.

5. Financial Planning and Forecasting

Financial planning involves estimating future financial needs and setting strategies for resource allocation. It includes budgeting for expenses, forecasting revenue, and

predicting cash flow requirements. Companies use financial models to estimate future performance and make informed decisions. For example, an airline company may use financial forecasting to anticipate fuel costs and adjust ticket pricing accordingly.

6. Risk Management and Financial Control

Risk management in financial management involves identifying, analyzing, and mitigating financial risks such as market risk, credit risk, and operational risk. Companies use various strategies like hedging, insurance, and diversification to protect against financial uncertainties. For example, a multinational corporation might use foreign exchange hedging to protect against currency fluctuations when dealing with international transactions.

7. Financial Analysis and Reporting

Financial analysis and reporting involve evaluating a company's financial performance using tools like financial statements, ratio analysis, and profitability assessments. This helps stakeholders understand the company's financial position and make informed decisions. For example, an investor looking to buy shares in a company will examine its financial statements, including the balance sheet, income statement, and cash flow statement, to assess its profitability and stability.

8. Corporate Finance and Strategic Management

Corporate finance focuses on major financial decisions related to mergers, acquisitions, and business restructuring. It involves valuing companies, managing corporate investments, and making strategic financial decisions. For example, when Facebook acquired Instagram, it was a strategic financial decision to expand its market dominance in the social media industry.

9. International Financial Management

International financial management deals with managing financial transactions across different countries, handling foreign exchange risks, and complying with international financial regulations. Companies engaged in global trade must consider currency fluctuations, tariffs, and taxation in different countries. For example, an automobile company exporting cars to different countries must manage currency exchange risks to avoid losses due to fluctuating exchange rates.

10. Tax and Legal Considerations

Tax planning and legal compliance are crucial aspects of financial management. Companies must adhere to tax laws, corporate regulations, and financial reporting standards. Proper tax management helps businesses minimise tax liabilities while staying compliant with government regulations. For example, multinational companies often establish their headquarters in tax-friendly countries like Ireland to benefit from lower corporate tax rates.

Financial management is a broad field encompassing investment, financing, dividends, risk management, and strategic decision-making. Effective financial management ensures that a business remains profitable, competitive, and financially sustainable in the long run. By making informed financial decisions, businesses can maximise shareholder value, maintain liquidity, and achieve long-term success.

1.1.4 Financial Goal: Profit Maximisation V/S Wealth Maximisation

Financial management plays a crucial role in shaping a company's growth and sustainability. It involves making strategic financial decisions to ensure the efficient allocation of resources and the maximisation of owner's wealth.

Primarily, Profit maximisation and wealth maximisation are the fundamental goals of financial management.

1.1.4.1 Profit Maximisation

Profit maximisation is a fundamental financial goal for businesses, as it directly impacts their sustainability and growth. Traditionally, businesses operate with the primary objective of earning the highest possible profits, as this ensures better returns for shareholders, increased investment opportunities, and long-term financial health. Companies that prioritize profit maximisation focus on strategies such as cost reduction, revenue growth, efficiency improvement, and market expansion. While this goal is essential, it must be pursued strategically to balance short-term gains with long-term sustainability.

Examples:

One of the best examples of a company successfully maximising profits is Apple Inc. Apple has consistently dominated the technology industry by focusing on innovation and premium product offerings. The company introduces new products, such as iPhones, MacBooks, and Apple Watches, with cutting-edge technology and premium pricing strategies, ensuring high-profit margins. Additionally, Apple maintains a strong brand image and customer loyalty, which allows it to command premium prices while keeping production costs under control through supply chain efficiency. By continuously innovating and creating a demand for its products, Apple has maintained a competitive edge, maximizing its profitability year after year.

Similarly, McDonald's exemplifies profit maximisation through its effective cost-control strategies and pricing optimization. The fast-food giant focuses on keeping costs low by leveraging economies of scale, streamlining operations, and optimizing its supply chain. McDonald's constantly evaluates customer preferences and market trends to introduce new menu items while keeping its core products affordable. For example, its value meal options ensure affordability for customers while increasing sales volume, ultimately leading to higher profits. Moreover, McDonald's has embraced digitalisation through mobile ordering, self-service kiosks, and delivery services, enhancing operational efficiency and further driving profitability.

Despite its advantages, the profit maximisation objective has certain limitations. Businesses that focus solely on short-term profits may neglect factors such as product quality, customer satisfaction, and corporate social responsibility. For instance, cost-cutting measures that reduce product quality might result in long-term damage to a company's reputation. Additionally, ignoring employee welfare or environmental concerns in pursuit of higher profits can lead to regulatory issues or public backlash.

In conclusion, while profit maximisation is a critical financial objective, it must be approached with a balanced strategy that considers long-term sustainability and ethical considerations. Companies like Apple and McDonald's demonstrate that profitability can be achieved through innovation, operational efficiency, and customer-centric strategies. However, businesses must also ensure that their profit-driven decisions do not compromise long-term growth, social responsibility, or brand reputation.

Limitations of the financial goal of Profit Maximisation

Following are some of the limitations of Profit Maximisation;

i. It Does Not Consider the Time Value of Money (TVM)

The time value of money (TVM) is a crucial financial concept that recognises that a dollar today is worth more than a dollar in the future due to potential earning capacity. Profit maximisation as a financial objective does not account for this principle, treating all profits equally regardless of when they are received.

Why is this a Problem?

- ◊ Businesses need to consider the present value of money when making financial decisions.
- ◊ Future profits may be uncertain due to inflation, interest rates, and market changes.
- ◊ Investments should be evaluated based on their ability to generate value today, not just in the future.

Example:

A company considering two investment opportunities—one that generates $100,000 today and another that generates $100,000 in five years—should prefer the first option. If the second option is chosen without discounting future earnings, the company risks undervaluing the impact of inflation and lost investment opportunities. Real estate investments and stock dividends are classic examples of companies considering TVM to ensure maximum returns.

ii. It Ignores Risk and Uncertainty

Businesses operate in an environment of constant change, including economic fluctuations, competition, and market risks. Profit maximisation does not account for these uncertainties, assuming that all profit projections will be realised without disruption.

Why is this a Problem?

- ◊ Profits are uncertain and can fluctuate due to economic downturns, regulatory changes, or industry disruptions.
- ◊ Companies that focus solely on profit may take high-risk investments without considering potential losses.
- ◊ A stable and low-risk business model is often preferable to one with unpredictable, short-term profit spikes.

Example:

During the 2008 financial crisis, many banks and financial institutions prioritised profit maximisation over risk assessment. Companies like Lehman Brothers aggressively invested in subprime mortgages without considering the risks, leading to one of the biggest economic collapses in history. Similarly, cryptocurrency investments can yield high profits, but the volatility poses a significant risk if risk management strategies are not in place.

iii. It Overlooks Social Responsibility

Profit maximisation often leads companies to focus solely on financial gain at the cost of ethical business practices, environmental sustainability, and employee welfare. Ignoring corporate social responsibility (CSR) can damage a company's long-term reputation and customer trust.

Why is this a Problem?

- ◊ Consumers are increasingly conscious of ethical business practices and prefer brands that value sustainability.
- ◊ Neglecting employee welfare can lead to low morale, high turnover, and legal issues.
- ◊ Companies that cut corners on product quality to increase short-term profits may face long-term customer dissatisfaction and brand damage.

Example:

Volkswagen Emissions Scandal (2015) – Volkswagen manipulated emissions data to make their cars appear environmentally friendly. While this boosted short-term sales and profits, the scandal led to billions of dollars in fines, lawsuits, and loss of customer trust.

Nike and Sweatshop Allegations – In the 1990s, Nike was exposed for using sweatshops with poor working conditions to cut costs and maximise profits. This led to significant brand damage and forced the company to reform its labour policies.

Companies like Tesla and Patagonia, on the other hand, prioritise environmental and social responsibility while still maintaining profitability, proving that ethical business practices and financial success can coexist.

While profit maximisation is essential for business success, it should not be the sole financial objective. Companies must integrate long-term value creation, risk management, and social responsibility into their financial strategies to ensure sustainability. By considering the time value of money, market risks, and ethical responsibilities, businesses can achieve profitability while maintaining customer trust, regulatory compliance, and long-term growth.

1.1.4.2 Wealth Maximisation

Wealth maximisation is considered a more comprehensive financial objective than profit maximisation. It focuses on increasing the market value of shareholders' investments over the long term. This objective considers factors such as risk, cash flows, and the time value of money.

Examples:

- ◊ Amazon invests heavily in research and development (R&D) and long-term projects, even if it means sacrificing short-term profits. Over time, this approach has significantly increased Amazon's stock price and market valuation.
- ◊ Tesla focuses on innovation in electric vehicles and clean energy, increasing its brand value and stock price, thereby maximising shareholder wealth.
- ◊ Long-Term Investments: A technology company like Apple invests in research and development (R&D) to create innovative products, ensuring continuous revenue growth and increasing shareholder wealth.
- ◊ Dividend Policies: A company may decide to reinvest earnings instead of paying high dividends, leading to long-term value creation. For example, Amazon retained most of its profits for reinvestment rather than distributing dividends, resulting in significant stock price appreciation over time.
- ◊ Mergers and Acquisitions: When Facebook acquired Instagram, it was a strategic decision to expand its market dominance, leading to increased shareholder value.

Advantages of Wealth Maximization

- ◊ It focuses on the long-term financial health of the business.
- ◊ It considers risk factors and ensures financial sustainability.
- ◊ It enhances shareholders' value, leading to higher stock prices and dividends.
- ◊ It helps businesses make better financial decisions by considering the time value of money.

Limitations of Wealth Maximization

- ◊ It may take longer to show results compared to profit maximisation.
- ◊ Requires careful financial planning and strategic decision-making.

◊ Shareholder value may fluctuate due to external market conditions.

Key Differences Between Profit Maximisation and Wealth Maximisation

Feature	Profit Maximisation	Wealth Maximisation
Time Frame	Short-term focus	Long-term focus
Objective	Maximize immediate profits	Maximize shareholder wealth
Risk Consideration	Ignores risks and uncertainties	Takes risks into account
Time Value of Money	Not considered	Considered
Impact on Business	Can lead to unethical practices	Encourages sustainable growth
Example	Cutting costs to boost profits	Investing in R&D for future growth

Apart from the above-mentioned goals of Profit Maximisation and Wealth maximisation, there are many other important goals of financial management. They are discussed below:

1.1.4.3 Earnings per Share (EPS) Maximisation

Another important financial goal is maximising Earnings per Share (EPS), which reflects a company's profitability relative to its outstanding shares. Higher EPS attracts investors and boosts the company's market value.

Examples:

Microsoft consistently increases its EPS through strong financial performance, driving investor confidence and stock price growth.

Google (Alphabet Inc.) generates significant advertising revenue, increasing its EPS and strengthening its position in the market.

1.1.4.4 Return on Capital Employed (ROCE) Maximisation

ROCE measures how efficiently a company utilises its capital to generate profits. Companies aim to maximise their return on invested capital, ensuring better financial health and growth.

Examples:

Coca-Cola maintains a strong ROCE by continuously optimising production, marketing, and supply chain management, ensuring sustainable profits.

Samsung reinvests capital into advanced technology and product development,

maximising returns on capital employed.

1.1.4.5 Business Growth and Expansion

Companies strive to expand their market presence, increase their customer base, and grow their revenue streams. This growth may come from mergers, acquisitions, or international expansion.

Examples:

Facebook (Meta) acquired WhatsApp and Instagram to expand its market dominance, creating additional revenue streams and ensuring long-term growth.

Starbucks continuously opens new stores globally while diversifying its product offerings to sustain growth.

1.1.4.6 Risk Management and Financial Stability

Businesses operate in uncertain environments, making risk management a crucial financial goal. Companies must hedge against financial risks, such as currency fluctuations, market volatility, and credit risks.

Examples:

Goldman Sachs uses complex financial instruments like derivatives to manage investment risks and safeguard its portfolio.

Toyota hedges against currency fluctuations, as its sales are spread across multiple countries, ensuring financial stability.

1.1.4.7 Cost Efficiency and Financial Sustainability

Reducing costs while maintaining efficiency is a critical financial objective. Companies must optimise production costs, minimise waste, and improve operational efficiency.

Examples:

Walmart focuses on supply chain efficiency and bulk purchasing to keep costs low while maintaining profitability.

Netflix invests in data analytics to optimise content recommendations, reduce marketing costs, and increase customer retention.

1.1.4.8 Corporate Social Responsibility (CSR) and Ethical Financial Practices

Modern businesses recognise the importance of ethical financial management and corporate social responsibility. Investing in sustainable and ethical practices improves brand reputation and customer loyalty.

Examples:

Patagonia prioritises environmental sustainability by using eco-friendly materials and donating a percentage of its profits to conservation efforts.

Unilever implements sustainability initiatives to reduce carbon emissions and promote ethical sourcing of raw materials.

Financial management is not just about maximising profits; it involves a holistic approach to ensuring long-term wealth creation, risk management, sustainability, and ethical practices. While traditional businesses focus primarily on profit maximisation, modern corporations emphasis wealth maximisation, risk management, cost efficiency, and social responsibility to ensure sustainable growth. By balancing these objectives, companies can remain competitive and financially stable while fulfilling their obligations to shareholders, employees, and society.

Recap

- ◊ Meaning of Financial Management – Planning, organising, directing, and controlling financial activities in an organisation.
- ◊ Nature of Financial Management – Includes capital estimation, capital structure decisions, fund sourcing, investment pattern selection, and financial controls.
- ◊ Scope of Financial Management – Covers investment decisions, financing decisions, dividend decisions, working capital management, and financial planning.
- ◊ Financial Goals – Profit maximisation focuses on immediate profits, whereas wealth maximisation considers long-term shareholder value.
- ◊ Risk and Financial Stability – Effective financial management ensures liquidity, minimises risk and enhances corporate financial health.

Objective Questions

1. What is the primary focus of financial management?
2. Name the two major financial goals in a business.
3. What does capital structure refer to?

4. Which financial decision involves selecting long-term assets for investment?
5. Who defined financial management as "the activity concerned with planning, raising, controlling and administering of funds used in the business"?
6. What is the main objective of working capital management?
7. Which technique is commonly used for investment decision-making?
8. Name a company known for its profit maximisation strategy.
9. What is the purpose of financial forecasting?
10. What is the full form of EPS in finance?
11. What does risk management in financial management help control?
12. Name a major financial challenge in international business.

Answers

1. Managing financial resources
2. Profit maximisation and wealth maximisation
3. The mix of debt and equity
4. Investment decision
5. H. Guthman and Dougall
6. Maintaining liquidity
7. Net Present Value (NPV)
8. Apple Inc.
9. Estimating future financial needs
10. Earnings Per Share
11. Financial uncertainties
12. Currency fluctuations

Self Assessment Questions

1. Define financial management and explain its importance in a business.
2. Discuss the differences between profit maximisation and wealth maximisation.
3. Explain the major investment decisions in financial management.
4. What are the key components of working capital management?
5. Describe the role of risk management in financial decision-making.

Assignments

1. Conduct a case study analysis on the financial strategies of a multinational corporation.
2. Develop a financial plan for a startup, including capital structure and investment strategies.
3. Compare and analyse the financial statements of two companies to assess their financial health.
4. Prepare a report on the impact of dividend policies on shareholder wealth.
5. Evaluate the risk management strategies of a selected business and suggest improvements.

Suggested Reading

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Unit - 2
Functions of Finance

Learning Outcomes

At the conclusion of this unit, the learner will be able to;

- ◊ explain the finance function
- ◊ get an awareness of the significance of financial decisions
- ◊ describe the short-term and long-term financial decisions
- ◊ familiarise with the role of financial manager
- ◊ comprehend the role of financial management in business

Prerequisite

Mr. Ram was a successful textile business owner who had big dreams of expanding his enterprise. He knew that in order to take his business to the next level, he needed more capital. So, he decided to establish his business as a partnership, bringing in new investors who shared his vision for the future of the company. With the expansion of the business came the need for a skilled finance manager to oversee the financial operations of the company. Mr. Ram carefully selected a new finance manager who had the experience and expertise to take on this important role.

The new finance manager quickly got to work, preparing investment decisions, financial plans, and dividend decisions for the owners of the enterprise. He knew that fund raising and allocation were critical to the success of the business, and he made it his top priority to ensure that the company had access to the capital it needed to grow and thrive.

As the finance manager, he also had the important responsibility of managing the financial risks of the business. He carefully monitored market conditions and

economic trends to ensure that the business was well positioned to weather any potential storms. He was always on the lookout for new opportunities to invest in the business and maximize its potential for growth. He worked closely with Mr. Ram and the other partners to develop a solid financial plan that would help the business achieve its long-term goals.

In this unit, we will take a closer look at the financial management of this organization, exploring the strategies and decisions that were made to help the business succeed. From fund raising to risk management, we will delve into the key factors that contributed to the growth and success of this thriving textile enterprise.

Keywords

Financing decision, investment decision, dividend decision, liquidity, long-term asset, capital-mix, short-term asset, opportunity cost, capital structure, financial leverage, fund, cost,profit

Discussion

It may be simple to identify the finance operations, but it might be difficult to separate them from other company tasks like manufacturing and marketing. The procedures of acquiring capital, allocating it to assets, and delivering returns to shareholders—referred to as financing,investment, and dividend decisions, respectively—all fall under the purview of the finance functions. A corporation must maintain a balance between cash inflows and outflows while performing these duties, commonly referred to as a liquidity decision, in order to ensure financial stability. One of the most important financial functions for an organisation is the determination of liquidity. Thus, finance functions or decisions are divided into long-term andshort-term decisions and include the following:

Long-term financial decisions:

i. Long-term asset-mix or investment decision

ii. Capital-mix or financing decision

iii. Profit allocation or dividend decision

Short-term financial decisions:

◊ Short-term asset-mix or liquidity decision

A corporation typically conducts its financial operations concurrently and continuously, without necessarily adhering to a predetermined sequence. Executing these finance functions effectively requires careful planning, management, and execution.

The financial structure of a firm is fundamentally based on shareholder assets, also referred to as shares. A financial choice that raises the value of shares is advantageous for shareholders, it should be noted. Therefore, the financial manager should strive to increase the market value of shares when performing financial function.

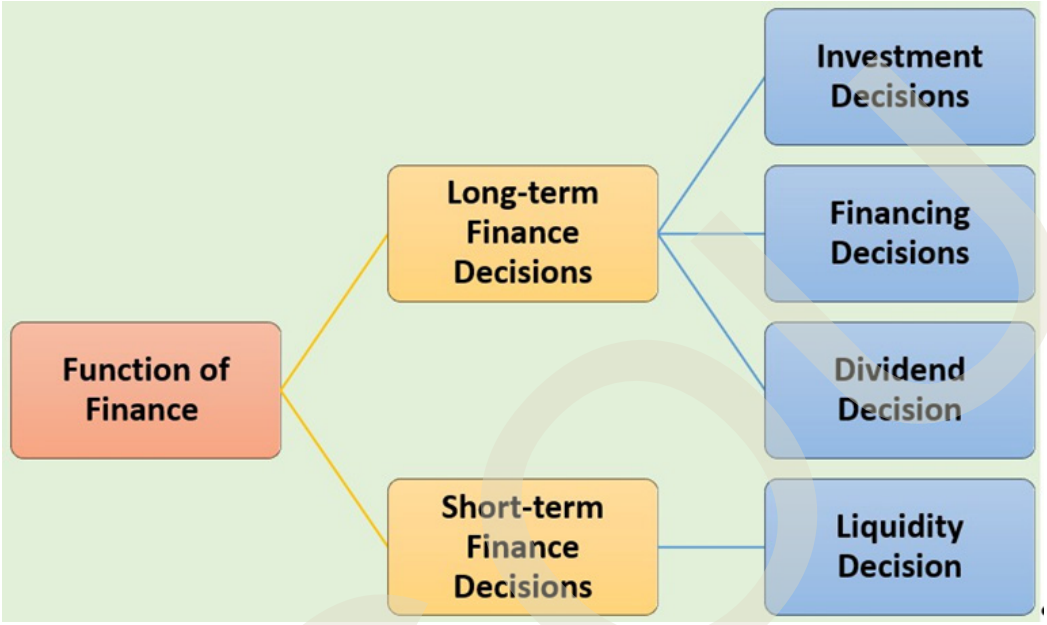

Figure 1.2.1 Functions of Finance

1.2.1 Long-term Finance Decisions

Long-term financial activities and decisions often last longer than a year and have the potential to affect a firm's long-term success and value. Because they are intimately related to a company's overall strategy, these choices are frequently made with top management's input.

1.2.1.1 Investment Decisions

The decisions a corporation makes regarding its investments, often known as capital budgeting decisions, involve capital expenditure. Determining the allocation of capital or the commitment of finances towards long-term assets that are anticipated to produce future benefits or cash flows is known as capital budgeting. Two essential components of investment decisions are assessing the potential profitability of new investments and comparing their anticipate returns to a cut-off rate. Investment proposals should be evaluated based on both expected return and risk because forecasting future investment returns is uncertain. Capital budgeting also includes replacement decisions, where money is reinvested when an asset becomes less productive or unprofitable, in addition to allocating cash to new investments.

The correct cut-off rate or needed rate of return on investments is generally accepted to be the opportunity cost of capital, which is the expected rate of return an investor

may receive by investing in financial assets with similar risk. In reality, it might be difficult to calculate the opportunity cost of capital using the data and information that are accessible. When making investment decisions, decision-makers should take these difficulties into consideration.

1.2.1.2 Financing Decisions

Making finance decisions is one of the important duties of a financial manager. They must essentially decide when, where, and how to raise money to satisfy the company's investment needs. The main concern is finding the ideal ratio between equity and debt. The capital structure of the company is this mix of debt and equity, and the financial manager must work to get the best financing combination or the ideal capital structure for the business. When the market value of shares is maximised, the ideal capital structure is realised.

The shareholders' return and the company's return are equal when there is no debt. The introduction of debt, however, changes the return and risk to shareholders, potentially raising return on equity but also amplifying risk. Financial leverage is the term used to describe the use of borrowed money (debt) to increase the potential return on an investment. The financial manager needs to balance risk and return. The best capital structure is one that maximises shareholders' returns while keeping acceptable levels of risk in check. This strategy yields the highest market value per share. The financial manager must obtain the necessary sum from the best sources after determining the ideal ratio of debt to equity. In reality, a business takes into account a number of other elements, including control, flexibility, loan, agreements, legal aspects, etc., when determining its capital structure.

1.2.1.3 Dividend Decisions

The third key financial decision that the financial manager must make is about dividends. Dividend decision involves choosing whether to divide all profits as dividends or retain profits for reinvestment in the business (retained earnings), or distribute part of the profit and keeping the rest as retained earnings. The proportion of earnings retained in the business is referred to as the retention ratio, while the proportion of profits distributed as dividends is known as the dividend payout ratio. Similar to the debt policy, the dividend policy should be based on how it will affect shareholder value. A dividend policy that increases the market value of the company's shares is the ideal one. Therefore, the financial manager should choose the ideal dividend payout ratio so that the shareholders hold a positive view of the company's dividend policy. Although a company may issue bonus shares, (which are additional shares given to the existing shareholders without charge) dividends are typically paid in cash. In practice, the financial manager should take into account factors like cash dividends, bonus shares, and the consistency of dividends while making the dividend decision.

1.2.2 Short-term Finance Decisions

Short-term finance functions are actions or decisions that must be made in order to

manage a company's ongoing financial needs for a period of less than a year. These choices often involve handling current assets and liabilities, borrowing short-term loans, and making short-term investments with surplus funds.

1.2.2.1 Liquidity Decision

Numerous tasks that are part of a company's financial management have an impact on its profitability, liquidity, growth, and risk. Liquidity decision is mainly concerned with the management of current assets which is significant to the long term success of any firm. The management of current assets, which has an impact on the company's liquidity and profitability, is one crucial task. It's critical to strike a balance between profitability and liquidity so that the company can invest in current assets that produce returns while still having enough cash on hand to satisfy its short-term obligations.

The firm's current asset requirements should be estimated using reliable methods by the financial manager, who should also make sure that funds are available when needed.

Making investment decisions, which include committing or recommitting cash to buy or sell assets, is another crucial task. These choices ultimately affect the growth and worth of the company by having an impact on other operations like manufacturing and marketing. Finding the best capital structure and dividend policy to maximise the firm's market value is another problem of financial management. The financial management must decide the firm's capital structure and dividend policy after taking into account a number of variables, including control, flexibility, legal considerations, loan agreements, and bonus shares.

In summary, financial management involves reviewing and controlling decisions to commit or recommit funds to new or ongoing uses. It is directly concerned with various functions within an enterprise that affect the acquisition or distribution of assets. As Ezra Solomon said, "Financial management is not only concerned with raising funds but also with productive use of funds."

1.2.3 Financial Procedures and Systems

Certain other tasks must be routinely carried out in order for the finance functions to be executed effectively. They involve a lot of paperwork and time and concern systems and procedures. They do not require specialized skills of finance. Some of the important routine finance functions are:

i. supervision of cash receipts and payments and safeguarding of cash balances

ii. custody and safeguarding of securities, insurance policies and other valuable papers

iii. taking care of the mechanical details of new outside financing

iv. record keeping and reporting

In contemporary businesses, lower-level executives handle ordinary financial operations while the finance manager largely concentrates on managerial finance tasks.

Only procedures, forms, employment standards, and ensuring adherence to established rules and forms are subject to the financial manager's participation in routine tasks. However, in recent years, the role of the financial manager has grown to include more managerial financial tasks. The scope of finance functions have expanded, and the position of the finance manager has changed, as discussed in the section that follows.

1.2.4 Financial Manager's Role

What are the duties of a financial manager, and how have they changed over time? For a modern company, financial manager is crucial for the execution of financial operations. Their function as a member of the senior management team in addressing complicated finance management issues has expanded in scope, intensity, and importance. The role of the financial manager has expanded beyond only keeping records, creating reports, and obtaining money as necessary. Instead, they are in charge of directing the company's fortunes and taking part in crucial capital allocation choices. As a result of this new position, the financial manager must guarantee that the company's resources are used as effectively as possible in order to affect the size, profitability, growth, risk, and survival of the company, which in turn affects its entire worth. To be effective in this position, the financial manager needs to have a solid understanding of the nature and range of finance responsibilities. In the field of financial management, this dynamic decision-making function is a relatively recent development, as thirty years ago, the financial manager was not always regarded as an essential player in top management decision- making. In order to appreciate the evolution of a financial manager's work inside contemporary organisations, it is crucial to comprehend the primary responsibilities of a financial manager.

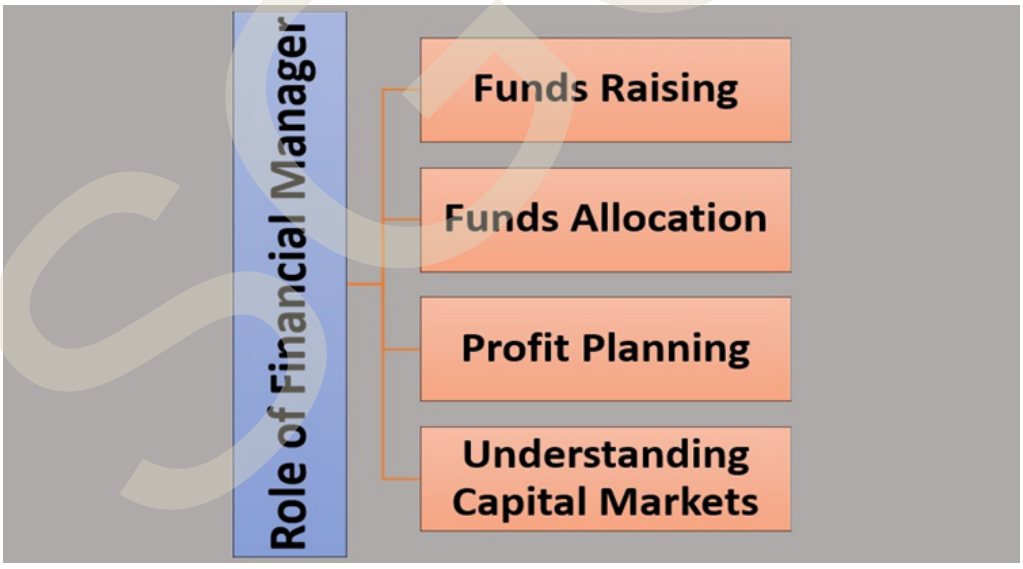

Figure 1.2.2 Role of financial manager

1.2.4.1 Funds Raising

In the traditional approach to financial management, which dominated the field of finance for a long time, the role of the financial manager was limited to fund raising.

The financial management required to raise money only during big events like the company's expansion, reorganisation, promotion, or diversification. The financial manager's sole duty in day-to-day operations was to make sure that the company had enough cash on hand to pay its debts. The American model, which centered on the acquisition of capital through institutions, tools, and practices, was followed by finance textbooks in the USA and other nations. According to the conventional understanding of financial management, the financial manager had no input into how the company's funds were allocated. It was assumed that these decisions were given, and the financial manager was responsible for raising the required funds from various sources.

Despite being popular, the traditional method was criticised for having a limited view of financial management. It ignored practical financial management issues and concentrated primarily on the viewpoint of management insiders. The conventional method neglected the real problems associated with the distribution and administration of funds and lacked a conceptual framework for making financial decisions. It also placed an excessive emphasis on fund raising.

1.2.4.2 Funds Allocation

Utilising the firm's resources more efficiently became necessary after the mid-1950s due to changes in the business environment and economic factors like industrialization, competition, and government intervention. The conventional method of managing finances, which centered on obtaining funding for significant events, was no longer adequate. Instead an alternative strategy that put more of an emphasis on conceptual and analytical ideas and the efficient and effective use of funds evolved. This new strategy views financial management as a crucial component of general management.

The modern financial manager is concerned with making rational decisions about the allocation of funds, taking into account the long-term objectives of the firm. This includes:

i. Determining the size and technology of the firm

ii. Selecting the optimal asset and financing mix

iii. Shaping the profitability and risk profile of the firm.

The financial manager must answer three critical questions regarding the enterprise's size, asset holdings, and fundraising strategy. These questions relate to investment, financing, and dividend decision-making.

All business activities are significantly impacted by financial decisions. In order to maximise the utilisation of the company's resources, it is the responsibility of the financial management to make these decisions as rationally as possible. These choices are referred to be management finance functions since they necessitate unique care and excellent managing skills.

1.2.4.3 Profit Planning

The responsibilities of the financial manager can be expanded to include duties

linked to profit planning, which include judgments on price, costs, output volume, and product line selection. Planning your profits is essential for making the best financing and investing choices. The combination of fixed and variable costs in a company's cost structure, as well as other factors, greatly affects its profitability. Profits are more erratic than sales because fixed expenses are constant while variable costs fluctuate with volume variations. The phrase "operating leverage" describes the shift in profitability brought on by a shift in sales. Developing solutions to deal with unforeseen changes and forecasting the links between volume, expenses, and profits are both aided by profit planning.

1.2.4.4 Understanding Capital Markets

The capital markets, which act as a platform for bringing together investors (lenders) and businesses (borrowers), must be interacted with by the financial management. A full understanding of capital market processes, including how securities are valued and how risk is assessed and managed in investment and financing decisions, is essential for the financial manager. Investors may see the use of excessive amounts of debt to support growth as a dangerous move that could result in a decrease in the firm's share value. Additionally, rather than paying out dividends, investors may prefer a highly profitable, expanding company to reinvest profits in promising opportunities, as this may increase their chances of making significant capital gains in the future.

Investments have a risk and return component, and investors who participate in capital markets continuously assess the financial manager's decisions. As the cost structure of the company, which consists of fixed and variable costs, significantly affects profitability, profit planning is crucial for optimising investment and financing decisions. Profit planning facilitates the creation of action plans to deal with unforeseen developments and assists in anticipating the link between volume, costs, and profits.

1.2.5 Role of Financial Management in Modern Business

Whether an organisation is for profit or not, having adequate money is essential for its survival. In addition, long-term sustainability and viability of an organisation depend on the efficient administration of financial resources. In order to accomplish this goal, sound financial management is essential. Planning, organising, directing, and regulating financial processes and operations is necessary for obtaining finances, allocating financial resources, using cash, and performing other crucial tasks.

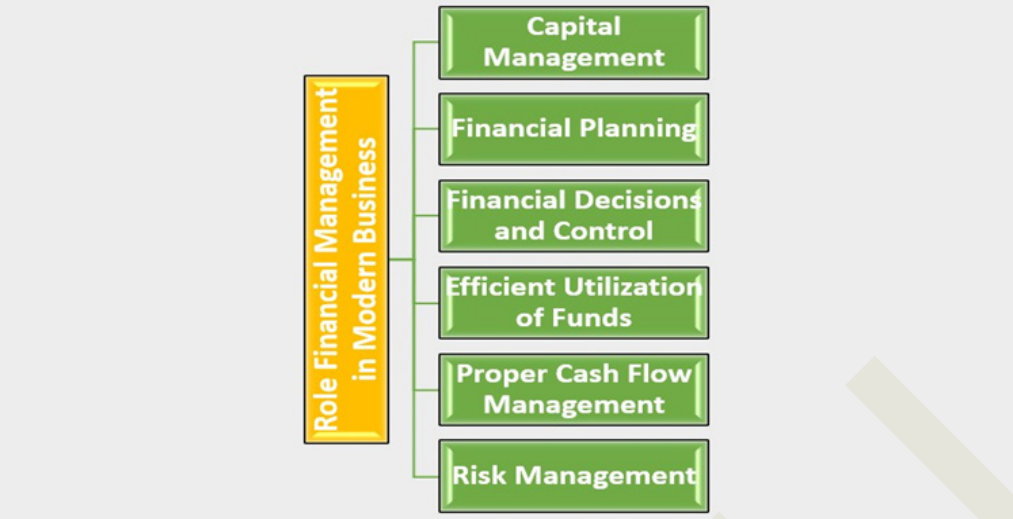

Figure 1.2.3 Role of financial management in modern business

1.2.5.1 Capital Management

A business's capital management depends heavily on financial management. Financial managers are in charge of figuring out how much capital the company needs. They determine the capital structure and the sources of funding to buy them after estimating the amount of funds needed.

1.2.5.2 Financial Planning

Financial management creates guidelines for the use of financial resources and activities within an organisation. Financial managers collect information from many sources and analyse it to understand the requirements of the organisation. After gathering this data, plans and budgets are created with the intention of improving overall performance.

1.2.5.3 Financial Decisions and Control

Financial managers are in charge of applying various financial control strategies and making financial choices. Their main responsibility is to make sure that all business operations are carried out within the estimated cost and do not go over the set budgets. To manage the organization's finances, they make use of a variety of financial methods, including financial forecasting, ratio analysis, and profit and loss analysis.

1.2.5.4 Efficient Utilization of Funds

In order to generate projected profits and achieve growth, financial managers play a critical role in ensuring that the organization's money are allocated to successful investment opportunities.

1.2.5.5 Proper Cash Flow Management

Any organization's smooth operation and long-term viability depend on effective

cash management. It is the responsibility of financial managers to monitor all cash transactions by keeping thorough records of both cash inflows and outflows. They work to avoid instances where there is an imbalance of funds within the company.

1.2.5.6 Risk Management

Financial management also plays a significant part in risk management for organisations. Financial management assists the company in anticipating potential hazards and taking all required precautions to control or avoid them. Additionally, it creates some reserves for handling any unforeseen or urgent business situations.

Recap

- ◊ Finance functions are divided into long-term and short-term decisions.
- ◊ Long term decisions involve investing, financing and dividend decisions.
- ◊ Short term decision involves liquidity decision.
- ◊ Investment decisions: Decisions regarding allocation of capital or investment in long term assets.
- ◊ Financing decisions involve deciding on the source of funds required to meet the investment needs of the company.
- ◊ The capital structure is the mix of debt and equity that a company uses to finance its operations.
- ◊ Decisions regarding the distribution of dividends are known as dividend decisions.
- ◊ Profit retained and reinvested in the business is known as retained earnings.
- ◊ The proportion of a company's net income that is distributed as dividends is known as dividend payout ratio.
- ◊ Decisions made to manage a company's financial needs for a period less than one year is known as short term decisions.
- ◊ Role of financial manager: fund raising, fund allocation, profit planning and understanding the capital markets.
- ◊ Risk management is an important function of financial management in modern business organisation.
- ◊ Financial management is the effective and efficient planning, organizing, directing, and controlling of the financial activities and processes of an organization.

Objective Questions

1. What is liquidity decision?
2. What are the two aspects of investment decisions?
3. What do you mean by opportunity cost?
4. What does "capital structure" mean?
5. When does the firm achieve the optimum capital structure?
6. What do you mean by financial leverage?
7. What do you mean by dividend payout ratio?
8. What is the retention ratio?
9. Who is a financial manager?
10. What are the long term finance decisions?
11. What are bonus shares?
12. What is capital budgeting?

Answers

1. The decisions regarding the management of current assets aimed at balancing profitability and liquidity is known as liquidity decision.
2. Two important aspects of investment decisions are (a) the evaluation of the prospective profitability of new investments and (b) the measurement of a cut-off rate against which the prospective return of new investments can be compared.
3. The opportunity cost of capital is the expected rate of return that an investor could earn by investing his or her money in financial assets of equivalent risk.
4. The mix of debt and equity is known as the firm's capital structure.
5. The firm's capital structure is considered optimal when the market value of its shares is maximized.

6. Financial leverage is the term used to describe the use of borrowed money (debt) to increase the potential return on an investment.
7. The proportion of a company's net income that is distributed as dividends is known as dividend payout ratio.
8. Retention ratio is the proportion of earnings that the company retains within the business as retained earnings.
9. A financial manager is a person who holds significant responsibility, for executing the financial functions within an organisation.
10. The long term finance decisions include investment, finance and dividend decision.
11. Additional shares given to existing shareholders for free of cost are known as bonus shares.
12. Determining the allocation of capital or the commitment of finances towards long-term assets that are anticipated to produce future benefits or cash flows is known as capital budgeting.

Self-assessment Questions

1. Discuss about the long term decisions of finance functions?
2. Explain the role of a financial manager.
3. Can you explain the role of financial management in modern business with suitable examples?
4. What are the two factors to be kept in mind while making an investment decision?
5. What do you mean by cut-off rate?
6. Why is it significant to find the ideal ratio between debt and equity while designing the capital structure?
7. What is the difference between retention ratio and dividend payout ratio?
8. Why is it vital for the financial manager to keep a balance between

profitability and liquidity while managing the current assets of the firm?

9. Mention any four routine finance functions.
10. Compare and contrast the role of financial manager in modern and traditional business ogansisation.
11. What are the long term objectives that a financial manager must consider while deciding about the allocation of funds?
12. Is it essential for a financial manager to have a proper understanding of the capital markets? Support your answer with relevant points.

Assignments

1. Visit a business enterprise and write a brief note about the main factors to consider when making financial decisions in that organization.
2. Analyze the dividend policy of a company of your choice and identify the factors that have influenced the company's dividend decision.
3. Find out the capital structure of a company and analyze whether the structure is optimal.
4. Visit a firm and identify the various roles and responsibilities performed by the financial manager of that firm.

Suggested Reading

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BLOCK - 02 Investment Decision

Unit - 1
Investment Evaluation

Learning Outcomes

At the conclusion of this unit, the learner will be able to:

- ◊ explain the nature of investment decisions and investment evaluation criteria
- ◊ familiarise with capital budgeting processes & techniques
- ◊ evaluate various projects and find out the most profitable projects for investments

Prerequisite

Your mobile phone has stopped working! Now, you have two choices: Either buy a new one or get the same mobile repaired. Here, you may conclude that the cost of repairing the mobile increases the life of the phone. However, there could be a possibility that the cost to buy a new cell phone would be lesser than its repair costs. So, you decide to replace your cell phone and you proceed to look at different phones that fit your budget. Similarly, an organization is often faced with the challenges of selecting between two projects/investments or the buy vs. replace decision. Ideally, an organization would like to invest in all profitable projects but due to the limitation of capital an organization has to choose between different projects/investments.

When a firm is presented with a capital budgeting decision, one of its first tasks is to determine whether or not the project will prove to be profitable. This unit is mainly concerned with the capital budgeting decision or investment decision. Various methods and techniques used for the evaluation of the profitability of the projects are discussed in detail.

Keywords

Capital Budgeting, Investment, Investment evaluation criteria, Cash Flow, Internal Rate of Return (IRR), Payback (PB), Average Rate of Return (ARR), Discounted Cash Flow, Non- Discounted Cash flow, Capital Rationing

Discussion

2.1.1 Investment Decisions

Investment decisions are one of the most critical aspects of financial management. They involve allocating a firm's resources to long-term assets or projects with the goal of maximising the firm's value. These decisions are strategic in nature and have long-term implications for the business.

Investment decisions are the choices made by shareholders or top management on the sum of money to be invested in potential business ventures. The choice of assets in which the firm will invest is related to the investment decision.

2.1.1.1 Objectives of Investment Decisions

The primary objective of investment decisions is to allocate resources efficiently to generate returns over time. This means choosing projects or assets that will provide the highest possible return relative to the risk involved. The ultimate goal is to maximise shareholder wealth by increasing the value of the firm.

Example:

A company has ₹1 million to invest. It can either:

Invest in a new factory that will generate ₹200,000 annually for 10 years.

Invest in government bonds that will yield ₹50,000 annually for 10 years.

The investment decision here involves analysing which option will provide the best return while considering the risks (e.g., market demand for the factory's products vs. the stability of government bonds).

1. Maximisation of Shareholder Wealth

The primary objective of investment decisions is to maximise shareholder wealth by choosing investments that provide the highest possible return. Businesses invest in projects that increase the company's value, leading to higher stock prices and dividends for shareholders. For example, if a company invests in expanding its production capacity to meet growing market demand, it can generate more revenue, increasing shareholder returns.

2. Optimal Utilisation of Resources

Efficient allocation of financial resources ensures that capital is used in projects that generate the highest possible returns. Companies must avoid investing in underperforming assets or unnecessary expenditures. For instance, a technology company deciding whether to upgrade its IT infrastructure must assess whether the investment will improve productivity and generate higher profits.

3. Risk Minimisation

Every investment carries a degree of risk, and financial managers must choose investments that balance risk and return. Risk diversification, such as investing in multiple markets or asset classes, helps minimise potential losses. For example, a multinational corporation investing in different geographic regions reduces the risk of economic downturns in any single country, affecting overall business performance.

4. Profit Maximisation

Investments should contribute to overall profitability, either by increasing revenue or reducing costs. Profit maximisation ensures that businesses remain competitive and sustainable. For example, a retail company investing in e-commerce infrastructure can attract more customers, increase sales, and reduce operating costs associated with physical stores.

5. Maintaining Liquidity

Investment decisions should not compromise the company's ability to meet its short-term financial obligations, such as paying salaries, suppliers, and debts. Maintaining liquidity ensures smooth business operations. For example, if a manufacturing firm invests heavily in new machinery without keeping enough cash reserves, it might struggle to cover immediate expenses like raw material purchases.

6. Long-term Growth and Sustainability

Investment decisions should focus on sustainable long-term growth rather than short-term gains. Businesses must invest in innovation, technology, and market expansion to remain competitive. For example, an automobile manufacturer investing in electric vehicle (EV) technology ensures long-term relevance as the market shifts toward sustainable transportation.

7. Cost Efficiency

Choosing cost-effective investment options helps businesses maximize profitability. Companies must evaluate the return on investment (ROI) and ensure that costs do not outweigh the benefits. For example, a company considering whether to build an in-house logistics system or outsource to a third-party logistics provider must compare costs and long-term efficiency.

8. Compliance with Legal and Regulatory Requirements

Investment decisions must adhere to financial regulations, corporate governance

policies, and ethical standards to avoid legal risks and penalties. Companies must conduct due diligence before investing. For example, a bank investing in financial products must ensure compliance with anti-money laundering laws and central bank regulations.

9. Alignment with Business Strategy

Investments should align with the company's overall strategic goals, whether it's diversification, technological advancement, or market expansion. For instance, a pharmaceutical company investing in research and development (R&D) for new drug formulations aligns with its goal of innovation and market leadership.

10. Capital Structure Optimisation

Investment decisions should balance debt and equity financing to minimise the cost of capital and enhance financial performance. A company with excessive debt may face high-interest costs while relying too much on equity can dilute ownership. For example, a real estate developer choosing between funding a project through bank loans or issuing new shares must evaluate the impact on financial stability and profitability.

2.1.1.2 Nature of Investment Decision

1. Long-term Commitment of Funds

Investment decisions typically involve committing financial resources for an extended period, meaning that companies must carefully evaluate the potential returns and risks before proceeding. Once funds are allocated, they remain tied up in assets such as infrastructure, machinery, or new business ventures. For example, a power generation company investing in a new hydroelectric plant requires significant funding upfront, and the project may take several years to become operational and generate returns.

2. Long-term Effect on Profitability

Since investment decisions shape a company's financial future, they have a lasting impact on profitability. Poor investment choices can lead to financial strain, while strategic investments can drive long-term growth. For instance, if a technology firm invests in artificial intelligence (AI) research today, it may take years to develop market-ready products, but the long-term benefits could significantly enhance its profitability and competitive edge.

3. Large Amount of Investment

Investment decisions often require substantial capital, making them critical to a company's financial strategy. Such large-scale investments necessitate thorough feasibility studies and risk assessments. For example, a telecom company investing in 5G infrastructure must allocate billions of dollars, considering the costs of equipment, licensing, and network expansion before achieving financial returns.

4. Irreversible in Nature

Most investment decisions are difficult or impossible to reverse without incurring

significant financial losses. Once a company commits to a project, reversing or altering the decision can be costly. For instance, if a manufacturing company builds a factory in a specific location, later deciding to relocate would involve huge costs related to dismantling, relocation, and lost investments in infrastructure.

5. Maximisation of Wealth

Investment decisions are primarily aimed at increasing the value of the business and maximising shareholders' wealth. Choosing the right projects ensures sustainable financial growth. For example, a pharmaceutical company investing in the development of a life-saving drug aims to increase its market share and profitability, ultimately driving up shareholder value

6. Monitoring and Control of Funds

Due to the significant financial commitment involved, continuous monitoring and control are essential to ensure that investments generate the expected returns. Companies set up performance-tracking mechanisms, such as financial audits and project evaluations, to assess investment outcomes. For example, a retail chain expanding into new markets closely monitors store performance and adjusts strategies to optimise sales and profitability.

7. Transfer of Information

Investment decisions rely on accurate and timely information to minimise risks and maximise returns. Companies must gather market intelligence, financial forecasts, and competitor analysis before committing funds. For instance, an automobile company planning to enter the Electric Vehicle (EV) market must analyse consumer preferences, government policies, and technological advancements to make an informed investment decision.

2.1.1.3 Importance of Investment Decision

1. They Influence the Firm's Growth in the Long Run

Investment decisions play a crucial role in shaping a company's future growth and competitive position. Choosing the right projects and allocating funds effectively can lead to business expansion, innovation, and increased market share. For example, if a technology company invests in artificial intelligence (AI) research, it may take several years before the product is ready for the market. However, once developed, it can create a sustainable competitive advantage, driving long-term revenue growth.

2. They Affect the Risk of the Firm

Investments impact the financial and operational risk of a firm. High-risk investments, such as launching a new product in an untested market, can lead to potential losses if demand is lower than expected. On the other hand, a conservative investment approach, like expanding an already successful product line, can minimise risks. For example, an automobile company investing in electric vehicles (EVs) faces technological and regulatory risks, but it could also gain first-mover advantages if EV adoption increases.

3. They Involve the Commitment of a Large Amount of Funds

Investment decisions often require significant capital allocation, making them critical to a company's financial strategy. These large-scale investments require careful planning, as they can impact the company's cash flow and financial stability. For instance, a telecom company investing in 5G infrastructure needs billions of dollars for network expansion, spectrum acquisition, and equipment, making it a high-stakes decision.

4. They Are Irreversible or Reversible at Substantial Loss

Once an investment is made, reversing the decision can be costly, if not impossible. Many investment decisions involve building physical infrastructure, acquiring assets, or entering into long-term contracts. For example, suppose a manufacturing company sets up a factory in a particular country and later decides to move due to regulatory changes. In that case, it may face heavy relocation costs, loss of investment, and potential legal issues.

5. They Are Among the Most Difficult Decisions to Make

Investment decisions require a thorough analysis of various factors, including market trends, financial feasibility, technological advancements, and competition. Due to their long-term impact and high financial stakes, these decisions are complex and require expert judgment. For example, a pharmaceutical company deciding whether to invest in developing a new drug must consider research costs, regulatory approvals, potential market demand, and competition before making a commitment.

6. The Exchange of Current Funds for Future Benefits

Investment decisions involve sacrificing current financial resources for expected future benefits. This means that businesses must carefully evaluate whether the future returns justify the initial cost. For example, an e-commerce company investing in warehouse automation must wait several years before it can fully recover the investment cost through increased efficiency and reduced labour expenses.

7. The Funds Are Invested in Long-Term Assets

Investment decisions typically involve acquiring assets that will be used for an extended period, such as machinery, buildings, and technology. These assets are not easily converted into cash and require careful selection. For example, a logistics company investing in a fleet of electric trucks aims to reduce fuel costs in the long run. Still, the initial investment is substantial and must be justified by long-term savings.

8. The Future Benefits Will Occur to the Firm Over a Series of Years

Unlike short-term financial decisions, investment decisions generate returns over multiple years. Companies must assess the time value of money and determine whether the long-term benefits outweigh the upfront costs. For example, a renewable energy company investing in a solar power plant will take years to break even, but the long-term cost savings and environmental benefits make it a viable investment.

2.1.1.4 Types of Investment Decisions

Investment decisions can be categorised into three main types:

1. Expansion Decisions

Expansion decisions involve investing in new projects or expanding existing operations to grow the business. These decisions are often made to capture new markets, increase production capacity, or introduce new products.

Example: A smartphone manufacturer decides to invest $500 million in building a new production facility to meet the growing demand for its products. This expansion decision aims to increase the company's production capacity and market share.

2. Replacement Decisions

Replacement decisions involve replacing old or obsolete assets with new ones to improve efficiency, reduce costs, or maintain competitiveness. These decisions are often driven by technological advancements or wear and tear of existing assets.

Example: A logistics company replaces its old fleet of delivery trucks with new, fuel-efficient vehicles. The new trucks reduce fuel costs and maintenance expenses, improving the company's profitability. This is a replacement decision because it involves upgrading existing assets.

3. Diversification Decisions

Diversification decisions involve investing in new products, services, or markets to reduce risk. By diversifying, a company can spread its risk across different areas, reducing its dependence on a single product or market.

Example: A company that manufactures soft drinks decides to invest in the bottled water business. This diversification reduces the company's reliance on the soft drink market, which may be subject to changing consumer preferences or health concerns.

2.1.1.5 Factors Influencing Investment Decisions

Several key factors influence investment decisions, determining a project's feasibility, profitability, and sustainability. Companies carefully analyse these factors to ensure the optimal allocation of financial resources and minimize risks associated with investments.

1. Expected Returns

One of the most critical factors is expected returns, which refers to the potential profitability of an investment. Businesses aim to invest in projects that generate significant returns over time, ensuring growth and financial stability. If an investment does not promise adequate returns, it may not be considered viable.

2. Risks

Another important factor is risk, which involves the uncertainty and potential for loss

associated with an investment. Different projects carry varying levels of risk, including market risk, financial risk, and operational risk. Companies must assess these risks to determine whether the investment aligns with their risk tolerance and strategic goals.

3. Capital

The cost of capital is also a crucial consideration in investment decisions. It represents the expense of acquiring funds for an investment, whether through equity, debt, or retained earnings. A company must ensure that the return on investment (ROI) exceeds the cost of capital to generate positive financial value. If the cost of financing is too high, the investment may not be worthwhile.

4. Market Condition and Industry

Market conditions and industry trends play a significant role in investment decision-making. Businesses must evaluate the state of the economy, consumer demand, technological advancements, and competitive landscape before making an investment. For instance, investing in a declining industry or an oversaturated market may not yield favourable outcomes.

5. Investment Choices

Lastly, strategic goals influence investment choices, as companies align their financial decisions with their long-term vision and objectives. Investments should contribute to business expansion, innovation, sustainability, or competitive advantage. A company looking to establish itself as a leader in its sector will prioritize investments that enhance its market position and brand reputation.

For example, a renewable energy company may choose to invest in solar power projects due to multiple favourable factors. The expected returns are high, driven by increasing demand for clean energy and government incentives supporting renewable energy adoption. The risk is relatively lower compared to fossil fuel investments, as the transition to sustainable energy is a growing global trend. The cost of capital may also be attractive, given that many financial institutions offer favourable loan terms for green energy projects. Additionally, market conditions are favourable due to regulatory support and environmental concerns pushing consumers and businesses toward sustainable solutions. Finally, this investment aligns with the company's strategic goals of promoting sustainability and becoming a leader in the renewable energy sector.

By carefully evaluating these factors, businesses can make informed investment decisions that drive long-term growth, minimise risks, and enhance financial performance.

2.1.2 Capital Budgeting

A company's investment choices are typically referred to as its capital budgeting or capital expenditure choices. A decision made by the company to invest its current resources most effectively in long-term assets in consideration of a projected stream of benefits over a number of years is referred to as a capital budgeting decision. Assets that have an impact on the company's operations for longer than a year are referred to as

long-term assets. Investment choices made by the company often involve replacement, upgrading, expansion, and acquisition of long-term assets. A decision to invest might also involve the sale of a corporate unit or division, choosing new sales distribution strategies, running a promotional campaign, or investing in research and development, for instance.

Capital budgeting maybe defined as the decision-making process by which a firm evaluate the purchase of major fixed assets including buildings, machinery, equipment, etc. It deals with major investment proportions which are essentially long-term projects. It is concerned with the allocation of firm's scarce financial resources among the available market opportunities.

According to Lynch, "Capital budgeting consists of planning of available capital for the purpose of maximizing the long-term profitability of the concern."

A firm's investment decision is generally known as capital budgeting or capital expenditure decision. It can also be defined as the firm's decision to invest its current funds most efficiently in long-term assets in anticipation of expected cash flows or benefits over an extended period.

The firm's investment decision may include expansion, acquisition, modernisation, and replacement of long-term assets. Such investment requires current assets such as inventories and receivables. Here, investment in fixed and current assets is one single activity.

2.1.2.1 Capital Budgeting Process

The capital budgeting process begins with the;

- ◊ identification of potential investment opportunities
- ◊ gathering investment proposals
- ◊ decision making
- ◊ preparation of capital budget and appropriations
- ◊ implementation
- ◊ performance review

1. Identification of Potential Investment Opportunities

The planning body estimates future sales, which serves as the basis for setting production targets. This information is also helpful in identifying required investments in plant and equipment, research and development, distribution, etc.

A corporation will generally have several options to measure each new effort. For instance, if a business wants to increase the size of its warehouses, it may decide between building a new one or leasing a bigger space elsewhere. The best choice must, therefore, be assessed in terms of logistics and cost to determine which alternative is best. A business should decide when to pursue the most viable opportunity once

it has been recognised, taking in mind elements like business necessity and up-front expenditures.

2. Gathering investment proposals

The identified investment proposals are rooted through several persons in a standardised capital investment proposal form. Rooting a proposal through several people ensures that it is viewed from different angles. It also helps create a climate for bringing about coordination in interrelated activities.

3. Decision Making

Making decisions is the third phase. The decision-making stage will require the executives to select the appropriate investment from the various investment prospects considering the limits of their sanctioning authority. Investment requiring higher outlets needs the approval of the board of directors.

4. Preparation of Capital Budget and Appropriation

The next stage after reaching a decision is to divide investment expenditures into higher and lower value investments. Projects involving smaller outlays which can be decided by executives at lower level get speedy action whereas projects involving larger outlays are included in the capital budget after necessary approvals. Further, it provides an opportunity to review the project at the time of implementation. These appropriations aim to analyze the investment performance.

5. Implementation

After completing the aforementioned processes, it turns the investment idea into a real project. The management staff may encounter a number of difficulties when they complete the responsibilities because they might be time-consuming.

Bringing out an investment proposal into a concrete project is a complex, time consuming and risky task. Delay in implementation can lead to substantial cost overrun. The capital budgeting committee should make sure that management has done its homework on the basic research and the clear articulation of the project before it is put into action to ensure timely processing. After that, it is effectively implemented.

6. Performance Review

A performance review or post-completion audit is a feedback device. It is the means for comparing actual performance with projected performance. It is useful in several ways, such as;

- ◊ it helps to know how realistic were the project assumptions
- ◊ it provides a documented record of experience, which is highly valuable for future decision making.
- ◊ it helps in uncovering judgmental biases
- ◊ it prompts project sponsors to be appropriately cautious.

2.1.3 Investment Evaluation Criteria / Capital Budgeting Techniques

Three steps are involved in the evolution of an investment;

- ◊ estimation of cash flows
- ◊ estimation of the required rate of return
- ◊ application of decision rule for making the choice

The investment decision rules may be referred to as capital budgeting techniques or investment evaluation criteria. A sound appraisal technique should be used to measure the economic worth of an investment project. A sound investment evaluation criterion should possess the following characteristics;

- ◊ it should consider all cash flows to determine the true profitability of the project
- ◊ it should provide for an objective and unambiguous way of separating good projects from bad projects
- ◊ it should help ranking of projects according to their true profitability
- ◊ it should recognise the fact that bigger cash flows are preferable to smaller ones and early cash flows are preferable to later ones
- ◊ it should help to choose the project that maximize the shareholder's wealth from mutually exclusive projects
- ◊ it should be a criterion which is applicable to any conceivable investment project independent of others.

A wide range of criteria have been suggested to judge the worthiness of investment projects. The important investment criteria are discounting criteria and non-discounting criteria. The discounting criteria take in to account the time value of money whereas the non-discounting criteria ignore the time value of money.

Following are the popular investment evaluation criteria used by businesses to evaluate their proposals;

1. Non-discounted Cash Flow Criteria

- ◊ Payback (PB)
- ◊ Discounted payback
- ◊ Accounting Rate of Return (ARR)

2. Discounted Cash Flow (DCF) Criteria

- ◊ Net present value (NPV)
- ◊ Internal rate of return (IRR)
- ◊ Profitability index (PI)

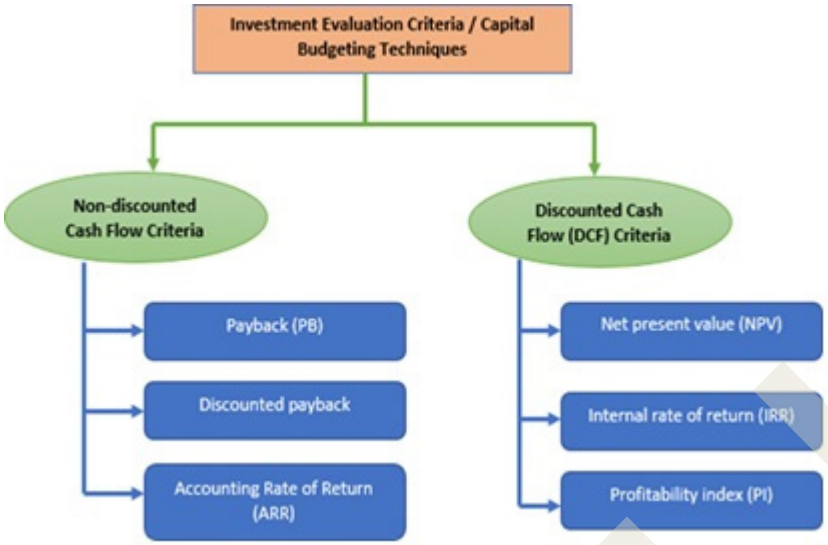

Figure 2.1.2 Investment Evaluation Criteria / Capital Budgeting Technique

2.1.3.1 Non-discounted Cash Flow Criteria

The non-discount method of capital budgeting technique ignores the time value of money. In other words, it is expected that all future money would be worth the same as money today. It is often referred to as conventional techniques. Under Non-discounted Cash Flow, there are three ways for determining the value of the investments. There are payback method, discounted payback method and accounting rate of return (ARR).

2.1.3.1.1 Payback Period Method

The payback period is the length of time required to recover the initial cash outlay on the projects. The payback criterion states that the more quickly a project pays for itself, the better. The maximum allowable payback period is typically specified by businesses using this criterion. If 'n' is chosen, initiatives with payback periods of 'n' years or fewer are seen as worthwhile, while those with payback periods more than 'n' years are regarded as unworthy.

$$\text{Payback} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflow}} = \frac{C_0}{C}$$

Types of Payback Period Calculations

i. Payback with Constant Cash Flow

Assume that a project requires an outlay of Rs. 50,000 and yields annual cash inflow of Rs.12,500 for 7 years. The payback period for the project is:

$$PB = \frac{₹50,000}{₹12,500} = 4 \text{ years}$$

ii. Payback with Uneven Cash flow

When there are unequal inflows of cash, the time to payback can be calculated by adding the cash inflows together until they equal the initial outlay in cash. Think about the following instance.

Suppose that a project requires a cash outlay of Rs. 20,000, and generates cash inflows of Rs. 8,000; Rs. 7,000; Rs. 4,000; and Rs. 3,000 during the next 4 years. What is the project's payback?

The total cash inflows reveal that Rs. 19,000 of the initial investment is recouped in the first three years. Only Rs. 1,000 of the initial investment needs to be recovered by the end of the fourth year, which sees a cash inflow of Rs. 3,000. If the cash inflows happen uniformly throughout the year, it will take (Rs. 1,000/Rs. 3,000) * 12 months, which equals 4 months, to recoup Rs.1000. This results in a payback time of 3 years, 4 months.

Acceptance Rule for Payback Period Method

The payback period is a common metric used by businesses to rate projects and evaluate investments. They contrast the payback of the project with a preset, typical payback. If the project's payback duration is shorter than the management-established maximum or standard payback term, it will be approved. According to this ranking approach, the project with the shortest payback duration receives the best ranking, and the project with the longest repayment period receives the lowest ranking. As a result, if the company must pick between two initiatives that are mutually exclusive, the project with the shorter payback period will be chosen.

Merits of Payback Method

Payback is a popular investment criterion in practice. It is considered to have certain merits.

1. *Simplicity*: Payback's simplicity and ease of calculation are its most noteworthy benefits. The method's simplicity is seen well by the corporate executives. This is clear from the fact that they rely heavily on it in actuality to evaluate investment proposals.

2. *Cost effective:* Payback method is less expensive than the majority of complex techniques that consume a significant amount of the analysts' time and computer resources.

3. *Short-term effects*: Establishing less of a standard payback period can help a company's earnings per share in the short term. However, it should be kept in mind that this might not be an appropriate long-term strategy since the company might have to give up its potential for expansion for current profits.

4. *Risk shield*: A shorter conventional payback period might reduce project risk since it may provide guarantee against loss. A business must invest in numerous initiatives with erratic cash flows and short lifespans. Payback may become significant in such situations, less as a measure of profitability and more as a way to set a limit on the acceptable level of risk.

5. *Liquidity*: The quick regain of the investment is the focus of return. As a result, it provides information about the project's liquidity. The money thus released can be used for other purposes.

Limitations of Payback Period Method

In spite of its simplicity and the so-called virtues, the payback method may not be a desirable investment criterion since it suffers from a number of serious limitations:

1. Ignores the time value of money.
2. Ignores the cash inflow after the pay back payback.
3. This method does not substantially measure profitability of the project.
4. Sometimes a project having higher payback is better than lower payback.
5. Does not measure the rate of return.

2.1.3.1.2 Discounted Payback Method

The fact that the repayment technique does not discount the cash flows when determining the payback time is one of its major criticisms. Cash flows can be discounted, and the payback can then be determined. The number of periods required to repay the investment outlay on a present value basis is known as the discounted payback time. The cash flows that will occur after the payback term are still not taken into account in the discounted payback period. Following are the steps to be followed to find out discounted payback period.

2.1.3.1.2.1 Make a table with the anticipated cash outflow for the investment in Year 0 noted in it.

2.1.3.1.2.2 Enter the anticipated cash inflows from the investment for each succeeding year in the table's subsequent lines.

2.1.3.1.2.3 Using the same interest rate for all of the periods in the table, multiply the anticipated yearly cash inflows for each year in the table by the corresponding discount factor/ present value factor. The initial investment (cash outflow) is made all at once, thus no discount rate is applied.

2.1.3.1.2.4 The discounted cash flow for each year should be listed in a column on the table's extreme right. In this last column, the discounted cash flow for each period is added back to the residual negative amount from the period before. The fact that the balance includes the cash outflow necessary to support the project makes it initially negative.

2.1.3.1.2.5 The time period that has elapsed up to that point reflects the payback period, which occurs when the cumulative discounted cash flow turns positive.

Let us consider an example. A ₹23,24,000 initial investment is anticipated to generate ₹600,000 annually for six years. If the discount rate is 11%, let us see how to determine the investment's discounted payback period. The cash flows of the projects and their discounted payback periods are shown in Table 2.1.1

Table 2.1.1 Discounted payback Illustrated

Year	Cash Flow CF	Present Value Factor PV ₹1=1/(1+i)n	Discounted Cash Flow CF×PV ₹1	Cumulative Discounted Cash Flow
0	- 23,24,000	1	-23,24,000	-23,24,000
1	6,00,000	0.901	5,40,600	-17,83,400
2	6,00,000	0.812	4,87,200	-12,96,200
3	6,00,000	0.731	4,38,600	-8,57,600
4	6,00,000	0.659	3,95,400	-4,62,200
5	6,00,000	0.593	3,55,800	-1,06,400
6	6,00,000	0.535	3,21,000	2,14,600

Discounted payback period = Years before full recovery + (Unrecovered cost at start of the year/Cash flow during the recovery year)

Here,

Discounted Payback Period

$= 5 + (106{,}400 \div 321{,}000)$

$= 5 + 0.33$

$= 5.33$ years

In order to accept this project, management may first determine whether the estimated payback period is within the target payback period, beyond which initiatives are typically denied owing to high risk and uncertainty.

2.1.3.1.3 Accounting Rate of Return

The accounting rate of return (ARR) method which is also known as the average rate of return method is used to evaluate the proposed capital expenditure. Although there are a number of methods for calculating ARR, the most commonly used method is as follows:

$$\text{ARR} = \frac{\text{Average annual profits after taxes}}{\text{Average investment over the life of the project}} \times 100$$

Average annual profits after taxes are calculated by taking the average of the profit after tax expected for each year of the life cycle of the project. i.e. adding the profits and then dividing the total profit by the total number of years.

Now in order to find the average investment of the project, the net investment is divided by two. This is based on the assumption that the firm follows straight line depreciation in which the book value of the asset diminishes at a constant rate from its initial purchase price to zero at the end of its depreciable life. It should also be

noted that, if the machine has any salvage value, it should be deducted from the cost first (depreciable cost = cost - salvage value) and then divide the result by two so as to find the average investment. This is because the salvage money will be recovered only at the end of the project and an amount equal to the scrap value remains in the project throughout its life time. Similarly if any additional working capital is needed in beginning stage which is expected to be recovered only by the end of the project, then such additional working capital also needed to be added in order to calculate the average investment. Therefore,

$$\text{Average investment} = \text{Additional working capital} + \text{Salvage value} + \frac{\text{Initial cost of machine} - \text{Salvage value}}{2}$$

Example: A project will cost Rs. 40,000. Its stream of earnings before depreciation, interest and taxes (EBDIT) during the first year through five years is expected to be Rs. 10,000, Rs. 12,000, Rs.14,000, Rs. 16,000 and Rs. 20,000. Assume a 50 per cent tax rate and depreciation on straight-line basis. Project's ARR is computed in Table 2.1.2

Table 2.1.2 Calculation of Accounting Rate of Return

Period	*1*	*2*	*3*	*4*	*5*	*Average*
Earnings before depreciation, interest and taxes (EBDIT)	10,000	12,000	14,000	16,000	20,000	14,400
Depreciation	8,000	8,000	8,000	8,000	8,000	8,000
Earnings before interest and taxes (EBIT)	2,000	4,000	6,000	8,000	12,000	6,400
Taxes at 50%	1,000	2,000	3,000	4,000	6,000	3,200
Earnings before interest and after taxes [EBIT (1– *T*)]	1,000	2,000	3,000	4,000	6,000	3,200

$$\text{Straight line depreciation} = \frac{\text{Cost of asset} - \text{Salvage value}}{\text{Useful life of asset}}$$

Here, cost of asset (project) =40,000, Salvage value = 0, Useful life of asset = 5 years

$$\text{Therefore, depreciation} = \frac{40{,}000 - 0}{5} = 8000$$

$$\text{Accounting Rate of Return} = \frac{3{,}200}{20{,}000} \times 100 = 16 \text{ per cent}$$

A variation of the ARR method is to divide average earnings after taxes by the original cost of the project instead of the average cost. Thus, using this version, the ARR in Illustration 8.6 would be: Rs. 3,200 ÷ Rs. 40,000 × 100 = 8 per cent. Because earnings are calculated as an average but investments are not subject to the Acceptance Rule, this form of the ARR technique is less reliable. This technique will accept all projects whose ARR is greater than the minimum rate defined by management and reject projects whose ARR is less than the minimum rate as an accept-or-reject criterion. According to this system, a project would have the best ranking if it had the highest ARR, while the project with the lowest ARR would receive the lowest ranking.

Merits of Accounting Rate of Return

The ARR method may claim some merits:

1. *Ease of use:* The ARR approach is easy to comprehend and apply. It does not require intricate calculations.

2. *Accounting data:* Unlike the NPV and IRR approaches, which involve challenges to compute project cash flows, the ARR can be easily calculated from accounting data.

3. *Accounting profitability:* According to the ARR rule, the project's profitability is determined by taking into account the complete stream of income.

Limitations of Accounting Rate of Return

1. *Cash flows ignored:* Instead of cash flows, the ARR technique evaluates the projects using accounting profitability. Accounting profits also comprise non-cash items and are dependent on subjective assumptions and decisions. Therefore, relying on them to gauge the acceptability of investment projects is inappropriate.

2. *Time value ignored:* The temporal worth of money is disregarded while averaging income. In actuality, this process lends the remote receipts more weight.

3. *Arbitrary cut-off:* The company that applies the ARR regulation employs an arbitrary cut-off criterion. Typically, the firm's current return on assets (book value) serves as the benchmark. Due to this, growth firms generating extremely high returns on their current assets may turn down profitable projects (i.e., projects with positive NPVs). whereas less successful companies may choose to take subpar projects (i.e., projects with negative NPVs).

The ARR approach is still in use today as a performance measurement and control tool. However, it is unwise to use it as a selection factor for investments as it might cause capital to be allocated in an unprofitable way.

2.1.3.2 Discounted Cash Flow Method

The value of an investment is calculated using the discounted cash flow (DCF) approach based on the projected future cash flows. Using predictions of how much money an investment will make in the future, DCF analysis aims to determine the value of the investment today. The significant discounted cash flow method types include:

2.1.3.2.1 Net Present Value (NPV)

The traditional economic method for assessing investment proposals is the net present value (NPV) method. It uses a DCF method that formally acknowledges the time value of money. It rightly holds that cash flows that arise at various times have distinct values and can only be compared once their corresponding present values have been determined. It is the most important concept of finance. It is used to evaluate investment and financing decision that involve cash flows occurring over multiple periods. Net Present Value of a project is the sum of the present value of all the cash flows positive as well as negative. Accept the project if the NPV is positive and reject the project if the NPV is negative. The NPV calculation process includes the following steps:

◊ Forecasting the investment or project's cash flows should be done using reasonable assumptions.

◊ To discount the anticipated cash flows, an appropriate discount rate needs to be found. The suitable discount rate is the opportunity cost of capital for the project, which is equal to the necessary rate of return anticipated by investors on projects with a similar level of risk.

◊ The opportunity cost of capital should be used as the discount rate to determine the present value of cash flows, and the following formula can be used to determine the factor of present value for each year.

$$PV = FV\frac{1}{(1+r)^n}$$

◊ By deducting the present value of outflows of cash from the present value of cash inflows, one can calculate net present value. If the project's NPV is positive (i.e., NPV> 0), it should be approved.

Let us consider an example.

Imagine two projects A and B has the following cashflows. We can see how these can be evaluated with the help of NPV method for taking investment decision.

Table 2.1.3 Cash flows of Project A and B

Year	Cash flow	
	A	B
0	(42,000)	(45,000)
1	14,000	28,000
2	14,000	12,000
3	14,000	10,000
4	14,000	10,000
5	14,000	10,000

The capitalisation rate is 10% (which can be used as discount factor)

Table 2.1.4 NPV calculation

Project A and Project B Using NPV Techniques						
Year	0	1	2	3	4	5
Cash Flow ProjectA	-42,000	14,000	14,000	14,000	14,000	14,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-42000	12727.27	11570.24	10518.41	9562.182	8692.894
Total Present Valueof Cash Flow	53071					
NPV	**11071**					

Year	0	1	2	3	4	5
Cash Flow ProjectB	-45000	28,000	12,000	10,000	10,000	10,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-45000	25454.55	9917.352	7513.15	6830.13	6209.21
Total Present Valueof Cash Flow	55924					
NPV	**10924**					

If the NPV is greater than Rs.0, the firm will earn a return greater than its cost of capital or required rate of return or hurdle rate which one is preferred by the project manager. Such action should increase the market value of the firm, and therefore the wealth of its owners by an amount equal to the NPV. In this case both NPV is positive but comparatively project A is offering more NPV. Therefore, Project A can be selected to invest in.

Acceptance Rule

It should be obvious that the investment project is accepted if its net present value is positive (NPV > 0) and rejected if the net present value is negative (NPV< 0) when using the NPV method. Positive NPV increases the net worth of the owners, which ought to drive up the price of a company's stock. Only if the project generates cash inflows at a pace greater than the opportunity cost of capital will the net present value be positive. A project with NPV = 0 (zero NPV) may be approved. A project with a zero NPV generates cash flows at a rate that is precisely equal to the capital opportunity cost. The project with the highest NPV should be chosen when choosing between two projects that are mutually incompatible. Projects will be ranked according to their net present values using the NPV approach; the project with the highest favourable net present value would receive the top spot, and so on.

Merits of NPV Method

Following are the merits of NPV.

1. *Time value:* It recognizes the time value of money—a rupee received today is worth more than a rupee received tomorrow.

2. *Measure of true profitability:* It uses all cash flows occurring over the entire life of the project in calculating its worth. Hence, it is a measure of the project's true profitability. The NPV method relies on estimated cash flows and the discount rate rather than any arbitrary assumptions, or subjective considerations.

3. *Value-additivity:* The discounting process facilitates measuring cash flows in

terms of present values; that is, in terms of equivalent, current rupees. Therefore, the NPVs of projects can be added. For example, NPV (A + B) = NPV (A) + NPV (B). This is called the value-additivity principle. It implies that if we know the NPVs of individual projects, the value of the firm will increase by the sum of their NPVs. We can also say that if we know values of individual assets, the firm's value can simply be found by adding their values. The value-additivity is an important property of an investment criterion because it means that each project can be evaluated, independent of others, on its own merit.

4. *Shareholder value:* The NPV method is always consistent with the objective of shareholder value maximization. This is the greatest virtue of the method.

Limitations of NPV Method

The NPV method is a theoretically sound method. In practice, however, it may pose some computational problems.

1. *Cash flow estimation:* The NPV method is easy to use if forecasted cash flows are known. In practice, it is quite difficult to obtain the estimates of cash flows due to uncertainty.

2. *Discount rate:* It is also difficult in practice to precisely measure the discount rate.

3. *Mutually exclusive projects:* Further, caution needs to be applied in using the NPV method when alternative (mutually exclusive) projects with unequal lives or funds constraint are evaluated. The NPV rule may not give precise results in these situations.

4. *Ranking of projects:* It should be noted that the ranking of investment projects as per the NPV rule is not independent of the discount rates. Let's look at an illustration. Let's say there are two projects, A and B, that both cost ₹50. After one year, Project A returns₹100, and after two years, ₹25. Project B, on the contrary hand, returns ₹30 after a yearand ₹100 after two. The net present value (NPV) of projects as well as their respectiveorders are as follows at rates of discount of 5% and 10%:

Table 2.1.5 NPV of Projects and their Ranks

	NPV at 5%	Rank	NPV at 10%	Rank
Project A	67.92	II	61.57	I
Project B	69.27	I	59.91	II

As can be observed, when the discount rate is increased from 5% to 10%, the order of the projects is reversed. The cash flow patterns are to blame. The impact of discounting increases for cash flow that occurs later in the project's life; the higher the discount rate, the greater the impact of discounting. The greater cash flows for Project B occur later in its existence. As the discount rate rises, their present value will decrease.

2.1.3.2.2 Internal Rate of Return

A project's internal rate of return is the discount rate that brings its net present value to zero. It considers the volume and timing of cash flows. The words yield on investment, marginal efficiency on capital, rate of return over cost, time-adjusted rate of internal return, and others are also used to refer to the IRR approach.

In the case of a one-period project, the internal rate of return idea is quite easy to

comprehend. Let's say you deposit Rs. 10,000 with a bank and receive Rs. 10,800 back after a year. Your investment's genuine rate of return would be:

$$Rate\ of\ return = \frac{10800 - 10000}{10000}$$

$$= 0.08\ or\ 8\%$$

The amount that you would obtain in the future (Rs.10,800) would consist of your investment (Rs. 10,000) plus return on your investment (0.08 × Rs. 10,000)

Steps to be followed for calculating IRR

In case of uneven cash flows for over a period, calculating IRR should be done by trial-and- error method. Basically, we will try to find out NPVs at different discount rates and finally arrive at the rate which makes the NPV equals to 'zero'. Following are the steps to be followed;

1. Calculate NPV of the project using a lower discount rate (i.e., find out positive NPV using a lower rate)
2. Calculate NPV of the project using a higher discount rate (i.e., find out negative NPV using a higher rate)

$$IRR = Lower\ Rate + \frac{NPV\ at\ Lower\ Rate}{PV\ at\ Lower\ Rate - PV\ at\ Higher\ Rate}\ x\ (Higher\ Rate - Lower\ Rate)$$

Let's take the same example we used for NPV method.

Step 1: We find out the NPV at a lower rate for both the projects (For easy calculation, we stick to the capitalisation rate which is 10%)

Table 2.1.6 NPV calculation at lower rate

Year	0	1	2	3	4	5
Cash Flow ProjectA	-42,000	14,000	14,000	14,000	14,000	14,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-42000	12727.27	11570.24	10518.41	9562.182	8692.894
Total Present Valueof Cash Flow	**53071**					
NPV	**11071**					

Year	0	1	2	3	4	5
Cash Flow ProjectB	-45000	28,000	12,000	10,000	10,000	10,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-45000	25454.55	9917.352	7513.15	6830.13	6209.21
Total Present Valueof Cash Flow	**55924**					
NPV	**10924**					

Step 2: We calculate NPV at a higher rate. (Remember we are trying to obtain a negative NPV so, on trial basis we apply 20% and 25% as discount rate for projects A and B respectively.)

2.1.7 NPV calculation at higher rate

Year	0	1	2	3	4	5
Cash Flow ProjectA	(42,000)	14,000	14,000	14,000	14,000	14,000
Present Value Factor at 20%	1.00	0.833	0.694	0.579	0.482	0.402
Present Value ofCash flow	(42,000)	11,667	9,722	8,102	6,752	5,626
Total Present Valueof Cash Flow	**41869**					
NPV	**-131**					

Year	0	1	2	3	4	5
Cash Flow ProjectB	(45,000)	28,000	12,000	10,000	10,000	10,000
Present Value Factor at 25%	1.00	0.800	0.640	0.512	0.410	0.328
Present Value ofCash flow	(45,000)	22,400	7,680	5,120	4,100	3,280
Total Present Valueof Cash Flow	**42580**					
NPV	**-2420**					

(The present value factor is calculated as $\frac{1}{(1+20\%)^1}$ in the first year, $\frac{1}{(1+20\%)^2}$ in the second year and so on for project A and $\frac{1}{(1+25\%)^1}$ in the first year, $\frac{1}{(1+25\%)^2}$ in the second year and so on for Project B)

Now we have got negative NPV for both the projects. It is to be understood that, since we are getting positive NPV at 10% and negative NPV at 20% for project A, the rate which gives us NPV=0 should be in between these two discount rates. Similarly for project B the discount rate which makes NPV= 0 should be in between 10% and 25%. Hence, we use the interpolation equation to find out the exact discount rate which makes the NPV zero as below;

Project A

$$IRR = 10 + \frac{11071}{53071 - 41869} \times (20 - 10) = 19.8$$

Project B

$$IRR = 10 + \frac{10924}{55924 - 42580} \times (25 - 10) = 22.28$$

Acceptance Rule

Using the IRR technique, the accept-or-reject rule states that a project should be approved if its IRR is greater than the opportunity cost of capital (r > k). Keep in mind that k is also referred to as the cut-off, the hurdle rate, and the needed rate of return. If the project's IRR is less than the opportunity cost of capital (r k), it must be rejected. If the internal rate of return is equal to the opportunity cost of capital, the decision-maker might not care. Thus, the IRR acceptance rules are:

- ◊ Accept the project when r > k
- ◊ Reject the project when r < k
- ◊ May accept the project when r = k

Merits of IRR Method

Like NPV method, IRR method is similar. Being able to evaluate profitability as a percentage and the opportunity cost of capital is what makes it a common investment criterion. IRR approach benefits include:

1. *Time value:* The IRR method recognizes the time value of money.
2. *Profitability:* It calculates its rate of return by taking into account all cash flows that occur throughout the project's full lifespan.
3. *Acceptance rule:* It generally gives the same acceptance rule as the NPV method.
4. *Shareholder value:* It is in line with the goal of maximising shareholder wealth.

The shareholders' wealth will increase whenever a project's IRR is higher than the opportunity cost of capital.

Limitations of IRR Method

The IRR approach is a theoretically solid investment evaluation criterion, just like the NPV method is. However, there are some situations where IRR rules can produce results that are inconsistent and misleading. Here, we briefly discuss several potential issues with the IRR approach.

1. *Multiple rates:* A project's rate of return might be one of several rates or it might not. These issues are brought about by the mathematics of IRR computation.
2. *Mutually exclusive projects:* In some circumstances, it could also fail to provide the best option between two projects that are mutually exclusive. This is because IRR does not take into consideration the duration of projects or the timing of cash flows in a consistent manner.
3. *Value additivity:* The value additivity principle does not apply to the IRR approach, in contrast to the NPV method.

2.1.3.2.3 Profitability Index (PI)

The profitability index assesses the desirability of a suggested capital investment. This is done by contrasting the initial outlay amount with the projected future cash flows' current value. A potential investment becomes more attractive when the profitability index rises. When finances are few, it is possible to rank potential investments using the profitability index. The highest-ranking proposals will receive funding, while the lower-ranking ones will not. The concept of net present value is modified by the profitability index. The sole distinction is that it yields a ratio instead of a precise cash amount of net present value.

The ratio between the initial investment and the present value of future earnings is measured by the profitability index (PI). The index can be used to rate investment projects and display the value produced per investment dollar. It is also known as the Profit Investment Ratio (PIR) or the Value Investment Ratio (VIR).

Following is the formula for Profitability Index;

$$PI = \frac{PV\ of\ Cash\ Inflows}{PV\ of\ Cash\ Outflow\ i.e.,\ Initial\ Investment}$$

Acceptance Rule

The following are the PI acceptance rules:

- ◊ Accept the project when PI is greater than one PI > 1
- ◊ Reject the project when PI is less than one PI < 1

◊ May accept the project when PI is equal to one PI = 1

The project with positive NPV will have PI greater than one. PI less than one means that the project's NPV is negative.

Let's take the example of Project A and Project B which is discussed in the NPV calculations.

Table 2.1.8 Present Value of cashflows

Year	0	1	2	3	4	5
Cash Flow ProjectA	-42,000	14,000	14,000	14,000	14,000	14,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-42000	12727.27	11570.24	10518.41	9562.182	8692.894
Total Present Valueof Cash Flow	**53071**					
NPV	**11071**					

Year	0	1	2	3	4	5
Cash Flow ProjectB	-45000	28,000	12,000	10,000	10,000	10,000
Present Value Factor at 10%	1	0.909091	0.826446	0.751315	0.683013	0.620921
Present Value ofCash flow	-45000	25454.55	9917.352	7513.15	6830.13	6209.21
Total Present Valueof Cash Flow	**55924**					
NPV	**10924**					

Here,

Present value (PV) of cash inflows of Project A is 53071 PV of cash outflow of Project A is 42000

Therefore,

$$PI\ of\ Project\ A = \frac{53071}{42000} = 1.26$$

Present value (PV) of cash inflows of Project B is 55924

PV of cash outflow of Project B is 45000

Therefore,

$$\boldsymbol{PI\ of\ Project\ B = \frac{55924}{45000} = 1.24}$$

In this case both projects have PI greater than one. So, both projects are desirable. But comparatively project A has the higher PI ratio, which means it fetches more returns to the investor and hence can be preferred to project B.

Merits of Profitability Index

Like the NPV and IRR rules, PI is a conceptually sound method of appraising investment projects. It is a variation of the NPV method, and requires the same computations as the NPV method.

1. *Time value:* It recognizes the time value of money.
2. *Value maximization:* It is consistent with the shareholder value maximisation principle. A project with PI greater than one will have positive NPV and if accepted, it will increase share-holders' wealth.
3. *Relative profitability:* In the PI method, since the present value of cash inflows is divided by the initial cash outflow, it is a relative measure of a project's profitability.

Like NPV method, PI criterion also requires calculation of cash flows and estimate of the discount rate. In practice, the estimation of cash flows and discount rate poses problems.

2.1.4 Comparison between NPV and IRR

The two capital budgeting methods have the following differences:

◊ Outcome.

In contrast to the IRR approach, which produces the predicted percentage return, the NPV method yields the projected monetary value which a project will generate.

◊ Purpose.

The breakeven cash flow rate of a project is the focus of the IRR technique, whereas project surpluses are the subject of the NPV method.

◊ Decision support.

Due to its presentation of a dollar return, the NPV approach offers an outcome that serves as the basis for an investment choice. As the IRR method's rate of return does

not inform the investor of the amount of money that will be made, it is not helpful in making this choice.

◊ Reinvestment rate.

While using NPV, the firm's cost of capital is assumed to be the rate of return for the reinvestment of interim cash flows, whereas when using the IRR technique, it is the internal rate of return.

◊ Discount rate issues.

The NPV approach necessitates the use of a discount rate, which can be challenging to calculate because management may wish to modify it in accordance with perceived risk levels. The rate of return is easily determined from the underlying cash flows with the IRR approach, hence it does not have this issue.

Table 2.1.9: Comparison of NPV with IRR

BASIS FOR COMPARISON	NPV	IRR
Meaning	The total of all the present values of cash flows (both positive and negative) of a project is known as Net Present Value or NPV.	IRR is described as a rate at which the sum of discounted cash inflows equates discounted cash outflows.
Expressed in	Absolute terms	Percentage terms
What does it represent?	Surplus from the project	Point of no profit no loss (Break-even point)
Decision Making	It makes decision making easy.	It does not help in decisionmaking
Rate for reinvestment of intermediate cash flows	Cost of capital rate	Internal rate of return
Variation in the cash outflow timing	Will not affect NPV	Will show negative ormultiple IRR

2.1.5 Capital Rationing

Capital rationing is a situation where a constraint or budget ceiling is placed on the total size of capital expenditures during a particular period. Often firms draw up their capital budget under the assumption that the availability of financial resources is limited.

Capital rationing refers to the selection of the investment proposals in a situation of constraint on availability of capital funds, to maximize the wealth of the company by selecting those projects which will maximize overall NPV of the concern.

In a capital rationing situation, a company may have to forgo some of the projects whose IRR is above the overall cost of the firm due to the ceiling on budget allocation for the projects which are eligible for capital investment. Capital rationing refers to a situation where a company cannot undertake all positive NPV projects it has identified because of shortage of capital. Under this situation, a decision maker is compelled to reject some of the viable projects having positive net present value because of a shortage of funds. It is known as a situation involving capital rationing.

2.1.5.1 Factors Leading to Capital Rationing

Two different types of capital rationing situations can be identified, distinguished by the source of the capital expenditure constraint.

i. External Factors:

The rationing of external capital is mostly caused by flaws in the capital markets. Deficits in market information or restrictive attitudes that obstruct the free flow of capital may be the root of imperfections. As an illustration, Supreme Electronics Ltd. is a privately held business. It takes out as much credit as it can from financial institutions. Investment possibilities are still available, and they can be funded by raising equity capital. But it doesn't sell shares. The concept of issuing shares to the general public is not supported by the owner-managers because they are concerned about losing control of the company.

Think of another instance. Tan India Wattle Extracts Limited wants to build a wattle extract manufacturing facility. Wattle extract is anticipated to have a very high demand; hence the planned project is probably quite profitable. But potential investors are not persuaded by the project's prospects. Thus, there are no capital markets for the company. In the absence of shareholders' access to financial markets, the NPV rule is unlikely to be effective. Capital market imperfections alone do not make the NPV rule invalid. There will be relatively few circumstances where shareholders do not have access to capital markets in reality.

ii. Internal Factors:

Management self-imposed constraints lead to internal capital rationing. There could be many different restrictions enforced. For instance, it can be determined not to take on debt in order to raise more money. This might fit into the company's cautious financial stance. The amount of money that divisional managers are allowed to invest may be subject to arbitrary management restrictions. Management may occasionally use a minimal rate of return that is greater than the expense of capital to ration capital. Notwithstanding the constraints, it is implied that a handful of financially successful ventures will need to be abandoned due to a shortage of funding. Yet, because owners can borrow or loan on the capital markets, the NPV rule will hold true. It can be quite challenging to defend internal capital rationing. However, it typically serves as a tool for financial management. The managers generally may overestimate their need for investments in a set-up with divisions. Setting upper limitations on their capital expenditures is one method to make them feel the pressure to carefully consider

their investment prospects and establish priorities. Similar to this, a business may set investment caps if it determines that it cannot handle the pressures and organisational issues brought on by rapid expansion.

The level of capital budget will tend to depend on the quality of investment proposals submitted to top management, in addition it will also tend to depend on the following factors:

a. Top management's philosophy towards capital spending.

b. The outlook for future investment opportunities that may be unavailable if extensive current commitments are undertaken.

c. The funds provided by current operations.

d. The feasibility of acquiring additional capital through borrowing or share issues.

In a capital-restricted environment, management must identify profitable investment possibilities as well as evaluate which combination of profitable projects would produce the best NPV for the available money by rating each according to their profit margin. Ideally, projects should be started as soon as their expected return is comparable to their financing costs.

There may be a notable reluctance to participate in external finance, and thus, a limit will be imposed on the sums available for investment if safety and the preservation of, say, household controls are thought to be more essential than further earnings. There are several reasons why the firm may not be able to acquire outside funding for its investment programme despite its desire to do so.

For instance:

a. It can be impossible or very expensive to raise more debt capital due to the enterprise's historical performance and current capital structure.

b. Due to its track record of low or negative rates, it might be unable to raise further equity money.

c. Current loan agreements may limit potential future borrowing. Furthermore, one would anticipate that capital rationing would be mostly self-imposed in a typical corporation.

Recap

- ◊ Investment decisions are the choice made by shareholders or top management on the sum of money to be invested in potential business ventures.
- ◊ Capital Budgeting includes
  - Investment Evaluation Criteria
  - Estimation of Cash Flow
  - Estimation of Internal Rate of Return (the Opportunity Cost of Capital)
  - Application of a decision rule for making the choice
- ◊ Long-Term Assets and Short-Term Assets are the two types of assets.
- ◊ Capital budgeting refers to the choice to invest money in long-term assets.
- ◊ Capital budgeting techniques include non-discounted and discounted methods.
- ◊ Non-discounted Cash Flow Methods
  - Payback Method
  - Discounted Payback Method
  - Accounting Rate of Return
- ◊ Discounted Cash Flow Method
  - Net Present Value (NPV)
  - Internal Rate of Return
  - Profitability Index (PI)
- ◊ The payback period is the length of time required to recover the initial cash outlay on the projects
- ◊ Capital rationing refers to a situation where a company cannot undertake all positive NPV projects it has identified because of shortage of capital.
- ◊ Factors leading to capital rationing : Internal factors and external factors
- ◊ The number of periods required to repay the investment outlay on a present value basis is known as the discounted payback time
- ◊ The accounting rate of return (ARR) method is also known as the average rate of return method.

- ◊ A project's internal rate of return is the discount rate that brings its net present value to zero
- ◊ The ratio between the initial investment and the present value of future earnings is measured by the profitability index (PI)
- ◊ The total of all the present values of cash flows (both positive and negative) of a project is known as Net Present Value or NPV

Objective Questions

1. What do you mean by Capital budgeting
2. What do you call a long term investment decision?
3. Mention some types of investment decisions.
4. What are the steps involved in the evolution of an investment?
5. What is payback period method?
6. What are the merits of payback period method?
7. What are the limitations of payback period method?
8. What is the other name for accounting rate of return method?
9. What are the limitations of accounting rate of return method?
10. What is NPV?
11. What is the acceptance rule for NPV method?
12. What are the merits of NPV method?
13. What is internal rate of return?
14. What is the acceptance rule for IRR method?
15. What is the other name for profitability index method?

Answers

1. Capital budgeting is the process of evaluating and selecting long-term investments.
2. Capital Budgeting
3. Expansion of existing business, expansion of new business, modernisation and replacement.
4. Estimation of cash flows, estimation of required rate of return and application of decision rule for making the choice.
5. The payback period method evaluates investments by determining how long it takes to recover the initial investment. It's calculated by dividing the initial investment by the annual cash flow.
6. Simplicity, Cost- effective.
7. Ignores the time value of money and the cash inflow after the pay back.
8. Average rate of return method.
9. Cash flows and time value of money ignored.
10. Net Present Value of a project is the sum of the present value of all the cash flows i.e. positive as well as negative.
11. The investment project is accepted if its net present value is positive (NPV > 0) and rejected if the net present value is negative (NPV< 0) when using the NPV method.
12. Recognizes time value of money, Value additivity.
13. A project's internal rate of return is the discount rate that brings its net present value to zero.
14. Using the IRR technique, the accept-or-reject rule states that a project should be approved if its IRR is greater than the opportunity cost of capital (r > k).
15. Profit Investment Ratio (PIR) or the Value Investment Ratio (VIR).

Self-Assessment Questions

1. What is an Investment Decision?
2. Why does an investment decision need special attention?
3. Explain the decision rule for making investment choices.
4. Briefly elaborate the Investment Evaluation Criteria.
5. What are the non-discounted cash Flow methods?
6. Compare NPV and IRR.
7. Define Profitability Index Method
8. What are the drawbacks of the Payback Period method?
9. What is Time value of Money? Explain with an illustration.
10. How to calculate NPV?
11. Explain the merits and demerits of IRR method.
12. What are the various discounted cash flow methods?

Assignments

1. The initial investment required for Projects A and B is RS 20,000. Cash inflows for both the projects are given below. You are required to rank these projects according to payback period method.

Years	Cash Inflows	
	Project A	Project B
1	1000	2000
2	2000	4000
3	4000	6000
4	7000	8000
5	8000	9000

2. A ₹32,25,000 initial investment is anticipated to generate ₹900,000 annually for six years. The the discount rate is 10%, determine the investment's discounted payback period.

3. A project will cost Rs. 50,000. Its stream of earnings before depreciation, interest and taxes (EBDIT) during the first year through five years is expected to be Rs. 13,000, Rs. 15,000, Rs. 17,000, Rs. 18,000 and Rs. 20,000. Assume a 40% tax rate and depreciation on straight- line basis. Calculate the accounting rate of return of the project.

4. A company is considering two machines for purchase. Machine A costs Rs 50,000 and Machine B costs Rs 60,000. The expected cash inflows from both machines for four years are given below. Using NPV method, suggest which machine the company should purchase. Assume PV factor at 8%.

Year	Cash inflow	
	Machine A	Machine B
1	20,000	33,000
2	20,000	17,400
3	20,000	21,000
4	20,200	22,200

Suggested Reading

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BLOCK - 03
Working capital Decision

Unit - 1
Introduction to Working Capital

Learning Outcomes

At the conclusion of this unit, the learner will be able to;

- ◊ to familiarise the term Working Capital and its significance
- ◊ understand of different types of Working Capital
- ◊ to explore the idea of Working Capital Financing
- ◊ to describe various sources of Working Capital

Prerequisite

Imagine you are starting a new restaurant in your locality. As you know, starting a business requires finance. There are many ways in which you can finance your business activity. You can use your own fund as well as borrow money from outside. Once you procure enough funds the next step is to invest that amount into the business for acquiring assets needed for the business. The question at that point is whether you will invest all your capital in purchasing long term assets required for running a business. In this case, long term assets include building, utensils and machinery required in the kitchen, etc. If you invest all your capital in long term assets like these, then these fund will be locked up for a longer period of time. Meanwhile you will be requiring money for financing some of your routine activities like buying vegetables for the kitchen, paying wages for the chef, etc. How are you going to find finance for these activities?

This is the reason why businesses in general keep a certain portion of their capital in cash or near cash liquid assets. That portion of capital will be used to carry out day to day operations of the business. We call it 'Working Capital' in business terminology. In this section we are going to discuss further about the term Working Capital.

Keywords

Fixed Capital, Gross Working Capital, Net Working Capital, Seasonal Working Capital, Variable Working Capital, Semi Variable Working Capital.

Discussion

Working capital is a term that can refer to both non-fixed capital and the difference between the book value of current assets and current liabilities. In the scenario of a restaurant as we discussed earlier, working capital can be understood as that part of capital which is kept apart to meet the day-to-day routine expenses like buying groceries, paying bills, paying wages, etc. Let us explore further about working capital and its significance and types in the coming sections of this unit.

3.1.1 Working Capital - Meaning

The capital of the company can be broken down into two main categories.

- ◊ Fixed Capital
- ◊ Working Capital

Fixed capital means the money that the company uses to make long-term investments. Purchasing long-term assets is one instance. It typically consists of singular events.

Working capital is the fund required for a company's ongoing demands. Making periodic repayments to creditors, paying employees' salary, purchasing raw materials, etc. are some examples. It can be easily converted to money. For this reason, it is often referred to as short-term capital.

3.1.2 Working Capital - Definitions

Mead, Baker and Malott - "Working Capital means Current Assets".

J.S.Mill - "The sum of the current asset is the working capital of a business".

Weston and Brigham - "Working Capital refers to a firm's investment in short-term assets, cash, short-term securities, accounts receivables and inventories".

Bonneville - "Any acquisition of funds which increases the current assets, increase working capital also for they are one and the same".

3.1.3 Concepts of Working Capital

There are two concepts of working capital—gross and net.

Gross working capital is the amount invested by the company in short-term assets. The assets that can be turned into cash within an accounting year are known as current assets and include cash, short-term securities, debtors (accounts receivable or book debts), bills receivable and stock (inventory).

The difference between current assets and current liabilities is referred to as net working capital. The claims of third parties that are anticipated to become due for payment during an accounting year are considered current liabilities and include creditors (accounts payable), bills payable, and outstanding expenses. Positive or negative net working capital is possible. When current assets exceed immediate liabilities, there will be a positive net working capital. When current liabilities exceed current assets, net working capital is negative.

From a managerial perspective, the two ideas of working capital—gross and net—are not mutually exclusive; rather, they are equally important.

3.1.4 Significance / Need of Working Capital

Working capital is a crucial component of any firm. Every business concern needs to keep a certain amount of working capital on hand to cover short-term obligations as well as daily needs.

Following are the importance of working capital.

1. Acquiring inputs for production: Raw materials are the essential component of the manufacturing process. According to the requirements of the business concern, it should make regular purchases. As a result, every business concern keeps a certain amount on hand as working capital to buy supplies like raw materials and spare parts.

2. Periodical payment to employees: Payment of wages and compensation to labour and workers comes next on the list of working capital expenses. Employees who receive periodic payments are always at the top of their game. Therefore, a business concern keeps sufficient operating capital to pay wages and salaries.

3. Daily expenditures: A business concern must cover a variety of expenses related to operations on a daily basis, such as fuel, power, office costs, etc.

4. Provide credit obligations: A company is in charge of fulfilling the short-term obligation and giving the consumer access to credit facilities. Therefore, the company must offer enough working capital.

3.1.5 Types of Working Capital

Working Capital can be classified into different categories. The primary classification is into three categories viz., Permanent, Temporary and Semi Variable. Temporary working capital is further classified into two categories. Let us examine these in detail below;

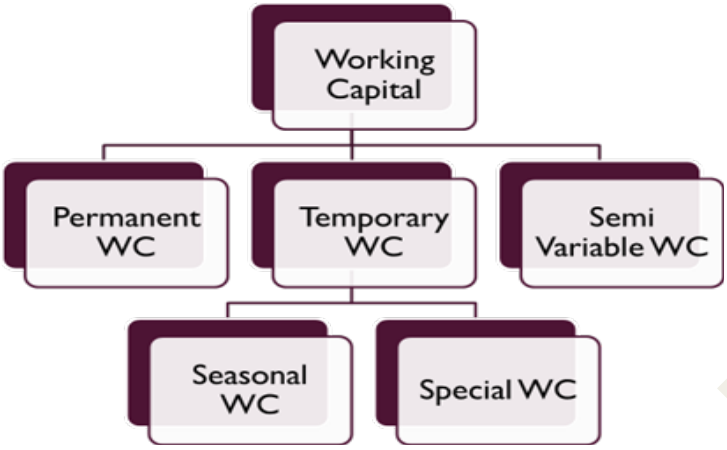

Figure 1.1.1 Types of Working Capital

3.1.5.1 Permanent Working Capital

It also goes by the name "fixed working capital." The business concern must always maintain a minimum level of capital, which is considered relatively permanent. The kind of business will determine the size of permanent capital. No matter how often sales are made or how much time passes, permanent or fixed working capital remains constant.

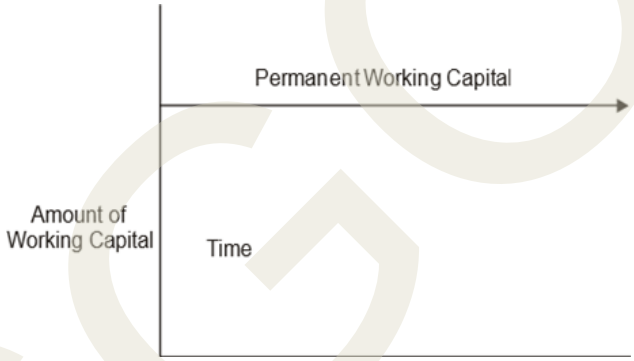

Figure 1.1.2 Permanent Working Capital

3.1.5.2 Temporary Working Capital

It is also known as flexible working capital. The amount of money needed to cover seasonal demands and certain particular reasons. Seasonal working capital and special working capital are further subcategories of variable working capital.

Working capital for the business concern's seasonal demands is referred to as seasonal working capital. The amount of money needed to meet exceptional requirements, such as starting large- scale marketing campaigns for doing research, etc. are known as special working capital.

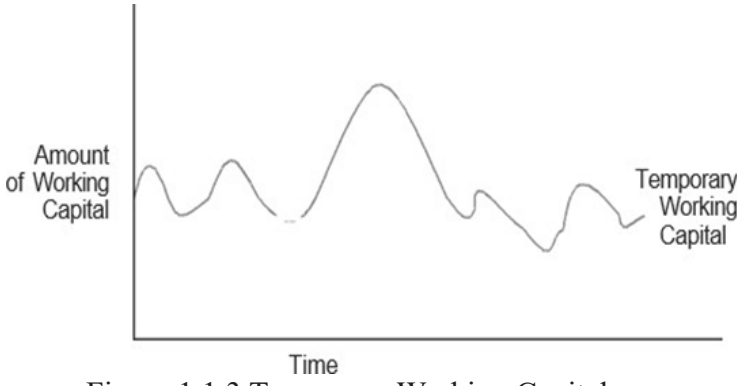

Figure 1.1.3 Temporary Working Capital

3.1.5.3 Semi Variable Working Capital

Up to a certain point, a specified sum of working capital is assigned at the grassroot level, and then it increases in accordance with changes in sales or the passage of time.

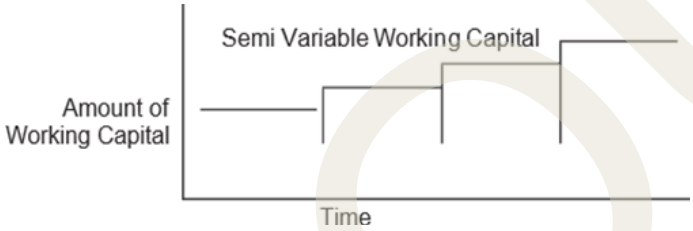

Figure 1.1.4 Semi Variable Working Capital

3.1.6 Financing of Working Capital

Different financing strategies might be used by a company in relation to current assets. Three different forms of financing can be identified as:

Finance for the long term

Some of the sources of long-term funding include reserves and surplus, debentures, long-term borrowings from financial institutions, ordinary share capital, preference share capital etc.

Short-term financing

Short-term financing refers to funding that is typically secured for a period less than one year. It is prearranged with banks and other short term financing providers on the money market. Bank working capital loans, public deposits, commercial paper, receivables factoring, etc. are examples of short-term financing.

Spontaneous financing

The automated sources of short-term finances that emerge naturally during the course of a firm are referred to as spontaneous sources of funding. Trade credit and unpaid bills are two instances of spontaneous financing. The cost of spontaneous borrowing is not explicitly stated. It is assumed that a company will make the most of these financial resources. After all spontaneous sources of funding have been used up, the actual

alternative for financing current assets is between long-term and short-term sources of funds.

3.1.6.1 Sources of Working Capital

Short-term and long-term sources can both be used to normalise the working capital requirement. Up to a certain extract, each source will have both advantages and disadvantages. From one stage to the next, working capital may be used in different ways.

The various sources through which you can raise money for routine operations are depicted in the following figure;

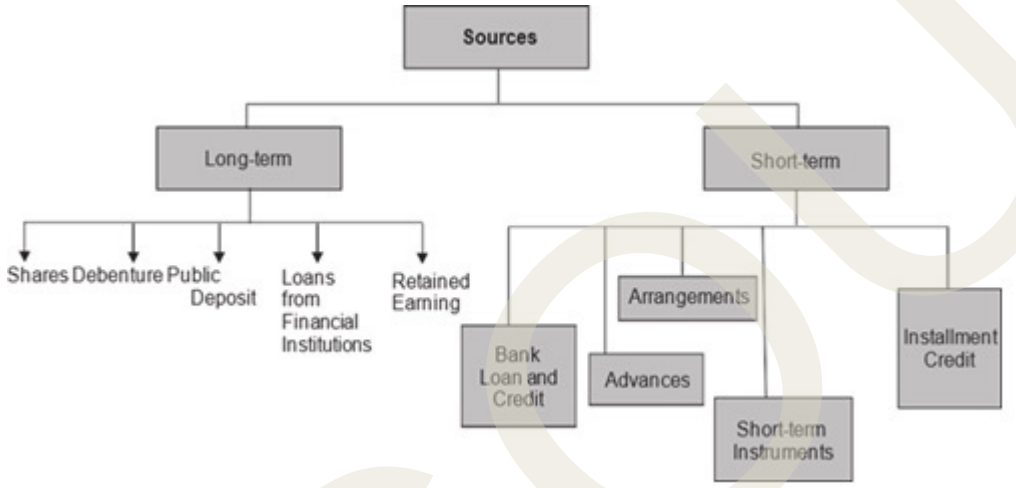

Figure 1.1.5 Sources of Working Capital

The sources listed above can be divided into internal resources and external resources of working capital.

The previous years' profit retained any kind of reserves or surpluses, other similar funds kept aside like depreciation fund, etc. can be the internal sources of finance.

Money raised through debentures or public deposits, money borrowed from financial institutions, other credit facilities availed or credits received, arrangements like factoring can be some of the external financing sources.

3.1.7 Components of Working Capital

Different temporary assets and liabilities make up working capital. The organisations' current assets and current liabilities might be made up of a wide variety of things. Depending on the form and character of the organisation, the type of business they conduct,and even the stage of development in their life cycle, different combinations of these elements may be used. The following chart can be used to demonstrate the potential components of working capital.

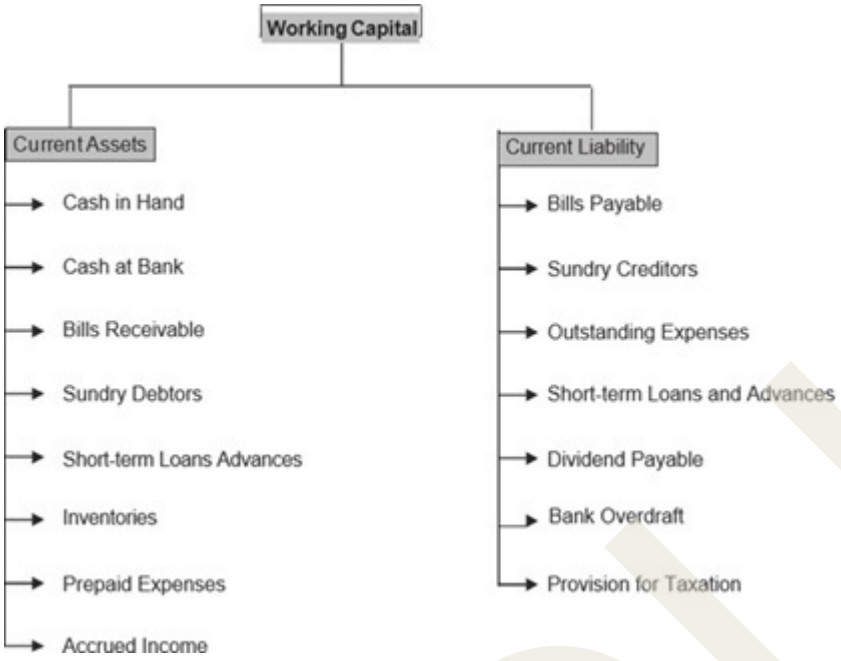

Figure 1.1.6 Components of Working Capital

3.1.8 Factors Affecting the Working Capital Requirements

Working capital needs vary depending on a number of variables. To determine a business's need for working capital, there is no common set of guidelines or formula. The following are the main elements that determine the amount of working capital needed.

1. **Nature of business:** The nature of the business has a big impact on how much working capital a company needs. Businesses can keep less working capital on hand if they adhere strictly to a no-credit-acceptance policy and only accept cash payments for their goods. The quantity of working capital that a construction company keeps on hand is more than that of a transport firm.

2. **Production cycle:** The amount of working capital is influenced by the duration of production cycle. They need to keep less working capital on hand if the production cycle is short. If not, a significant quantity of working capital must be maintained.

3. **Business cycle:** Business variations result in cyclical and seasonal changes in the state of the company, which have an impact on the need for working capital. Working capital requirements increase during periods of economic expansion and decrease during periods of economic contraction. The need for working capital increases as business performance improves.

4. **Production policy:** It is one of the aspects that have an impact on how much working capital a company needs. If the business keeps to its policy of continuous manufacturing, regular working capital is required. Working Capital requirements will depend on the circumstances set forth by the company if the production policy of the company is based on different scenarios.

5. **Credit policy:** The corporate's demand for operating capital is also impacted by the credit policies of sales and purchases. The corporation must keep more working capital if it maintains a lax credit policy to recover payments from its consumers. If the business makes its payment on time, it will maintain cash on hand and in the bank.

6. **Growth and expansion:** Working capital demands increase as a company grows and expands because these phases involve initial outlays of more funds as well as increased working capital requirements.

7. **Availability of raw materials:** The availability of raw materials will determine a substantial portion of the working capital requirements. The fundamental elements of the industrial process are raw materials. If it is difficult to obtain the raw material, production ceases. In order to maintain an appropriate supply of raw materials, the company needs to invest some working capital.

8. **Earning capacity:** If a company has a high level of earning potential, cash from operations can be used to generate extra working capital. Earning potential is one of the elements that affects how much working capital a business need.

Recap

- ◊ Working Capital is the proportion of investment that a business must put into current assets to ensure continued production and selling.
- ◊ Gross working capital is the total amount invested by the company in current assets.
- ◊ Net working capital is the difference between current assets and current liabilities.
- ◊ When current assets exceed current liabilities, it is known as positive working capital.
- ◊ Negative working capital is when current liabilities exceed current assets.
- ◊ There are mainly three types of working capital: Permanent, Temporary and Semi Variable Working Capital.
- ◊ The minimum level of capital that should be always maintained by a business concern is known as Permanent working capital.
- ◊ Temporary Working Capital is classified into Seasonal and Special Working Capital
- ◊ Working capital required for meeting the seasonal demands of a business concern is known as seasonal working capital.

- ◊ Special working capital is required to meet unforeseen or occurrence of a special event.
- ◊ Sources of working capital are mainly classified into short term and long term sources.
- ◊ Short term working capital sources include installment credit, bank loan, bank overdrafts, customer advances etc.
- ◊ Long term working capital sources include shares, debentures, public deposits etc.

Objective Questions

1. What is working capital?
2. What is gross working capital?
3. What do you mean by net working capital?
4. What is Permanent Working Capital?
5. What is Temporary Working Capital?
6. What are the three forms of financing working capital?
7. What are long term sources of working capital?
8. What are internal resources of working capital?
9. What is semi variable working capital?
10. Mention some factors that affect the working capital requirements.
11. How earning capacity of a firm helps in determining the working capital requirement of that firm?
12. What are the various external resources of working capital?

Answers

1. Capital required for day-to-day operations.
2. Sum total of current assets is known as gross working capital.
3. Net working capital is the difference between current assets and current liabilities.
4. The minimum amount of working capital that should be maintained by a business concern.
5. Temporary working capital is the working capital required to meet seasonal demands and special occasions.
6. Finance for long term, Short term financing and Spontaneous financing.
7. Shares, debentures, public deposits, loans from financial institutions, retained earnings etc.
8. Retained earnings, reserves and surplus, depreciation fund, etc. are the internal sources of finance.
9. In the case of semi variable working capital, a specified sum of working capital is assigned at the grassroot level, and then it increases in accordance with changes in sales or the passage of time.
10. Production cycle, Nature of business, credit policy, growth and expansion.
11. If a company has a high level of earning potential, cash from operations can be used to generate extra working capital, thus reducing the need for external financing.
12. Money raised through debentures or public deposits, money borrowed from financial institutions etc.

Self-Assessment Questions

1. What is working capital? Define it.
2. Describe the terms gross and net in relation to working capital.
3. Why is the gross notion of working capital important?

4. What are the different types of Working Capital?
5. Explain the different forms of financing Working Capital
6. What are the long term and short term sources of Working Capital?
7. Explain the various determinants of working capital requirements.
8. List the internal and external sources of working capital.
9. Briefly explain how growth and expansion of a firm helps in determining the working capital requirement of that firm.
10. What is spontaneous financing?
11. What is the difference between temporary working capital and semi variable working capital?
12. Explain the significance of working capital.

Assignments

1. Visit at least 10 corporate websites and find out their level of working capital.
2. Consider your activities for one month ahead and find out the working capital required for meeting those needs.
3. Try to identify the various long term and short term sources of working capital of a firm of your choice.
4. Study the credit policy of an organization and comment on the working capital requirement.

Suggested Reading

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Unit - 2
Working Capital Management

Learning Outcomes

At the conclusion of this unit, the learner will be able to;

- ◊ familiarise the term Working Capital Management and its components.
- ◊ be aware of different types of Working Capital Policies
- ◊ explore the dimensions of Working Capital Management
- ◊ describe various Regulation of Working Capital finance in India

Prerequisite

For any business venture managing finance is not an easy task. An airline's general operating expenses, maintenance costs, fuel costs, salary of employees etc. are covered by revenue. Borrowing denotes a lack of income that was made up by loans. Let us go through the case of Air India in this regard. According to a report by Comptroller and Auditor General (CAG), even though the estimated working capital demand of Air India is 4000–4500 crores, the airline had taken out a massive working capital loan of 19,207.39 crores. This huge borrowing has led the entire business of Air India to shatter on at later stages and even ended up inviting private players to take over. Managing your investment in working capital is a decision which has a far fetching impact on liquidity, solvency and profitability. When you lock in more than necessary funds in the current asset, it goes unproductive and idle and when you invest less than minimum, then you may not have sufficient funds to meet requirements and might cause a stoppage of activities. Hence finding a balance is a crucial matter to decide for finance managers. Let us now verify the important aspects of Working Capital Management in an organisation.

Keywords

Conservative Working Capital Policy, Moderate Working Capital Policy, Aggressive Working Capital Policy, Lead time, Safety stock, Economic Order Quantity, Lock Box System, Credit Policy, Factoring, Overdraft, Cash credit.

Discussion

One crucial aspect of financial management is working capital management. It focuses on the business's short-term financing, which is closely associated with trade profitabilityand liquidity. Effective working capital management enhances a company's operational success and aids in providing short-term liquidity. Therefore, studying working capital management iscrucial for both financial management and total business concern management.

3.2.1 Working Capital Management

Another crucial responsibility of a financial manager is working capital management. This involves effectively managing current assets and current liabilities to ensure that the business has sufficient resources to meet its short term obligations. Simply it is called Administration of Current Asset and Current Liabilities of the business concern.

Due to the fact that the majority of working capital is tied up in few key assets, managing essential working capital components such as cash, inventories, and receivables is of utmost importance.

Meaning

Planning, organising, and controlling the elements of working capital including cash, bank balance, inventories, receivables, payables, overdraft, and short-term loans, is known as working capital management.

Definition

According to Smith K.V, "Working capital management is concerned with the problems that arise in attempting to manage the current asset, current liabilities and the inter- relationship that exist between them".

According to Weston and Brigham, "Working capital generally stands for excess of current assets over current liabilities. Working capital management therefore refers to all aspects of the administration of both current assets and current liabilities".

3.2.2 Dimensions of Working Capital Management

As we have discussed in the last unit, working capital comprise of several components basically in the nature of current assets and liabilities. Thus, when we discuss about components of working capital management it will come down to those components management also. Generally we consider the following elements to working capital management;

i. Inventory management

ii. Cash Management

iii. Receivables Management

3.2.2.1 Inventory Management

The majority of the business concern's current assets are made up of inventories. Additionally, it is necessary for the efficient running of corporate operations. Inventory management should take proper planning of raw material purchases, handling, storing, and recording into account. Management of raw materials and related items is referred to as inventory management. Inventory management takes into account a variety of factors, including what to buy, how to buy it, how much to buy, where to buy it, where to store it, when to use it for production, etc.

Stock of goods or a catalogue of goods are the definitions of inventory in the dictionary. Inventory refers to a store of finished items in accounting terms. Inventory in the context of manufacturing comprises things like raw materials, work in progress, stores, etc.

Kinds of Inventories

Inventories can be classified into five major categories.

d. **Raw Material:** It is a fundamental and crucial component of inventories. These products are ones that have not yet been committed to production by a manufacturing company.

e. **Work in Progress:** These materials include those that have begun the production process but have not yet been finished.

f. **Consumables:** These are the materials required for the manufacturing process to work well.

g. **Finished Goods:** These are the products that the company's production process ultimately produces. The product is prepared for sale.

h. **Spares:** It comprises tiny components and spares, which are included in inventories.

Objectives of Inventory Management

30-80% of the total current assets of the business concern are made up of inventory.

In addition, it plays a crucial role in the field of financial management and is strongly related to production management. As a result, each working capital choice made about the inventory will have an impact on the company's financial and production functions. Therefore, effective inventory management is crucial to any concern with the manufacturing process.

The following are the main goals of inventory management:

1. Hurdle free and effective running of the production process.
2. Creating profitability by maintaining and utilising optimum level of inventory.
3. Equipping the business to make use of seasonal demand for products.
4. Escape from future hike in prices of inputs.
5. Ensuring that resources are available whenever required.
6. Deciding the frequency, time and place of purchase of materials.
7. Avoiding the dangers of keeping the inventory over the required level or under the required level.

Techniques of Inventory Management

Effective control and administration of stocks comprise inventory management. Inventory control is the process of ensuring that the necessary number and quality of inventories are available when they are needed and at the same time avoiding irrational investments in them. Different sorts of inventory management techniques are possible which are depicted in the following figure;

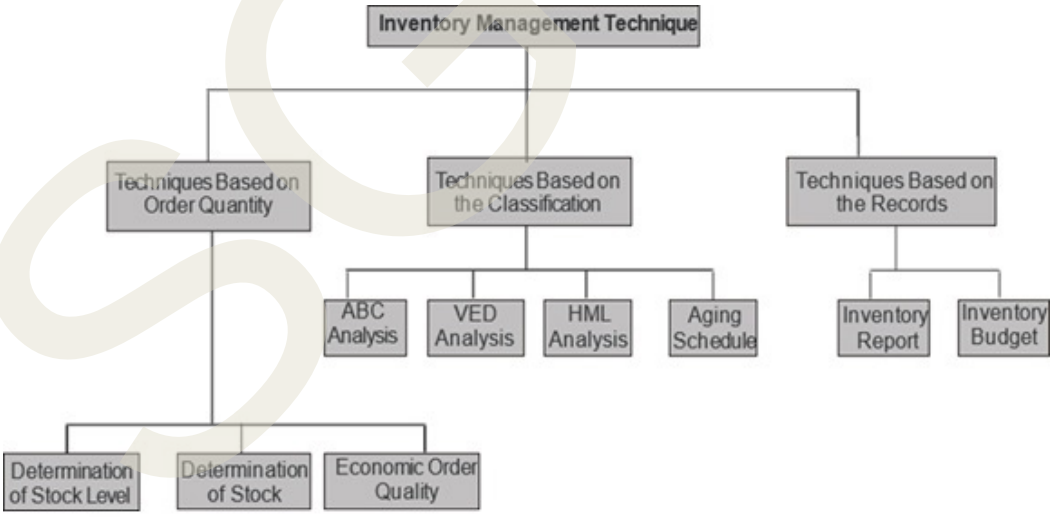

Figure 3.2.1 Inventory management Techniques

A. Techniques based on the order quantity of Inventories

The following methods can be used to determine the order amount of inventories:

1. Stock Level

Stock level is the amount of inventory that a business concern keeps on hand at all times. Therefore, to ensure a smooth operation of the business process, the business concern must maintain an optimal level of stock. Based on the stock's volume, a different level of stock can be calculated. The main stock level measures are listed below;

2. Lead Time

Lead time refers to the average amount of time it takes to receive delivery after placing an order with a supplier. It includes the total time required to process and fulfill the order.

3. Safety Stock

Safety stock refers to additional stock that may be used when real lead times and/or use rates are higher than anticipated. The opportunity cost and carrying cost of inventories are used to calculate safety stockpiles. Low levels of safety stock can lead to higher opportunity costs due to potential stock outs, whereas keeping more safety stock will increase carrying expenses.

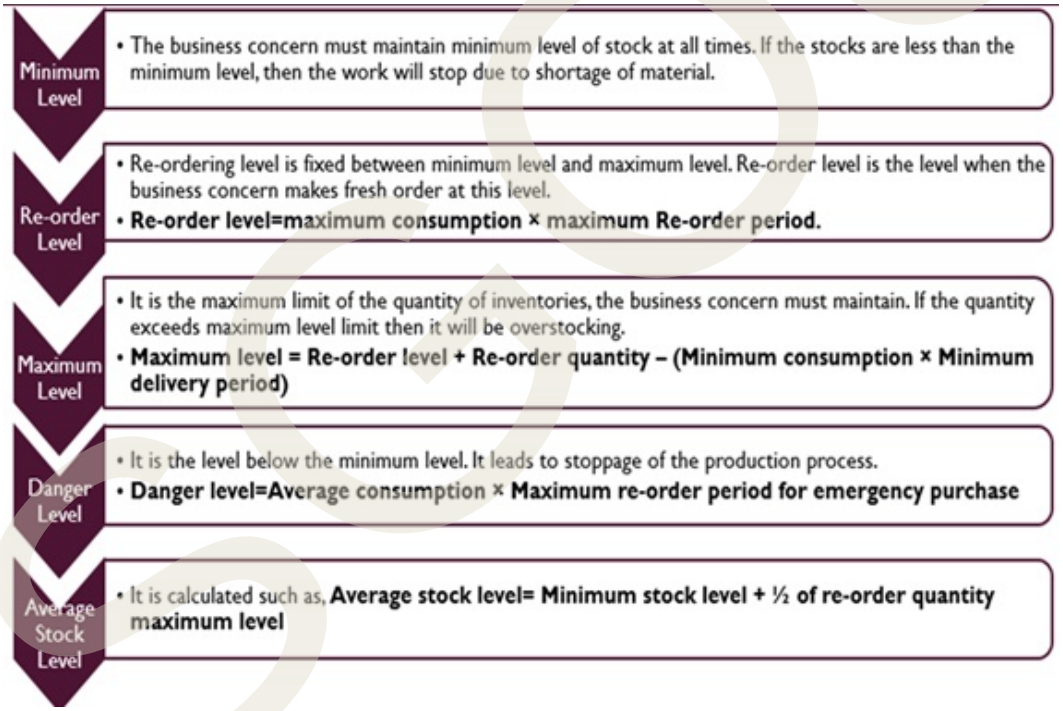

Figure 3.2.2 Stock levels

Economic Order Quantity (EOQ)

The term "EOQ" refers to the level of inventory where the ordering cost and carrying cost which are combined to form the total cost of inventory is at its minimum. The ordering cost and carrying cost are two different sorts of costs that go into determining the optimal amount. The inventory level with the lowest overall ordering and carrying cost is known as the EOQ.

EOQ can be calculated with the help of the mathematical formula:

$$EOQ = \sqrt{2ab/c}$$

Where,

a = Annual usage of inventories(units)

b = Buying cost per order

c = Carrying cost per unit

B. Techniques Based on the Classification of Inventories

A-B-C analysis

According to the value and quantity of the inventories, inventory is divided into three groups by inventory management techniques; the A category is made up of the 10% of the inventory's items that account for 70% of the value of consumption. The category B for inventory items that contribute 20% or more of the consumption value, and the category C for inventory items that contribute only 10% of the consumption value.

Aging Schedule of Inventories

Inventories are categorised based on how long they have been held, and this system also aids in tracking inventory movement. It is also known as FNSD analysis—

where,

F = Fast moving inventories

N = Normal moving inventories

S = Slow moving inventories

D = Dead moving inventories

The primary goal of this analysis is to help with inventory disposal decisions.

VED Analysis

This method, similar to ABC analysis, is best suited for spare components in inventory management. According to how they are used, inventories are divided into three groups.

V = Vital item of inventories

E = Essential item of inventories

D = Desirable item of inventories

HML Analysis

According to this analysis, inventories are divided into three groups according to their value.

H = High valued inventories

M = Medium valued inventories

L = Low valued inventories

c. Techniques on the Basis of Records

Inventory budget

It is a type of functional budget that makes it easier to anticipate how much inventory the business will need at a given time. This budget is created using historical data.

Inventory reports

The creation of regular inventory reports offers data on order volume, quantity to be purchased, and other inventory-related information. Management makes the essential decisions for inventory control and management in the business concern based on these reports.

3.2.2.2 Cash Management

To pay for the acquisition of materials and services necessary for the regular operation of their business, a business concern needs cash. One of the essential and crucial components of current assets is cash.

Cash is money that a business can use to make quick, unrestricted payments. Coins, bills of exchange, cheques held by the business, and the balance in its bank accounts all fall within the definition of cash. Cash flow management includes cash inflows and outflows, cash flow inside the business, cash balance retained by the business, etc.

Motives for Holding Cash

1. **Transaction motive:** It is a reason to keep cash on hand or close by in order to cover regular cash needs for financing transactions during normal business operations. To buy raw materials, pay bills, taxes, dividends, etc., cash is required.
2. **Precautionary motive:** Holding cash or close to cash serves as a safety net for unforeseen circumstances. To deal with unforeseen circumstances like floods and strikes, money is required.
3. **Speculative motive:** The goal of keeping cash on hand is to act fast to seize opportunities, which are often found outside of the normal course of business. To take advantage of a chance to buy raw materials for less money or to make purchases at advantageous pricing, a certain quantity of cash is required.
4. **Compensating motive:** The goal of keeping cash on hand is to pay banks for the services or loans they provide. Banks offer a wide range of services to businesses, including check clearing, money transfers, and more.

Cash Management Techniques

Managing cash flow constitutes two important parts:

i. Speedy Cash Collections.

ii. Slowing Disbursements.

Speedy Cash Collections

Businesses must focus on the area of quick cash collections from clients. The company creates a methodical approach and expert strategies for that. These methods are intended to encourage customers to pay as soon as feasible and to receive payments from them without delay. For Speedy Cash Collection company uses some of the following crucial methods:

1. *Prompt Payment by Customers:* Businesses could use discounts, special offers, and other incentives to entice customers to pay on time. It helps to decrease client payment delays, and the company can prevent customer delays. The businesses may employ some methods, such as self-addressed stamped envelopes, billing gadgets, etc., to ensure fast payments.

2. *Early Conversion of Payments into Cash:* Business entities should use caution when converting payments quickly into cash. The businesses may employ some methods for this goal, including postal float, processing float, bank float, and deposit float.

3. *Concentration Banking:* Payments are made to regionally scattered collection centres and deposited in nearby banks for speedy clearing as part of this collection operation. It is a system with numerous sites of collection and decentralised billing.

4. *Lock Box System:* The lock box system involves renting secure collection sites where customers send their payments. These lock boxes are managed by local banks, which retrieve and process the payments directly. This method often leads to faster processing times compared to a concentration banking system, as the payments are handled more efficiently and closer to the source, resulting in additional time savings for the business.

Slowing Disbursement

Effective cash management should focus on slowing down the disbursement of cash to customers or suppliers in addition to quickly collecting cash and receivables. Slowing down the cash flow does not imply postponing or evading the payment. The following techniques can be used to slow down the release of money:

1. *Avoiding the early payment of cash:* Only on the final day of the payment period should the company make its due. If a business doesn't make an early cash payment, it might keep the money and utilise it for other things.

2. *Centralised disbursement system:* In the case of speedy cash collections a decentralised collecting system is followed. Whereas a centralized cash

disbursement system, processes payments at a single central location and requires more time to collect and process accounts. Therefore, the decentralized approach typically provides faster cash collection, while payments can be made on the due date with a centralized system.

3.2.2.3 Receivables Management

Receivables refers to the amount of money a company is owed by customers for goods or services delivered but not yet paid. One of the main components of the current assets of commercial concerns are receivables. It is also referred to as Account Receivables or Bills Receivables because it solely results from credit sales to consumers.

Account receivable management involves making decisions about investing money in assets to maximize the company's overall return on investment. Receivables management aims to increase sales and profit as long as the benefits of giving more credit are greater than the cost of funding it.

The following list includes the costs related to accounts receivable and credit extensions:

i. Collection Cost

ii. Capital Cost

iii. Administrative Cost

iv. Default Cost.

1. **Collection Cost:** This is the expense related to obtaining the outstanding debts from clients to whom credit sales have been made.

2. **Capital Cost:** This is the price of using extra money that could have been used elsewhere in order to sustain credit sales.

3. **Administrative Cost:** This is an additional administrative expense for keeping track of accounts receivable, including salary paid to the personnel who is responsible for keeping track of accounting records pertaining to customers, investigative costs, etc.

4. **Default Cost:** Overdue amounts that cannot be recouped are considered default fees. Due to the inability of the clients, the business concern might not be able to reclaim the past due amounts.

Factors Influencing the Receivable Size

The size of the business's receivables is dependent on a number of variables. The following are some of the crucial elements:

1. *Sales Level:* One of the key elements that affect how much money a company has in its accounts receivable is the quantity of sales. The company must relax its lending policy and terms and conditions if it wants to boost sales. There is a chance that the receivables will grow in size as long as the businesses continue

to make more sales.

2. *Credit Policy:* The setting of credit rules and analysis is known as credit policy. In the same industry, it can differ from business to business or even from product to product. A liberal credit policy raises both the size of the receivable and the volume of sales. The size of the receivable is reduced by strict credit policies.

3. *Credit Terms:* Credit terms outline the terms by which credit receivables must be repaid, and depending on those terms, the size of the receivables may rise or fall. Therefore, one of the elements that impact the size of the receivable is the credit terms.

4. *Credit Period:* In the case of credit sales, it is the period for which trade credit is given to the consumer. It is typically stated in terms of "Net days."

5. *Cash Discount:* Customers are encouraged to pay before the due date with cash discounts. The consumer will receive a special discount for paying before the deadline.

6. *Management of Receivable:* It is a factor that has an impact on the firm's size of receivables. The size of the receivable can be decreased by the company when management uses systematic measures.

Credit Policy

The amount of credit sales, the length of the collection time, and subsequently the investment in accounts receivable can all be influenced in one way by the financial management. The combination of three decision variables—credit standards, credit conditions, and collection efforts—over which the financial management has control is referred to as credit policy.

- ◊ The criteria used to determine whether consumers can be given items on credit are known as credit standards. An organization's investment in accounts receivable will rise if it has more slow-paying clients. The danger of default for the company will also increase.
- ◊ Credit terms outline the length of credit and the conditions for client payment. If clients are given a long payment period, investment in accounts receivable will be higher.
- ◊ Actual collection time depends on collection efforts. The investment in accounts receivable will decrease as the collection period gets shorter and vice versa.

Credit Collection Policy

All clients do not pay the firm's bills on time, so a collection procedure is required. Some clients take their time paying, while others don't pay at all. Therefore, the goal of the collection operations should be to increase slow-payer collections and decrease bad-debt losses. Regular and fast collection should be guaranteed by a collection policy. Prompt collection is necessary for working capital to turn over quickly, to keep collection expenses and bad debts to a minimum, and to maintain collection effectiveness. Regular collections keep borrowers on guard, and they often pay their debts on time.

Clear-cut collection techniques should be outlined in the collection policy. Clearly defined collection methods for past-due or delinquent accounts must also be developed. It is important to handle the slow-paying consumers with extreme tact. Some of them might be long-term clients. If the collection process begins suddenly and without warning, customers may become upset, and the company risks losing them to competitors.

It is important to clearly define who is responsible for collecting and follow-up. It might be given to the sales or accounts departments, or it might go to a separate credit department. It is essential that the accounts and sales departments coordinate, and this coordination needs to be formalised. The credit records and data are kept by the accounting department. Before taking any action against customers who have not paid their invoices, it should be communicated with the sales department if it is in charge of collection. Similar to this, before extending credit to a consumer, the sales department must ask the accounting department for prior information about that customer.

Despite the need for clearly defined collecting methods, each case should be judged on its own merits. Despite their best efforts, some customers may find themselves in a temporary financial bind and may be unable to make their payments by the due date. This can be a result of the current economic climate or other uncontrollable circumstances. Such situations demand particular attention. The collection process should only be started against them once they have resolved their financial issues.

A cash discount for on-time payments should be considered by the company. The expense incurred by the company to ensure quicker cash recovery is the cash discount. Some consumers may choose not to pay during the designated discount period, but might still pay at a later time, even after the cash discount has expired. To recover the whole amount, such cases must be quickly recognised and appropriate action should be taken.

Optimum Credit Policy

The total cost for a specific level of revenue must be decreased in order to enhance the company's operational profit. A credit policy that maximises the firm's value is optimal. When an investment's incremental or marginal rate of return is equal to the incremental or marginal cost of the funds used to finance the investment, the firm's value is maximised. By dividing the incremental operational profit by the incremental investment in receivables, one may determine the incremental rate of return. Given the risk associated with investing in accounts receivable, the incremental cost of funds is the rate of return demanded by the fund suppliers.

Keep in mind that the borrowing rate is not the same as the needed rate of return. The needed rate of return increases as investment risk increases. Due to an increase in slow-paying and defaulting accounts, the firm's investment in accounts receivable grows riskier as it relaxes its credit criteria.

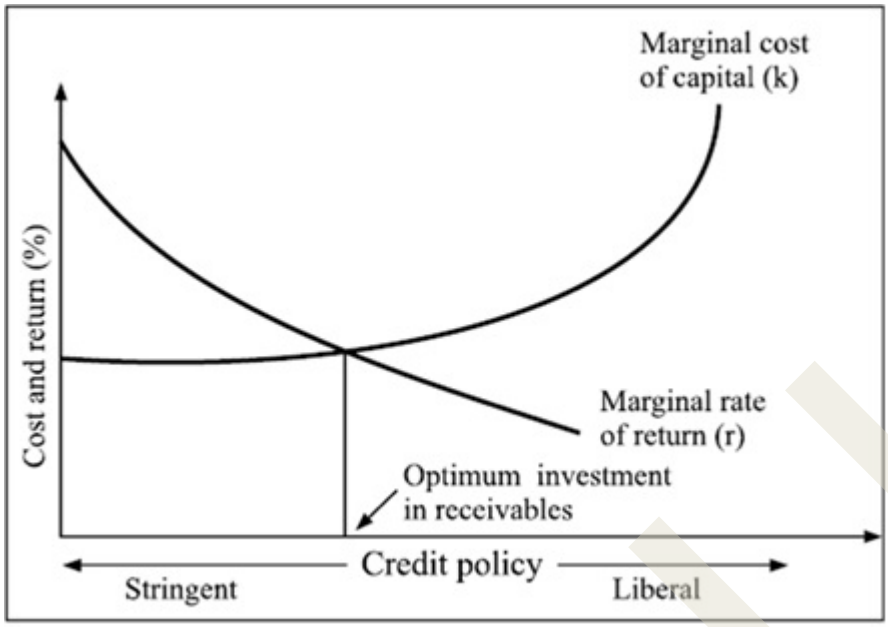

Figure 3.2.3 Optimum Credit policy

Factoring

A corporation must invest a lot of time and effort in credit management, which is a specialist job. Receivables collection is a challenge, especially for small businesses. The method of financing receivables by banks is common. The seller of products and services must take on the risk of debtor default since this support is only offered for a little time.

Factoring companies are specialised businesses that can handle a company's credit management and collection. Factoring is a well-liked method of controlling, financing, and collecting receivables in industrialised nations like the USA and the UK. It has recently spread to a number of other nations, including India. Factoring services are offered by four Indian banks' subsidiaries. We describe the nature, varieties, pricing, and advantages of factoring services in this section.

Nature of Factoring

A distinctive advancement in finance is factoring. It offers a client, management assistance as well as financial support. Selling receivables to a firm that focuses on their collection and management is a way to turn a non-productive, inactive asset (a receivable) into a productive asset (cash). Cash may become tight for some businesses if customers take a while to pay them for the goods and services they've provided. It is far preferable to sell that asset for cash that can be used in the firm right away than to have such an illiquid current asset on the balance sheet. Receivables can be turned into cash with the help of a "factor."

Factoring is described as "a business involving a continuing legal relationship between a financial institution (the factor) and a business concern (the client) selling goods or offering services to trade customers (the customers), whereby the factor purchases the client's accounts receivable and in relation to those, controls the credit

extended to customers and manages the sales ledger."

Another definition of factoring is "a contract between the suppliers of products or services and the factor, wherein:

a. Factoring involves arrangements between the supplier and its customers (debtors) with specific condition that receivables being factored are not related to transactions involving goods bought primarily for personal, family or household use;

b. the factor is to perform at least two of the following functions

   i. finance for the supplier, including loans and advance payments;

   ii. maintenance of accounts (ledgering relating to the receivables);

   iii. collection of accounts

   iv. protection against default in payment by debtors

c. notice of assignment of the receivables is to be given to debtors".

The factoring process is outlined in the agreement between the supplier and the factor. Typically, the business sends the customer's order to the factor for approval and creditworthiness assessment. The company sends out items to the customer as soon as the factor is pleased with the customer's creditworthiness and agrees to buy receivables. The consumer will be informed that the factor has purchased his account and will now be responsible for collecting money from him. A factor may keep a credit department with specialist people to carry out his duties of credit evaluation and collection for a big number of clients. If a factor agrees to own a firm's receivables after buying them, they will be required to offer security against any bad-debt losses to the company.

Factoring Services

Despite the fact that the purchase of receivables is essential to the operation of factoring, the factor offers the following three main services to clients:

◊ Sales ledger administration and credit management

◊ Credit collection and protection against default and bad-debt losses

◊ Financial accommodation against the assigned book debts (receivables)

Credit administration

Despite the fact that the purchase of receivables is essential to the operation of factoring, the factor offers the following three main services to clients.

In order to ensure that payments are made on time or early, the factor keeps track of all clients' outstanding debts for each item. They assist clients in determining whether to issue credit to customers and how much credit to do so. They help companies estimate the creditworthiness of customers by giving them information about industry developments, competition, and customers. They conduct a methodical study of the

credit information to ensure adequate monitoring and administration. They create a variety of credit and collection reports and provide them to clients for review and decision-making.

Credit collection and protection

The factor engages in all necessary collection activity when a customer's individual book obligations become due. Additionally, he offers complete or partial protection from bad debts. They are in a better position to establish a suitable approach to guard against potential defaults because of their interactions with a variety of customers and defaults with diverse paying patterns.

Financial assistance

Factors frequently offer the client financial support by granting advance cash against book obligations. Customers of "clients" become into a factor's debtors and must pay him directly to satisfy their debts. Therefore, factoring entails the outright acquisition of debts, enabling complete credit protection against any bad debts and offering financial accommodation against the company's book debts.

Factoring comprises the acquisition of a client's book debts in order to facilitate credit management, collection, and protection in light of the services offered by a factor. It also functions as a short-term funding method.

It offers defense against the non-payment of book obligations. However, the factor charges the client a price in exchange for these services. Therefore, factoring has a price.

3.2.4 Regulation of Working Capital Finance in India

The money set aside specifically for investing in current assets and covering daily expenses is known as working capital. Investments in current assets are made with working capital. It holds a significant position on the balance sheet of a company. Working capital financing is a specialist field created to satisfy a company's working needs. Trade credit, bank credit, factoring, and commercial paper are the primary sources of financing for working capital. Here, we only address bank credit because it is the most significant source of funding for current assets out of all of them. In general, businesses have easy access to bank financing for their working capital requirements. The Reserve Bank of India, however, has occasionally issued recommendations and instructions to the banks in order to tighten the processes and standards for working capital funding.

This section makes an effort to analyse how bank credit contributes to meeting businesses' requirement for working capital. Additionally, it aims to provide a bird's eye view of the rules the RBI has issued to banks regarding the financing of working capital.

Bank Finance For Working Capital

In India, banks are the primary institutional providers of financing for working capital.

The second-most significant source of funding for working capital requirements is trade credit, followed by bank credit. A bank determines the working capital needs by taking into account the firm's sales and production objectives as well as the desired levels of current assets. The term "credit limit" refers to the sum that the bank has authorised for the company's operating capital. The greatest amount of money that a business can borrow from the banking system is known as the credit limit.

Banks may set distinct limitations for the peak level credit requirement and the typical, non- peak level credit requirement for businesses with seasonal operations, stating the times when the borrower will use the separate limits. Banks deduct margin money instead of lending the full amount of the credit limit in practice. The purpose of the margin requirement is to maintain security and is based on the conservative tenet. If the margin requirement is 30%, the bank will only lend up to 70% of the asset's value. This suggests that even if the asset's value drops by 30%, the security of bank financing should be preserved.

Forms of Bank Finance

A firm can draw funds from its bank within the maximum credit limit sanctioned. It can draw funds in the following forms:

i. overdraft,

ii. cash credit,

iii. bills purchasing or discounting, and

iv. working capital loan.

1. *Overdraft:* The borrower is permitted to withdraw cash under the overdraft facility up to a certain maximum and for a specific length of time that is more than the balance in his current account. The overdraft amount is repayable upon request, but because the limits are renewed annually, it typically persists for a long time. From the borrower's perspective, the arrangement is quite flexible because he is free to take and refund money whenever he wants as long as he adheres to the general terms. Subject to certain minimum fees, interest is levied on daily balances—on the amount actually withdrawn. Cheques are used by the borrower to manage the account.

2. *Cash credit:* It resembles an overdraft agreement. In India, it is the most often used type of bank financing for working capital. A borrower may withdraw money from the bank under the terms of the cash credit facility up to the approved credit limit. He is not compelled to use the sanctioned credit in its whole at once; instead, he may withdraw funds as needed over time and repay it by depositing any excess monies in his cash credit account. Since there is no commitment fee, interest is only due on the amount that the borrower actually uses. Limits on cash credit are imposed in exchange for the security of current assets. While repayment of borrowed monies is possible upon request, banks typically do not recall such advances unless forced to do so by unfavourable circumstances. From the perspective of the borrower, a cash credit arrangement is the most flexible.

3. *Purchase or discounting of bills:* A borrower may request credit from a bank in exchange for the purchase or discounting of its bills. Bills from the borrower are bought or discounted by the bank. The total cash credit or overdraft limit is sufficient to cover the amount supplied under this agreement. The bank ascertains the drawer's creditworthiness before buying or discounting the notes. In spite of the fact that the phrase "bills acquired" suggests that the bank acquires ownership of the bills, in reality, the bank only holds the bills as a guarantee for the credit. When a bill is discounted, the borrower is compensated for the difference (viz., full amount of bill minus the discount charged by the bank). At maturity, the bank receives the full amount.

   The Reserve Bank of India developed the new bill market strategy in 1970 to promote bills as vehicles of credit. The plan's goal was to lessen the borrowers' reliance on the easily abused cash credit system. It was also expected that the programme will assist banks to deploy their surpluses or deficits by rediscounting or selling the bills purchased or discounted by them. Bills held by banks with deficits could be repurchased or rediscounted by banks with surplus cash. Every bank might seek to sell its bills in some circumstances. As a result, under the new bill market structure, the Reserve Bank of India serves as the lender of last resort. Unfortunately, the plan hasn't been a complete success yet.

4. *Letter of credit:* The buyers should make sure that their bank would make the payment if the buyer defaults on its responsibility, according to suppliers, especially the overseas suppliers. A letter of credit (L/C) agreement is used to guarantee this. To help a consumer buy items, a bank issues an L/C in his name. The bank makes the payment under the L/C arrangement if the consumer does not pay the supplier within the credit period. With this agreement, the bank assumes the supplier's risk. The customer is charged by the bank to open the L/C. It will offer such a facility to customers that are financially stable. The L/C arrangement is an indirect financing method, as opposed to cash credit or overdraft facilities; the bank will only pay the supplier on behalf of the customer if he fails to fulfil his obligation.

5. *Working capital loan:* To handle unforeseen events, a borrower may occasionally need ad hoc or temporary housing that exceeds the sanctioned credit limit. A demand loan account or a different non-operable cash credit account are two ways that banks offer this flexibility. On such additional credit, the borrower is obligated to pay an interest rate that is higher than the standard rate.

Regulation of Bank Finance

When providing working capital financing to businesses, banks have been adhering to a set of standards. The recommendations of several committees that the Reserve Bank of India has occasionally constituted have had a significant impact on these standards or guidelines. The Tandon Committee's recommendations served as the foundation for the working capital finance standards that banks have followed since the middle of the 1970s. In order to improve the processes and standards for working capital financing by banks, the Chore Committee issued additional recommendations. The guidelines based on these committees' recommendations are discussed below. In recent years, as India's

economy has been more liberalised, banks have significantly loosened their lending standards. In actuality, each bank is free to establish its own standards for working capital financing.

Up to the 1960s, industrial borrowers could easily and inconveniently obtain bank borrowing for working capital. Additionally, the cash credit arrangement, which has been the main method of providing such financing, is very beneficial to borrowers. Banks have not been worried about the borrower's creditworthiness or the intended purpose of the loan. The majority of bank financing was security-focused. Regardless of its economic role, this security-oriented approach tended to favour borrowers with substantial financial means. As a result, economic power became concentrated. Another issue was that the rise in bank lending did not correspond to the rise in output and inventory levels. This led to several distortions in how banks financed working capital. When Major Banks became a nationalised institution in 1969, the way it approached lending also changed.

As a result, there are many laws, rules, and limitations that apply to bank credit. The main goal of controlling and regulating bank credit is to guarantee that it is distributed fairly among the many sectors of the Indian economy. The RBI has been attempting, especially since the mid- 1960s, to instill some discipline among industrial borrowers and to reroute credit to the economy's core sectors. In order to achieve this, the RBI has been providing guidance and orders to the banking industries. The recommendations of certain specially created organisations tasked with investigating various facets of bank financing to industry have resulted in significant guidelines and directives.

Recap

- ◊ Working capital management is an act of planning, organizing and controlling the components of working capital.
- ◊ There are mainly three elements to working capital management. Inventory management, Cash Management and Receivables Management.
- ◊ Inventory management means, management of raw materials and related items.
- ◊ Management of cash consists of cash inflow and outflows, cash flow within the concern and cash balance held by the concern etc.
- ◊ Accounts receivable management refers to the process of overseeing and handling the collection of money that customers owe to a business for products or services provided.
- ◊ Working Capital Management formulates policies to manage and handle working capital efficiently.

- ◊ Major working capital finance from banks are; (a) overdraft, (b) cash credit, (c) bills purchasing or discounting, and (d) working capital loan.
- ◊ Reserve Bank of India issues guidelines and directives to the banks to strengthen the procedures and norms for working capital financing
- ◊ Inventories are classified as raw materials, work in progress, consumables, finished goods and spares.
- ◊ Inventory management techniques are classified on the basis of order quantity, classification of inventory and records.
- ◊ Economic order quantity refers to the level of inventory where the ordering cost and carrying cost which are combined to form the total cost of inventory is at its minimum.
- ◊ Cash management techniques include speedy cash collections and slowing disbursements.
- ◊ Inventory management helps in creating profitability by maintaining and utilising optimum level of inventory.

Objective Questions

1. What is working capital management?
2. What is re-order point?
3. What is lead time?
4. What are the motives for holding cash?
5. What is factoring?
6. What is optimum credit policy?
7. What do you mean by inventory management?
8. Mention any one objective of inventory management.
9. What do you mean by safety stock?
10. What is danger level in stock levels?
11. What is EOQ?
12. What is credit policy?

Answers

1. Managing the investment in current assets and liabilities.
2. The level at which firm places new order of inventory.
3. Time taken to deliver the inventory once the order is placed.
4. Transaction motive, Speculative motive, Precautionary motive, Compensating motive
5. Factoring is a type of finance in which a business would sell its accounts receivable to a third party for a fee or commission to meet its short-term liquidity needs.
6. Optimum credit policy is the one that maximises the firm's value.
7. Inventory management includes proper planning of raw material purchases, handling, storing, and recording into account
8. Hurdle free and effective running of the production process.
9. Safety stock refers to additional stock that may be used when real lead times and/or use rates are higher than anticipated.
10. It is the level below minimum level. It leads to stoppage of the production process.
11. The inventory level with the lowest overall ordering and carrying cost is known as the EOQ.
12. The setting of credit rules and analysis is known as credit policy.

Self-Assessment Questions

1. Discuss the objectives of inventory management.
2. Explain various inventory control techniques.
3. What are the techniques of classification of inventory?
4. Explain the motives of holding cash.
5. Discuss the cash management techniques.

6. What is receivables management? Explain it.
7. What are the types of bank finance for working capital? Explain each one of them.
8. What do you mean by discounting of bills?
9. What is a letter of credit?
10. What are the various factoring services?
11. Briefly explain optimum credit policy?
12. What do you mean by credit collection policy?

Assignments

1. Select a company which has a policy of selling on credit. Interview the company's managers and some customers to find out the company's credit policy.
2. Examine the annual reports of two companies of your choice preferably from two different industries. What differences do you find in the cash level and short-term investments, if any, of those two companies?
3. Identify a company of your choice and study and prepare a brief report on the inventory management, cash management and receivables management of the company.
4. Try to find out the various forms of bank finance used by a company and learn about the various proportions in which different forms of finance is used and find out the reason for it.

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BLOCK - 04
Financing Decision

Unit - 1
Introduction to the Capital structure theories

Learning Outcomes

At the conclusion of this unit, the learner will be able to:

- ◊ get an awareness on capital structure planning
- ◊ familiarize the theory and practice of capital structure
- ◊ get an introduction to debt/equity ratio
- ◊ explain the idea of optimal capital structure

Prerequisite

Imagine you have a business idea of starting a new restaurant in your neighbourhood. Purchasing machinery, kitchen tools and other materials require almost 5-10 lakh rupees. How will you find the money for investing in your business? The options available to you are either using your own money for financing this entire idea or you can borrow some money from a bank or any outsiders for a fixed interest and use that money in your business. Likewise, there are many ways in which businesses gather financial resources. Some people use own funds and some others may borrow. When you are using your own money, the return made out of your investment is only entitled to you since you are the risk bearer. If you are using borrowed money in addition to own fund, a fixed portion of your income will go to the outsider too. Hence it is a crucial task for businesses to decide how they are going to raise money for financing their financial idea. Capital structure refers to the way a business finances its overall operations and growth through a mix of debt (borrowed funds) and equity (owned funds). The capital structure decision is crucial because it influences a company's risk profile and cost of capital. This section will give you an insight into the scenario.

Keywords

Debentures, borrowings, equity shares, optimal capital structure, cost of capital, capital, capitalization, financial structure, capital gearing, equity capital, debt capital, arbitrage

Discussion

Finance is the foundation for any business. Having enough financial resources are necessary for materializing any business idea, whether it is good or bad. Every time a company makes an investment decision, there should be a proper plan regarding how the company is going to find money for financing the same. Without enough capital, no company can run smoothly. Even from buying new machinery to building bridges should be backed by a proper source of finance. It can be either an owned fund or it can be borrowed or a mix of both.

Capital

Capital refers to the fund raised from different sources of finance by the business firm to acquire assets to be used in the operations. The capital contributed by the owners can be called equity capital/ owned fund and the capital raised from outsiders can be called borrowed fund / debt capital.

Capital Structure

Capital structure represents the long-term financing sources used by a company to finance the business operations. It represents the composition or components of a company's total capitalisation and includes all long-term capital resources. It's made up of debt and equity securities.

Relationship between Capital Structure, Capitalisation and Financial Structure

Capitalisation:

The term capitalisation is the sum total of all the securities issued by the company to finance their business. It includes both equity and debt securities. For example, if a company issues ₹5 lakhs worth of debentures and ₹10 lakhs worth of equity shares, then the total capitalization is going to be ₹15 lakhs.

Capital Structure:

Capital structure gives the composition of capitalisation. It explains the composition of debt and equity used for achieving a particular capitalisation. According to the earlier example the capital structure will be;

Equity Capital	10 lakhs	66.67%
Debt Capital	5 lakhs	33.33%
Capitalisation	15 lakhs	100%

Financial Structure

Capital structure is not the same as financial structure. The financial structure depicts the overall funding pattern, including current liabilities.

Types of Capital Structure

Each company's capital structure is different, although the following capital structures are typically used;

- ◊ Equity shares only
- ◊ Equity and preference share only
- ◊ Equity and Debentures only
- ◊ Equity, Preference shares and Debentures.

There is one more classification as follows.

1. Horizontal structure: the one that use equity only.
2. Vertical structure: combination of equity (small amount), Preference and Debt.
3. Pyramid Structure: More equity and less debt
4. Inverted pyramid: More debt and less equity.

Capital Gearing

Capital gearing is the ratio between the various types of securities in the capital structure. It is the ratio between an owner's fund and debt or fixed cost-bearing funds.

Consider the earlier example itself

A company is said to;

1. *High Geared:* When debt capital is more when compared to equity.
2. *Low Geared:* When the issue of equity is more than debt.

4.1.1 Capital Structure Planning

Some businesses don't formally plan or set policies for their capital structures; instead, they evolve as a result of the financial decisions made by the financial manager. Financial choices are reactive, changing in response to operational choices. These businesses might do well in the short term, but they might eventually struggle to raise enough money to fund their operations. These businesses could also struggle to make the best use of their resources if they have an unplanned capital structure. As a result, it

is becoming more and more obvious that a business should manage its capital structure to make the most use of its resources and to be more flexible in response to changing market conditions.

Theoretically, the financial manager should plan an optimum capital structure for the company. The optimum capital structure is one that maximizes the market value of the firm. In practice, the determination of an optimum capital structure is a formidable task, and one has to go beyond the theory. There are significant variations among industries and among companies within an industry, in terms of capital structure. Since a number of factors influence the capital structure decision of a company, the judgment of the person making the capital structure decision plays a crucial part. If the decision-makers judge certain aspects differently, two similar companies may have different capital structures. It's possible that a purely theoretical model is unable to effectively account for all the variables that influence the capital structure choice in real life. Since financial markets are not ideal and decisions must be made with imperfect knowledge and risk, these factors are highly psychological, complicated, and qualitative and do not always follow recognised theory.

A company's board of directors or chief financial officer (CFO) should create a capital structure that is suitable or ideal for the business. This is only possible when all the variables that are important in determining the capital structure of the company have been thoroughly examined and balanced. The capital structure must be developed generally, taking into account the needs of a company's finances as well as the interests of equity owners. Being the owners of the business and the ones that invest capital (equity), the equity shareholders would be concerned about how a company would finance its operations. However, it is also important to take into account the concerns of other groups, including those of the government, society, creditors, and employees. In general, it is in line with the needs of other groups when a corporation states its goal in terms of shareholder wealth maximisation. Thus, the financial management should, among other things, try to maximise the long-term market value of each share while creating an acceptable capital structure for the company.

The market value of each share may, theoretically, reach its maximum at a specific point or within a certain range. In reality, the market value per share may fall within a range of an appropriate capital structure for the majority of businesses within a given industry. Examining a company's capital structure in relation to its share market price might help you gain a sense of this range. Empirically, it might be discovered that share values within a specific range don't differ significantly from one another. Subject to additional requirements like flexibility, solvency, control, and standards set by banking firms, the Security Exchange Board of India (SEBI), and stock exchanges, management of a firm may fix its capital structure at the upper end of this range in order to make the most of advantageous leverage.

4.1.2 Framework for Capital Structure: The FRICT Analysis

Different viewpoints can be used to assess a financial structure. Return, risk, and value are significant factors from the perspective of the owners. Flexibility is a major issue from a strategic standpoint. Control, adaptability, and feasibility are crucial

considerations. By weighing each of these factors, a strong capital structure would be developed:

4.1.2.1 Flexibility

The company's debt capacity should be taken into account when determining the capital structure and this capacity shouldn't be surpassed. The ability of a corporation to produce future cash flows determines how much debt it can support. It ought to have enough cash on hand to cover the fixed fees and principal owed to creditors, plus enough more to cover unforeseen expenses in the future. Flexibility in the capital structure is necessary. If a scenario changes, a company should be able to modify its capital structure with the least amount of expense and time. The business should be able to offer money whenever it's needed to finance its productive activities.

4.1.2.2 Risk

The risk is based on how unpredictable the firm's operations are. The macroeconomic issues as well as company- and industry-specific factors may be to blame. Overusing debt makes profits volatility for shareholders more pronounced and jeopardises the company's capacity to remain solvent.

4.1.2.3 Income

The company's capital structure ought to be in the owners' (shareholders') best interests. It should add value and, subject to other factors, deliver the highest possible returns for the shareholders at the lowest possible cost.

4.1.2.4 Control

Minimum control loss risk should be present in the capital structure. Control loss risk refers to the potential loss of control that existing shareholders or founders might experience when raising capital. This typically occurs when new equity is issued, diluting the ownership percentage and potentially affecting the decision-making power of the original stakeholders. Dilution of control is a major worry for the owners of closely held businesses.

4.1.2.5 Timing

Timing is a major factor in capital structure decisions. Funds should be used in the capital markets in such a way that it is favourable for the company. Identifying the right time to raise funds from the market can significantly enhance future cash flows. Awareness about market conditions and choosing the right time to secure capital will help firms to maximize the benefits of funding.

The FRICT analysis, which stands for "flexibility, risk, income, control, and timing," offers a comprehensive framework for assessing a firm's capital structure. Some extra specific aspects may be reflected in a company's unique characteristics. Additionally, each of these attributes will receive different amounts of focus from firm to organisation.

For instance, one corporation might value flexibility more than control, whilst another might be more focused on solvency compared to any other criteria. Additionally, if conditions change, their relative importance may also vary. Therefore, the capital structure of the company should be flexible.

4.1.3 Factors determining Capital Structure

There are many factors which might influence the decision of capital structure of a firm. These factors differ in their significance when determining the capital structure. Also, the influence of individual factors of a firm changes over time. Each time funds are required, the financial manager must evaluate the advantages and disadvantages of various financing options to choose the most beneficial capital structure.

Various factors that influence the capital structure are discussed below:

1. **Financial Leverage or Trading on Equity:** Financial leverage, also known as trading on equity involves using debt to increase the potential return on equity. It is the use of borrowed funds to finance the company's assets and operations, in order to generate higher returns for shareholders. Using long term debt helps to increase the earnings per share if the firm is able to earn a return which is higher than the cost of debt. It is also important to note that the leverage can operate adversely if the firm is not able to generate returns higher than the cost of debt. So the capital structure of a firm should be planned carefully choosing the right mix of debt and equity.

2. **Cost of Capital:** Cost of capital is a crucial factor in determining the capital structure of a firm. Cost of capital refers to the cost a company incurs to obtain funds for its operations and investments. It represents the rate of return that investors and lenders require for providing capital to the company. As we know the main sources of finance for an organisation are equity, debt and preference share capital. The goal is find a balance between equity and debt that minimizes the overall cost of capital.

3. **Cash Inflows:** The size and stability of cash inflows are crucial factors in determining a firm's capital structure. Debt financing involves fixed payments, such as interest and principal. Therefore, a firm with stable and substantial cash inflows can afford to include more debt in its capital structure. Before raising funds through debt, a firm should estimate its future cash flows to ensure that they are sufficient to cover these fixed payments. Thus, while planning its capital structure, a firm must consider its ability to generate reliable cash flows to meet debt obligations effectively.

4. **Nature and Size of Firm:** The stability and regularity of earnings depend on the type of business. Public utility companies typically have more stable and predictable earnings, allowing them to incorporate more debt into their capital structure. In contrast, small companies and firms with unstable earnings are generally advised to raise funds primarily through equity rather than debt.

5. **Control:** Equity shareholders have voting rights, while debenture holders and preference shareholders do not. Therefore, when a company raises additional

funds by issuing equity shares, there is a risk of diluting the control of the firm. To retain control, a company might prefer debt financing. However, excessive reliance on debt can lead to a heavy burden of fixed interest charges and principal repayments.

6. **Flexibility:** Redeemable preference shares and convertible debentures are often preferred for their flexibility. Preference shares and debentures that can be redeemed at the firm's discretion provide significant flexibility in managing the capital structure. It is important for a company to design its capital structure in a way that allows it to switch between different forms of financing as needed.

7. **Capital Market Conditions:** Capital market conditions are volatile, meaning that financial markets frequently experience unpredictable changes in prices, interest rates, and investment values. This volatility can impact investment returns, borrowing costs, and overall market stability. In a depressed market, issuing equity shares might be undesirable because investors tend to be more cautious. Conversely, during a market boom, issuing equity shares can be advantageous. Therefore, timing the issuance of equity shares effectively is crucial to minimizing the costs of raising funds.

8. **Assets structure:** When planning the capital structure, it is important to consider both the liquidity and composition of assets. If fixed assets make up a significant portion of the company's total assets, the company may be better positioned to raise a larger amount of long-term debt. The asset structure influences decisions regarding the sources of capital, as different types of assets might be used as collateral for loans or financing.

9. **Corporate tax rate:** If corporate taxes are high, firms might prefer debt financing because interest payments on debentures are tax-deductible, which lowers taxable income. On the other hand, dividends paid on equity shares are not tax-deductible.

10. **Legal Requirements:** Government guidelines regarding the issuance of shares significantly influence a firm's capital structure. For instance, the Securities and Exchange Board of India (SEBI) grants consent for capital issues under the following conditions:

- ◊ The debt-to-equity ratio does not exceed 2:1 (though a higher ratio may be permitted for capital-intensive projects).
- ◊ The ratio of preference capital to equity does not exceed 1:3.
- ◊ Promoters hold at least 25% of the equity capital.

4.1.4 Capital structure theories

In financial management, capital structure theory refers to the systematic approach of financing business activities through a combination of equities and debentures. Capital structure is the mix of owners supplied capital that is equity, reserves and surplus along with the borrowed capital such as bond and loans. There are several capital structure

theories explaining the relationship between debt and equity. The following theories will explain whether the capital structure affects the firm's value or not.

i. Net income approach

ii. Net Operating Income Approach

iii. Traditional approach

iv. Modigliani-Miller (MM) Approach

Net Income Theory (N I)

This method asserts that the choice of the capital structure affects the firm's worth. The weighted average cost of capital (WACC) will decrease as financial leverage rises, but the firm's value and the market price of common shares will rise. A decrease in leverage, on the other hand, will result in a rise in overall capital costs and, as a result, a drop in the value and market price of equity shares. Therefore this theory states that a company can increase its value and decrease the overall cost of capital by increasing the proportion of debt in its capital structure.

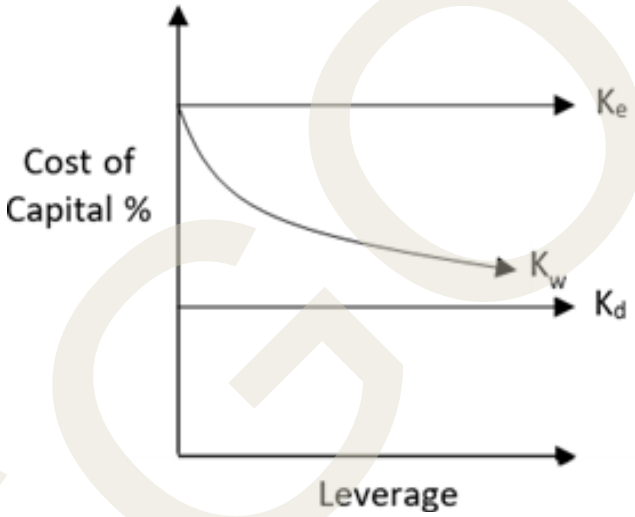

Figure 4.1.1 Net income Approach

Where Kw is the weighted average cost of capital, Ke is the cost of equity, and Kd is the cost of debt.

Ke and Kd are expected not to vary with leverage based on the diagram above. The weighted average cost of capital (WACC) declines as debt increases.

The following steps can be taken to determine the firm's value using the Net Income (NI) Approach:

Where,

Value of the firm (V) = S+ D

S = Market Value of Equity

D = Market Value of Debt

Market value of equity (S) = NI/Ke

NI = Earnings available to equity holders

Ke = Cost of Equity

When the weighted average cost of capital (WACC) is at its lowest, the value of the company will be at its highest using the NI method. Therefore, the theory recommends total or maximum debt financing to reduce the cost of capital. As a result of this strategy, the overall cost of capital is:

Overall Cost of Capital (Ko) = EBIT/Value of the firm

This approach is based on the following assumptions:

◊ Cost of debt is less than cost of equity

◊ There are no taxes

◊ The risk perception of investors is not changed by the use of debt.

According to this strategy, the company can raise its overall value by increasing the amount of leverage while simultaneously lowering its overall cost of capital. The key finding of this strategy is that it encourages the company to use as much debt as feasible in order to increase its worth.

Let us understand this finding with the help of an illustration.

Consider X. Ltd. uses ₹ 2 Lakhs in their capital structure, the equity capitalization rate (Ke) is 12% and makes an annual earning of ₹ 50,000. As per the NI approach, the value of the firm should increase along with a decrease in Overall cost of capital (WACC) if it increases the use of debt.

Table 4.1.1 illustrates how the value and WACC of the company changes when it uses Rs. 1,00,000 worth of 8% debentures in its capital instead of all equity.

Table 4.1.1 Net Income Approach

Particulars	No Debt	50% Debt
EBIT	50,000	50,000
Less: Interest on debentures (8%)	0	8,000(100000x8%)
Earnings available for equity holders i.e. Net Income(NI)	50,000	42,000
Equity capitalization rate (Ke)	12%	12%
Market value of equity (S) = NI/Ke	4,16,667	3,50,000
Market value of debt (D)	0	1,00,000
Total value of firm V = S + D	4,16,667	4,50,000
Ko	12%	11.11%

As you can see from the table, the value of X. Ltd has increased from 4,16,667 to 4,50,000 when they used 1 Lakh debentures in its capital structure. The overall cost of capital has decreased from 12% to 11.11%.

Hence, when the company uses more debt, it has a chance of decreasing its overall cost of capital and thereby increasing its market value.

Net Operating Income Approach (NOI)

Earnings before interest and tax (EBIT) are referred as Net Operating Income. This theory is exactly the opposite of the net income approach. According to this theory, a change in the capital structure of a company does not affect the market value of the firm, and the overall cost of capital remains constant. Given that the total capital cost is unrelated to the level of leverage, any changes in leverage will not affect the firm's overall worth or the market price of its shares. The distinction between debt and equity is, therefore, meaningless. According to this strategy, a rise in the equity capitalization rate offsets a rise in the apparent cost-saving usage of debt. Due to the presence of fixed return instruments in the capital structure, equity investors want better pay as an alternative to greater risk.

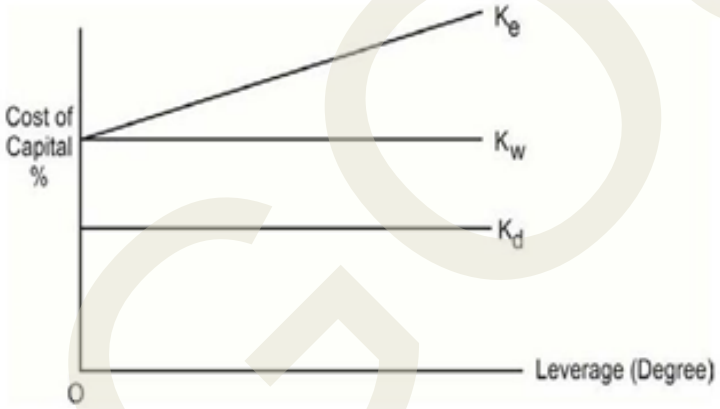

Figure 4.1.3 Net operating Income theory

The following presumptions are made by the NOI Approach:

i. In order to determine the value of the company overall, investors capitalise the total earnings of the company.

ii. The firm's total cost of capital Ko is constant and is based on business risk, which is likewise presumptively constant.

iii. It is also assumed that the cost of debt Kd is constant.

iv. As the capital structure uses more and more debt, the risk to the shareholders increases, which drives up the cost of equity capital, or Ke. The increase in Ke is such that it fully negates the advantages of using less expensive loans, and

v. There are no corporate taxes.

The following formula can be used to determine the value of the company (V).

Where,

$$V = \frac{EBIT}{K_o}$$

V = Value of the firm

EBIT = Earnings before interest and tax

Ko = Overall cost of capital

The market value of equity, according to this approach is the residual value which is determined by deducting the market value of debentures from the total market value of the firm.

Let's use the illustration from the net income approach section again. Consider a business with ₹2,00000 investment and a ₹50,000 net operating profit. Two possibilities are being considered: 1) There is no debt; and 2) There is equal equity and debt of ₹100,000 each. Let's say the business learns that the cost of debt is 8% and the overall cost of capital is 10%.

Table 4.1.3 Net Operating Income Theory

Particulars	**No Debt**	**50% Debt**
Equity	200000	100000
Debt	0	100000
EBIT	50,000	50,000
Less: Interest on debentures (8%)	0	8,000
Net Operating Income (NOI)	50,000	50,000
Overall capitalization rate (Ko)	10%	10%
Total Market value of Firm (NOI/Ko)	**5,00,000**	**5,00,000**
Market value of debt (D)	0	1,00,000
Market Value of Equity	5,00,000	4,00,000

Traditional Approach

Ezta Solomon and Fred Weston created the traditional approach. This approach is also known as Intermediate approach. Traditional approach is a compromise between the two extremes of net income approach and net operating income approach. This method contends that, up to a fair level of leverage, the firm's value will rise while the overall cost of capital will fall. Beyond the permissible limit of leverage, the cost of capital will rise and the firm's value will drop. At this point, the capital structure is optimal. Thus, optimum capital structure can be reached by a proper debt – equity mix.

According to this strategy, financial leverage up to a certain extent lowers capital costs and raises company value. Beyond that level reverse tendencies start to appear. The fundamental consequence of this strategy is that there is an ideal capital structure that minimises the cost of capital and that the cost of capital depends on the capital structure.

Based on the traditional view the following are the major points to perceive in relation to capital structure;

a. After an initial period of steady interest rates, as leverage increases, the rate of interest on debt rises.

b. Equity stockholders expect a steady or gradual growth in the rate. Following then, equity shareholders begin to perceive a financial risk, and from that point on, the expected rate quickly rises.

c. The WACC first lowers and then grows as a result of the interest rate and expected return behavior. The ideal capital structure is where the curve is at its lowest point.

This can be validated using the example of ABC. Ltd - The Net Operating Income of the company is 4,00,000. Total investment of the firm is 20,00,000. Equity capitalization rates are as follows:

◊ If the firm uses no debt – 10%

◊ If the firm uses Rs. 7,00,000 debentures – 11%

◊ If the firm uses Rs. 8,00,000 debentures – 13%

Assume that Rs. 7,00,000 debentures can be raised at 5% rate of interest whereas Rs. 8,00,000 debentures can be raised at 6% rate of interest. Compute the market value of the firm, value of shares and the average cost of capital:

Table 4.1.2 Traditional Approach

Particulars	No Debt	7,00,000 5% debentures	8,00,00 6% debentures
EBIT	4,00,000	4,00,000	4,00,000
Less: Interest on debentures	0	35,000 (7,00,000x5%)	48000 (8,00,000x6%)
Earnings available for equity holders i.e. Net Income (NI)	4,00,000	3,65,000	3,52,000
Equity capitalization rate (Ke)	10%	11%	13%
Market value of equity (S) = NI/Ke	40,00,000 $\frac{4,00,000}{\frac{10}{100}}$	33,18,182 $\frac{3,65,000}{\frac{11}{100}}$	27,07,692 $\frac{3,52,000}{\frac{13}{100}}$
Market value of debt (D)	0	7,00,000	8,00,000
Total value of firm V = S + D	40,00,000	40,18,182	35,07,692
K_o	10% (4,00,000/4000000*100)	9.95% (4,00,000/4018182*100)	11.4% (4,00,000/3507692*100)

It is clear from the above illustration that if debt of 7,00,000 is used, the value of the firm increases and the overall cost of capital decreases. But if more debt (Rs. 8,00,000 debentures) is used to finance instead of equity, the value of the firm decreases and the overall cost of capital increases.

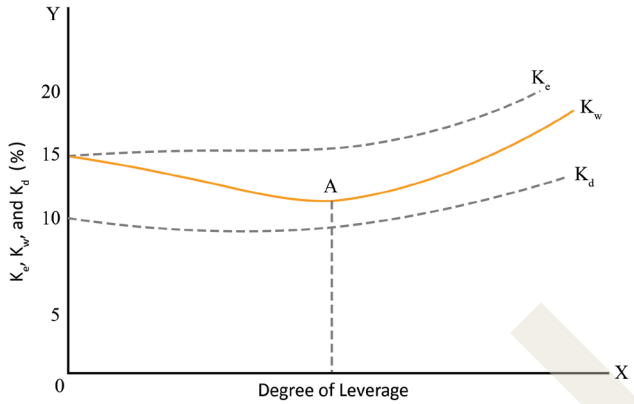

Figure 4.1.2 Traditional approach

Modigliani-Miller (MM) Approach - Without Tax

According to this theory the cost of capital is not affected by the changes in the capital structure of a firm. The debt-equity mix is viewed irrelevant in the determination of the total value of the firm. This theory states that increased use of debt leads to increase in the cost of equity and this increase in the cost of equity offsets the benefits of low cost of debt. A firm's operating income is seen as a determinant of its total value. In the opinion of MM, two identical firms in all respects except their capital structure cannot have different market values or cost of capital because of the arbitrage process

Arbitrage Process

The operation of the arbitrage process and the replacement of corporate leverage with personal leverage provide an explanation for the operational justification of the Modigliani-Miller hypothesis. Buying an asset or security at a cheaper price on one market and selling it at a greater price on another market is known as arbitrage. In turn, equilibrium is reached in several markets. Take two identical companies as an example, one of which has debt in its capital structure and the other has not. Investors in the company with the higher value will sell their shares and purchase those in the company with the lower value. Given the same potential risk or lesser risk, they will be able to obtain the same return with a lower investment. Because of this, they would benefit more.

Due to flaws in the capital market, the existence of transaction costs, and the existence of corporate income taxes, the recommended arbitrage process will not succeed under this strategy.

MM approach (without tax) is reliant on the assumptions listed below:

◊ There is a perfect market

◊ Every investor is logical or act rationally.

◊ The expected earnings of all the firms have identical risk characteristics.

◊ There are no corporate taxes.

◊ All earnings are distributed to shareholders.

The Modigliani-Miller technique produced the following three claims based on the aforementioned presumptions:

I. A company's total market value is determined by taking its predicted net operating income and dividing it by the market-determined discount rate that corresponds to its risk class.

Value of levered firm (Vg) = Value of unlevered firm (Vu)

$$Value\ of\ firm = \frac{Net\ Operating\ Income}{K_o}$$

II. The cost of equity is higher for a company with debt in its capital structure than it is for a company without debt. The risk premium for the financial risk will be included in the cost of equity.

III. The overall cost of capital is unaffected by the capital structure (financial leverage). Only the business risk has an impact on the cost of capital.

Modigliani-Miller (MM) Approach- With Tax

When the tax was added to the MM model in 1963, it was realised that the presence of corporation taxes would boost a firm's value or lower its cost of capital. The earnings of stock and debt holders in leveraged and unlevered firms will differ slightly as a result, and the value of a leveraged firm will be higher than the value of an unlevered firm by a factor equal to the debt amount times the corporation tax rate.

Value of a levered company = Value of an unlevered company + Tax benefit

Recap

- Capital refers to the fund raised from different sources of finance by the business firm to acquire assets to be used in the operations.
- The capital contributed by the owners can be called equity capital/ owned fund and the capital raised from outsiders can be called borrowed fund / debt capital.
- Capital structure represents the long-term financing sources used by a company to finance the business operations.
- The term capitalisation is the sum total of all the securities issued by the company to finance their business.
- Capital gearing is the ratio between the various types of securities in the capital structure. It is the ratio between an owner's fund and debt or fixed cost bearing funds.
- The company's debt capacity should be taken into account when determining the capital structure and this capacity shouldn't be surpassed.
- Overusing debt makes profits volatility for shareholders more pronounced and jeopardises the company's capacity to remain solvent.
- Control loss risk refers to the potential loss of control that existing shareholders or founders might experience when raising capital.
- Financial leverage, also known as trading on equity involves using debt to increase the potential return on equity.
- Cost of capital refers to the cost a company incurs to obtain funds for its operations and investments.
- If corporate taxes are high, firms might prefer debt financing because interest payments on debentures are tax-deductible, which lowers taxable income.
- Net Income theory states that a company can increase its value and decrease the overall cost of capital by increasing the proportion of debt in its capital structure.
- Net Operating Income theory states that change in the capital structure of a company does not affect the market value of the firm and the overall cost of capital remains constant.

Objective Questions

1. What is a capital?
2. What is equity capital?
3. What is debt capital?
4. What is capitalization?
5. What is the capital structure?
6. What is Capital Gearing?
7. What is a levered firm?
8. What is an unlevered firm?
9. What is debt-holders' income?
10. What is shareholders' income?
11. What is a leveraged firm's value?

Answers

1. Capital refers to the funds raised from different sources of finance by a business firm to acquire assets to be used in its operations.
2. The capital contributed by the owners can be called equity capital or own fund.
3. The capital raised from outsiders can be called a borrowed fund or debt capital.
4. Capitalization refers to the entire amount of securities that a firm has issued to finance its operations.
5. The ratio of debt to equity utilised to attain a particular capitalization is known as the capital structure.
6. Capital Gearing is the ratio between an owner's fund and debt or fixed cost bearing funds.
7. A company is referred to as a levered firm if it finances its assets with both stock and debt (geared firm).

8. A company is referred to as an unlevered firm if it uses no borrowing and funds all of its assets with equity (ungeared firm).
9. Interest
10. Projected operating profit less interest
11. The worth of the leveraged firm is the total of its equity and debt.

Self-Assessment Questions

1. Explain the factors determining the capital structure.
2. Could you please explain the relevant theory?
3. Explain the Importance of Capital Structure.
4. Briefly explain FRICT analysis.
5. What is Net Income theory of capital structure?
6. Explain Net Operating income Theory of capital structure.
7. What are the assumptions followed in Net Income theory?
8. What is the traditional approach theory of capital structure?
9. Explain MM approach theory without tax and with tax.
10. List the assumptions followed in Net Operating Income theory.

Assignments

1. Visit a business enterprise and write a brief note about their capital structure.
2. Identify two identical firms which have different capital structure (one that entirely depends on equity capital and the other one which uses debt – equity mix). Compare and study the market value and cost of capital of both the firms.

3. Choose a firm which had solely depended on equity capital in the initial stage and then introduced debt. Find out the change in market value and cost of capital in the transition.

Suggested Reading

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Unit - 2

Introduction to the Cost of Capital

Learning Outcomes

At the conclusion of this unit, the learner will be able to:

- ◊ get an awareness on cost of capital, its meaning and significance
- ◊ familiarise the investment evaluation
- ◊ explain cost of debt policy, calculation of debt
- ◊ analyze preference capital, equity capital & retained earnings
- ◊ describe operating ,financial &combined leverages

Prerequisite

When starting a business that requires funding, you need to choose between raising funds through debt or equity. To make an informed decision, you must understand the cost of capital. The cost of capital is the minimum return rate needed to justify undertaking a project. In other words, it helps you evaluate whether the anticipated returns from the investment will cover the costs associated with raising those funds. The cost of debt includes fixed interest payments and repayment obligations; the cost of equity involves the dividends paid to shareholders. Understanding these costs is essential for evaluating the financial impact of different funding sources on your business.

Keywords

Debentures, Borrowings, Equity Shares, Optimal Capital Structure, Capital, Capitalization, Financial Structure, Capital Gearing, Equity, Debt, Cost, Earnings

Discussion

The discount rate used to discount a project's cash flows is known as the "opportunity cost of capital" (or "cost of capital"). The minimum needed rate of return on capital invested in the project is its cost of capital, which is determined by how risky its cash flows are. Each investment project a company undertakes will have a different cost of capital since the risks associated with such initiatives may vary. It should be obvious that a project's risk,not the qualities of the company conducting it, determines the cost of capital for that endeavour.The company is an amalgamation of all of its investment initiatives. As a result, the needed rate of return on the total of the company's investment projects will be its overall, or average, cost of capital. As a result, the project's cost of capital is different from the firm's cost of capital.Can we discount the future profits of a capital project using the firm's cost of capital? The earnings of capital investments with risk comparable to the firm's average risk can be discounted using the firm's cost of capital. But as a first step, the necessary rates of return for any investment project can be determined using the firm's cost of capital as a benchmark. As there is a lack of a valid formal process for determining the amount of money for initiatives, the firm's capital cost can be changed either upwards or downwards to take into account risk variations in investment projects. In other words, if the proposal's risk is greater or less than the business's risk, the needed level of profit for a capital project could be equivalent to the company's capital cost with or without a risk prediction component.

4.2.1 Meaning of cost of capital

Making decisions involves selecting among options. An investor or management faces a vast array of competing investment alternatives while making investment selections. For instance, you may deposit your ₹1,000 in savings into either a 6.5 per cent, three-year fixed deposit in a nationalised bank or a 7 per cent, three-year postal certificate. Since the government guarantees payment in both situations, the investment opportunities carry a similar level of risk. You make the decision to put your savings in a bank. You have lost the chance to purchase postal certificates by taking this action. As a result, the opportunity cost you suffered is equivalent to the return on the missed investment opportunity. In the case of your investment, it is 7%. The return rate passed up on by the second better investment option with a similar level of risk is known as the opportunity cost. A project's needed rate of return is therefore an opportunity cost.

4.2.2 Significance of the Cost of Capital

We should be aware that one of the trickiest and most contentious areas in finance theory is the cost of capital. There are divergent views among financial experts regarding the best method for calculating the cost of capital. Despite the measuring issues, it remains a crucial idea in financial decision-making. It serves as a useful benchmark for;

- ◊ analyzing investment choices,

- ◊ creating a company's borrowing strategy and
- ◊ evaluating the top management's financial performance.

4.2.2.1 Investment Evaluation

The main objective of costs of investment measurement is to utilise it as a monetary benchmark for assessing capital investments. An investing proposal is approved using the Net present value method if it displays a favorable Net present value. By discounting the project's cash flows by the cost of capital, the NPV is determined. The discount rate applied to determine whether an investment project is desirable is, in this sense, the cost of capital. The investment project is approved using the IRR technique if its internal rate of return is higher than its cost of capital. The minimum rate of return needed on a financial venture is referred to in such frame of reference as the cost of capital. It is often referred to as the hurdle rate or the cut-off rate.

When the cash flows from an investment project are discounted by the cost of capital, it can result in a positive net present value (NPV), which increases the wealth of shareholders. If a project has zero net present value (NPV), it signifies that its cash flows have produced a return that is exactly equal to its cost of capital, and its approval or rejection will have no impact on the shareholders' wealth. The minimal required rate of return on an investment project that maintains the shareholders' current wealth is known as the cost of capital. Thus, it should be highlighted that the cost of capital serves as a benchmark for the most effective allocation of the firm's finances, which are provided by investors and lenders, to the different investment projects.

4.2.2.2 Designing Debt Policy

In reality, the cost factor has a considerable impact on a company's debt strategy. Debt acts as an interest tax shield since interest is a tax-deductible item, as we will discover later. Although debt raises the company's financial risk, the interest taxation shield lowers the cost of capital overall. The firm strives to maximise firm value by minimising the total cost of capital while determining the fundraising plan, that is, the ratio of debt and equity in the capital structure.

The cost of financing is an important factor when choosing the best funding sources at a given time. For example, it helps in comparing the costs of equity versus debt. However, risk and control are also crucial factors to consider.

4.2.2.3 Performance Appraisal

Top management's financial performance can be assessed using the cost of capital framework. This analysis evaluates how well investment initiatives align with the predicted overall cost of capital and examines the actual expenses incurred by management in raising the necessary funds.

4.2.3 Cost of Debt

There are numerous ways for a business to raise debt. It is allowed to borrow money

from banks or the general public in the form of debt securities (bonds), certificates of deposit, or both for a set length of time and at a set cost of borrowing. A bond or debenture may be offered at par or with a discount or at a premium. For the purpose of estimating the cost of debt, the contractual amount of return or the interest payment is used as the foundation.

The debts can be divided into two categories based on redemption (repayment of principle) at maturity: (i) Irredeemable debts and (ii) Redeemable debts.

4.2.3.1 Cost of Irredeemable Debt

Debentures that the issuer does not redeem are referred to as irredeemable debt. Irredeemable debt is also known as perpetual debt. The cost of irredeemable debt is the rate of return which the lenders expect. The coupon interest rate can be said to represent an approximation of the cost of debt. This coupon rate of interest on debt is the before tax cost of debt. So the rate of return required by lenders is the before-tax cost of borrowing (kd). The contracted (or regular) interest rate can be used to calculate the before-tax cost of debt. As the effective cost of debt is the tax adjusted rate of interest, the before tax cost of debt should be adjusted for tax effect.

By combining the corporate tax and the before-tax cost of capital, one can determine the after- tax cost of perpetual debt. Debt can be issued at par, discount, or premium.

◊ Before tax cost of debt can be computed as follows:

$$K_i = \frac{I}{NP}$$

Where,

K_i = Before tax cost of debt

NP = Net proceeds of debenture / bond

I = Annual interest payment

◊ The after-tax cost of debentures is determined as follows:

$$K_d = \frac{I}{NP}(1 - t)$$

Where,

K_d	=	Cost of debt after tax
I	=	Annual interest payment
NP	=	Net proceeds of debenture / bond
t	=	Tax rate

Net proceeds or Sale proceeds are the issue price less the total cost of issuing and selling securities, also known as the flotation cost (explained below). Learners can presume that the issue price will be the same as the going market price if it is not

specified. If issue charges are not specified, just assume that they are zero.

Floatation Costs:

The cost of underwriting or stockbroker fees, legal and administrative fees, registration fees, printing costs, etc. are all associated with the fresh offering of a security (debt or equity). The total of these expenses is referred to as the "floatation cost." This cost is incurred in order to make the instruments accessible to buyers.

Let's say a business issues Rs. 1,00,000 worth of Rs. 100 apiece 15% Debentures. The business pays taxes at a 40% rate. The cost of debt after taxes can be calculated as follows if:

a. debentures are issued at (i) par, (ii) 10% off, and (iii) 10% premium.

b. the issue is at par and brokerage is paid at 5%?

(a)

i. $K_d = \frac{15000}{100000}(1-0.4)$

$= 0.09$ or 9%

ii. $K_d = \frac{15000}{90000}(1-0.4)$

$= 0.10$ or 10%

iii. $K_d = \frac{15000}{110000}(1-0.4)$

$= 0.0818$ or 8.18%

(b)

$$kd = \frac{15000}{95000\ (i.e.\ 100000 - 5000)} + (1 - 0.4)$$

$= 0.0947$ or 9.47%

4.2.3.2 Cost of Redeemable Debt

Debt that must be repaid at some point is known as redeemable debt. These obligations have a monthly interest rate. By combining the corporate tax and the before- tax cost of borrowing, one can determine the after-tax cost of permanent borrowing. The issuer has three options for the issue of debt: par, discount, or premium. It is also possible to repay the debt at par, at a discount, or at a premium.

Equation to compute the after-tax cost of redeemable debt:

$$K_d = \frac{I(1-t) + \frac{RV - NP}{n}}{\frac{RV + NP}{2}}$$

Where,

I	=	Interest payment
NP	=	Net proceeds of debentures
RV	=	Redeemable value of debt
t	=	Tax rate
n	=	Number of years in which debt is to be redeemed

The cost of debt is calculated using the aforementioned formula when only the interest paid on the borrowing is taxable. Equation to compute the before-tax cost of redeemable debt:

$$K_d = \frac{I + \frac{RV - NP}{n}}{\frac{RV + NP}{2}}$$

The cost of debt is approximately calculated by the above calculations. Larger the disparity among RV and NP in such calculations, lesser the result reliability. As a result, if the gap in RV and NP seems particularly large, it is not recommended to utilise these calculations. These calculations are also inappropriate for bond redemption scenarios that occur gradually.

Example:

Let's say ABC Ltd. sold ₹ 60,000 worth of 12% Debt securities with a base value of ₹ 100. The issue's floating charge is 5% of the face value. The debt securities are redeemed at a bonus of 10% in ten years, and the interest is charged yearly.

If the tax is 50%, let's see how much will the debentures cost.

Here,

I = ₹12

RV = ₹110 (100+10% of 100 i.e., 10) NP= ₹95 (100-5)

n = 10

t = 50% or 0.5

Therefore,

$$K_d = \frac{12(1-0.5) + \frac{110-95}{10}}{\frac{110+95}{2}}$$

$$= \frac{12 - 6 + 1.5}{102.5}$$

=0.073 or 7.3%

4.2.4 Cost of Preference Capital

There are some conceptual challenges with costs of preference capital measurement. A firm is legally required to pay interest when it has debt, and this interest serves as the foundation for figuring out how much it will cost to pay off the loan. But when it comes to preference capital, the corporation is not legally required to pay dividends, and even if it does, doing so does not result in a charge to earnings; rather, it results in an allocation or appropriation of income to preference stockholders. Therefore, one would be inclined to draw the conclusion that profits on preference stock do not count as costs. That is untrue.

Preference capital costs depend on the income that investors anticipate to receive. Even while paying returns on preference capital is not required by law, it is typically done when the company generates enough earnings. Even though it doesn't lead to insolvency, the inability to pay dividends might be a serious issue from the perspective of regular investors. If dividends on the preference capital are not paid, the preference shareholders may gain power and participate in the management of the firm as voting rights are conferred on them.

Preference shares are usually cumulative which means that preference dividend will get accumulated till it is paid and so nothing can be paid to the equity shareholders as long as dividend on preference shares remains in arrears. Thus, the company might have trouble issuing preference or ordinary stock to raise money. In addition, if dividend is not distributed to the preferred stock and subsequently to the equity shareholders, the market price of the ordinary share may suffer. Due to these factors, preferred capital dividends should generally be paid on a regular basis, with the exception of times when the company is losing money or has a limited cash supply.

The capital raised through Preference Shares can be divided into redeemable and irredeemable categories, just as the debt.

4.2.4.1 Irredeemable Preference Share

The price of irredeemable preferred shares is calculated in a manner akin to that of perpetuity. Divide the preference dividend by the market rate or net proceeds from the offering to determine the price of an irredeemable preference share. It costs as follows to purchase an irredeemable preference share:

$$K_p = \frac{D_p}{\overline{NP}\ |}$$

Dp stands for preference dividend per share.

NP stands for net proceeds from the sale of preferred shares.

Net proceeds are defined as issue price minus issue costs or floatation cost. Learners can presume that the issue price will be the same as the going market price if it is not

specified. When issuing charges are not specified, just infer that they are zero.

Let's understand this with an example of a company which issues 10 per cent irredeemable preference shares. The face value per share is ₹100, but the issue price is ₹95. What will be the cost of a preference share? What if the issue price is ₹105?

We can compute cost of a preference share as follows:

Issue price ₹95:

$$K_p = \frac{10}{95}$$
$$= 0.1052 \text{ or } 10.52\%$$

Issue Price ₹105:

$$K_p = \frac{10}{105}$$
$$= 0.0952 \text{ or } 9.52\%$$

It should be mentioned that India does not permit the issuance of irredeemable preference shares.

4.2.4.2 Redeemable Preference Share

In reality, redeemable preference shares—that is, preference shares with a fixed maturity— are also issued. Preference shares that can be redeemed can be refunded after a certain amount of time. Therefore, the period of maturity of the preferred stock and their redeemable value must be taken into account when determining the cost of refundable preferred stock.

The following equation can be used for estimating the cost of redeemable preference shares:

$$K_p = \frac{D + \frac{RV - NP}{n}}{\frac{RV + NP}{2}}$$

Where,

D stands for annual preference dividend.

NP stands for net proceeds from the sale of preference shares.

RV is the redeemable value of preference shares

n is the number of years of maturity

Since preference dividends are paid from after-tax profits, the cost of preferred shares is not tax-adjusted. This is because the company has already paid taxes on the income from which these dividends are distributed. Therefore, the cost of preferred stock reflects the dividend rate without needing further tax adjustment.

Let's see the case of a business that issues ₹100 12% refundable preference shares at a 5% premium that are redeemable at a 10% premium after 15 years. What is the value of Kp (Cost of Preference Share) to a corporation if the flotation cost for every share is ₹2?

Here,

D = 12 (i.e., 12% of 100)

RV = 110 (i.e., 100 + 10% premium)

NP = 98 (i.e., 100-2)

n = 15

$$K_p = \frac{12 + \frac{110 - 98}{15}}{\frac{110 + 98}{2}}$$

$$= \frac{12.8}{104}$$

= 0.123 or 12.3%

4.2.5 Cost of Equity Capital

Is Equity Capital free of cost?

It is occasionally asserted that stock capital is cost-free. This argument stems from the fact that companies are not required by law to distribute dividends to equity shareholders. The equity payout is also variable, in contrast to interest rates and preference dividend rates. However, assuming equity capital is cost-free is wrong. As we have already stated equity capital has an opportunity cost; regular shareholders contribute money to the company in the hope of receiving payouts and capital profits proportionate to the risk of their investment. They invest money in equity shares on the expectation of getting dividend and the company must earn this minimum rate so that the market price of the shares remains unchanged. The current price of the shares, which is established by supply and demand in a healthy capital market, indicates the return that common shareholders are looking for.

Various techniques are used to calculate the cost of equity share capital, which would include:

Figure 4.2.1 Techniques to Find Cost of Equity

4.2.5.1 Dividend Price Approach

This approach is also called the dividend valuation model. This approach presupposes that the payout per share will always remain unchanged. Here, the anticipated payout is divided by the share price on the market to get the cost of equity capital:

$$K_e = \frac{D}{P}$$

Where,

Ke= Cost of equity

D = Expected dividend

P = Market price of equity

4.2.5.2 Earning Price Approach

According to this method, the cost of equity capital is the discount rate that equates the present values of expected future earnings per share with the net proceeds of a share. The proponents of this strategy link the company's earnings with the share market price. This strategy makes the assumption that earnings per-share will always remain the same.

$$K_e = \frac{E}{P}$$

Where,

E = earnings per share

P = Market price per share

4.2.5.3 Growth Approach

This strategy maintains a steady rate of dividend increase. When dividends, earnings, and the price of equity shares all increase at the same pace, the following formula can be used to calculate the cost of ordinary capital:

$$K_e = \frac{D_1}{P_0} + g$$

Where,

D1 = Expected dividend for the next year

P0 = Current Market price of each

share g = Dividend growth rate

When determining the cost of equity, the per-share floatation cost associated with newly issued securities should be subtracted from the market price per share.

4.2.5.4 Realized Yield Approach

In this method, the average rate of return obtained over the previous few years is regarded as the "anticipated return" in the future. Based on historical data of dividends that equity shareholders have actually received, it calculates the cost of equity. Although this method offers a single mechanism for determining cost of capital, it makes irrational assumptions about the company's risks, shareholders' expectations for returns etc. The cost (rate) of reinvestment for shareholders is relative to realised yield and the market price of shares do not change significantly.

4.2.5.5 Capital Asset Pricing Model (CAPM) Approach

A model that explains the connection between both the return expected and the risk of investing in a security is called the Capital Asset Pricing Model (CAPM). It demonstrates that a security's expected return is equivalent to the risk-free yield plus a risk premium that is calculated using the security's beta.

Beta is a measurement of a stock's risk (variability of returns) based on how frequently its price moves in relation to the market as a whole. Alternatively said, it refers to the stock's susceptibility to market risk.

A security's exposure to risk can be divided into two categories:

i. ***Unsystematic Risk:*** This type of risk is also known as company-specific risk because it is linked to the business's success. Diversifying the securities portfolio can lessen or eliminate this form of risk. Diversifiable risk is another name for this.

ii. ***Systematic Risk:*** This is the macroeconomic or market-specific risk that a

corporation faces when conducting business. Since diversity cannot completely eliminate this kind of risk, it cannot be diversified. Examples include things like interest rates, government policies, and inflation.

According to the CAPM method, a corporation should only be concerned with non- diversifiable risk (expressed in terms of beta) because an investor can eliminate diversifiable risk by diversification whereas non-diversifiable risk cannot be eradicated.

The equity capital cost can be computed using CAPM in the manner shown below.

$$K_e = R_f + \beta\,(R_m - R_f)$$

Where,

R_f = Return from risk free security

R_m = Return on market portfolio

β = Beta

4.2.6 Cost of Retained Earnings (Internal Equity)

One of the crucial internal sources of funding is retained earnings. Dividends may be paid out from profits available to equity. However, some of that is distributed, with the remaining amount being saved for reinvestment. Shareholders are compelled to forgo dividends when earnings are reinvested in the business. The dividends that the equity stockholders forego are actually a lost opportunity. Retained earnings therefore include opportunity cost. The cost of retained earnings can be computed with the help of the following formula:

$$K_r = \frac{D_1}{NP} + G$$

Where,

Kr = Cost of retained earnings

D = Expected dividend at the end of the year

NP = Net proceeds of share issue

G = Rate of growth

4.2.7 Meaning of Leverage

Leverage is a term used to describe a more effective way to attain a goal. In order to lift big objects that might not otherwise be possible, leverage is used. Leverage, from a financial perspective, is the power one financial variable has over another related financial variable. Costs, output, sales revenue, Earnings Before Interest and Tax (EBIT), Earning Per Share (EPS), and other financial factors may be among them. Leverage is the provision of the ability to employ fixed cost assets or borrowed funds to increase the return to shareholders.

James Horne has defined leverage as, "the employment of an asset or fund for which the firm pays a fixed cost or fixed return".

4.2.8 Types of Leverage

Leverage can be divided into three main categories depending on the company's finance mix. The following figure represents these categories.

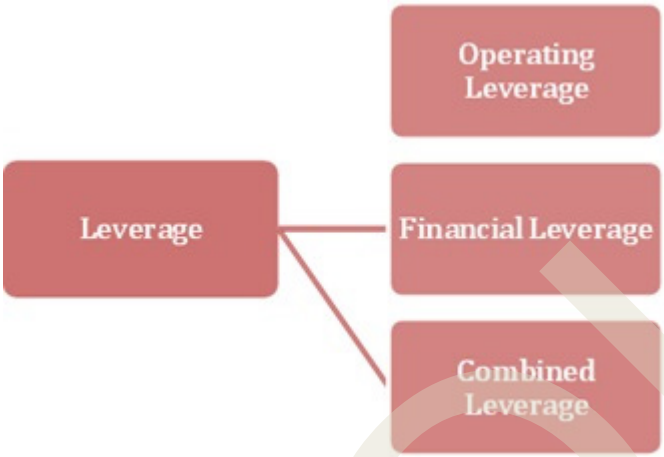

Figure 4.3.1 Types of Leverage

To boost EBIT and EPS, the corporation may use financial leverage, operating leverage, or both.

4.2.8.1 Operating Leverage

Operating leverage (OL) refers to the use of fixed operating costs to magnify the effects of changes in sales on a company's earnings before interest and taxes (EBIT). It measures how a company's fixed operating expenses affect its profitability as sales volumes fluctuate. Thus the ability of a corporation to employ fixed operational costs to increase the impact of shifts in sales on its earnings before interest and taxes is known as operating leverage.

Using a resource with a fixed cost in order to create enough revenue to pay for all fixed and variable costs is what is meant by operating leverage. This measures the operating risk of the business.

Operating leverage refers to the extent to which a company uses fixed costs versus variable costs in its operations. A company with a high degree of operating leverage has a large proportion of fixed costs relative to variable costs. This means that changes in sales volume will have a more significant impact on its earnings before interest and taxes (EBIT).A break-even analysis can be used to estimate operating leverage. The formula for Operating Leverage is mentioned below;

$$OL = \frac{\text{Contribution}}{EBIT}$$

Contribution is the revenue left after providing for variable cost (i.e., sales - variable

cost) EBIT is the operating profit of the firm before interests and taxes.

Degree of Operating leverage is calculated as;

$$DOL = \frac{\text{\% change in EBIT}}{\text{\% change in Sale}}$$

Operating leverage is present when the DOL is greater than one. Higher operating leverage is correlated with higher DOL.

A positive DOL/ OL indicate that the company is functioning over the break-even point and that both sales and EBIT are trending in the same manner. Organisation works at lower than break-even revenues in the event of negative DOL/ OL, and EBIT is negative.

4.2.8.2 Financial Leverage

The definition of financial leverage (FL) is "the deployment of money with a fixed cost to raise earnings per share." Utilizing money acquired at a fixed cost with the intention of boosting the return to ordinary shareholders is known as financial leverage.

Financial leverage talks about the financial risk taken up by the firm in the course of raising capital from different sources.

Using fixed cost funds can make financial leverage advantageous or disadvantageous. When a business generates more revenue from the assets than the fixed cost of using them, this is referred to as favourable financial leverage. It is also known as "positive financial leverage" for this reason.

When a company's earnings are less than the cost of the capital, there is unfavourable financial leverage. In light of this, it is also known as "negative financial leverage".

The following formula can be used to determine financial leverage:

$$FL = \frac{EBIT}{EBT}$$

EBIT is the Operating profit and EBT is Profit before tax.

The fluctuation in taxable profit as a consequence of the percentage change in earnings before interest and tax can be used to define the degree of financial leverage (EBIT). This can be [illegible] w.

$$DFL = \frac{\%\ change\ in\ EPS}{\%\ change\ in\ EBIT}$$

EPS is the earning available to each share.

When DFL is more than one (1), financial leverage exists. More is DFL, higher is financial leverage.

A positive DFL/ FL means firm is operating at a level higher than break-even point and EBIT and EPS moves in the same direction. Negative DFL/ FL indicate the firm is operating at a level lower than break-even point and EPS is negative.

4.2.8.3 Combined Leverage

Combined leverage (CL) happens when a company magnifies any change in sales into a larger relative change in earnings per share by using both financial and operational leverage. Composite leverage and total leverage are other names for combined leverage.

Combined leverage is the utilisation of operating and financial fixed costs to increase the impact of changes in sales volume on the company's earnings per share. The link between the revenue on account of sales and the taxable income is expressed by combined leverage.

The following formulas can be used to compute combined leverage:

$$CL = OL \; x \; FL$$

$$CL = \frac{Contribution}{EBIT} \; x \; \frac{EBIT}{EBT}$$

$$CL = \frac{Contribution}{EBT}$$

The change in a company's earnings per share (EPS) as a result of a 1% change in sales is known a level, this is also equivalent to the egree of financial leverage (DFL).

$$DCL = DOL \; x \; DFL$$

Similar to op $DCL = \frac{\%\ change\ in\ EBIT}{\%\ change\ in\ Sales} \; x \; \frac{\%\ change\ in\ EPS}{\%\ change\ in\ EBIT}$ ı be both positive and negative.

$$DCL = \frac{\%\ Change\ in\ EPS}{\%\ Change\ in\ Sales}$$

Recap

- Cost of capital is the minimum required rate of return on funds.
- Decision-making is a process of choosing among alternatives.
- The primary purpose of measuring the cost of capital is to use as a financial standard for evaluating the investment projects
- The cost of capital can be useful in deciding about the methods of financing at a point of time.
- The cost of preference capital is a function of the dividend expected by investors.
- The preference share may be treated as a perpetual security if it is irredeemable.
- The opportunity cost of the retained earnings is the rate of return foregone by equity shareholders.
- The firm's external equity consists of funds raised externally through public or right issues.
- Leverage is defined as the employment of an asset or fund for which the firm pays a fixed cost or fixed return.
- Operating leverage, Financial leverage and Combined leverage are the various types of leverage.
- Operating leverage refers to the extent to which a company uses fixed costs versus variable costs in its operations.
- The deployment of money with a fixed cost to raise earnings per share is known as financial leverage.

◊ Combined leverage is the utilisation of operating and financial fixed costs to increase the impact of changes in sales volume on the company's earnings per share.

Objective Questions

1. What is the cost of capital?
2. What do you mean by the decision-making process?
3. What is the primary purpose of measuring the cost of capital?
4. What is internal equity?
5. What is external equity?
6. What is the opportunity cost of retained earnings?
7. What is the cost of external equity?
8. What is leverage?
9. What are the types of leverage?
10. What are the other names for combined leverage?

Answers

1. The cost of capital is the minimum required rate of return on funds.
2. Decision-making is the process of choosing among alternatives.
3. Its use as a financial standard for evaluating investment projects
4. Internal equity capital is typically derived from retained earnings or profits that the company reinvests into the business rather than distributing to shareholders as dividends.
5. If a firm distributes the entire earnings to equity shareholders and raises equity capital externally by issuing new shares, it is called external equity.

6. The opportunity cost of the retained earnings is the rate of return foregone by equity shareholders.
7. The minimum rate of return, which the equity shareholders require on funds supplied by them by purchasing new shares to prevent a decline in the existing market price of the equity share, is the cost of external equity.
8. Leverage is defined as the employment of an asset or fund for which the firm pays a fixed cost or fixed return.
9. Operating leverage, Financial leverage and Combined leverage are the various types of leverage.
10. Composite leverage and total leverage are other names for combined leverage.

Self-Assessment Questions

1. Explain the cost of capital with suitable examples.
2. Write a short note on investment evaluation?
3. Explain the cost of debt with an illustration?
4. Write a short note on the cost of preference capital and the cost of equity capital?
5. What do you mean by leverages? What are the types of leverages?
6. Briefly explain Operating leverage.
7. What is the cost of irredeemable debt?
8. Explain the cost of retained earnings.
9. What is financial leverage? When does a financial leverage turn to be disadvantageous for the firm?
10. Explain combined leverage?

Assignments

1. With suitable real business scenarios, explain the importance of the cost of capital in decision making.
2. Choose a company of your choice and calculate the cost of equity capital for the company using dividend approach.
3. Select a company of and calculate the cost of equity capital for the company using CAPM approach.
4. Find out how cost of capital turned out to be significant in making investment evaluation for a company of your choice.

Suggested Reading

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BLOCK - 05
Dividend decisions

Unit - 1
Introduction to Dividend Decision

Learning Outcomes

After concluding this Unit, the learner will be able to;

- ◊ familiarise the term Dividend
- ◊ explain the importance of Dividend Decision
- ◊ explore various Forms of Dividend
- ◊ describe various Determinants of Dividend Decision
- ◊ explain various legal and procedural aspects of Dividend Decision

Prerequisite

Suppose you own a business along with one of your friends and both of you have equal interest and contribution in the business. When the business makes profit, what do you do with that surplus money? Will you reinvest the money into the business for further growth or will you split it into two and share it amongst you? Whatever choice you are making with the profit, it is completely at both the parties' discretion.

Now, imagine a similar situation where the number of people interested in a business is in thousands or even more. Deciding how to deal with the profits won't be easy in that case. That is the scenario of each and every joint stock company. The decision of whether to distribute the profits to the shareholders or to retain it in the business for future needs has to be taken wisely since it has far-fetched consequences on liquidity and profitability of the company. In this unit we are discussing the meaning and other aspects related to a firm's decision regarding the distribution of profits.

Keywords

Cash dividend, Stock dividend, Bond dividend, Property dividend, Dividend Policy, Payout Ratio, Interim Dividend

Discussion

The financial management must carefully consider the distribution of profits among shareholders. As these choices immediately affect the worth of the business concern and the wealth of the shareholders, it is a very vital and important component of the business concern. The financial manager has a significant role in making dividend decisions, just like financing and investment decisions. Business concerns must take into account a number of variables when determining their dividend policy, including retained earnings and the type of shareholders they have.

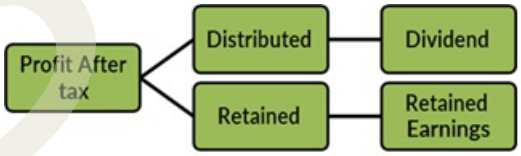
5.1.1 Meaning of Dividend

Dividends are the net earnings that a company distributes to its shareholders. It can also be referred to as the portion of a business's earnings that is divided between its investors. According to the Institute of Chartered Accountant of India, dividend is defined as "a distribution to shareholders out of profits or reserves available for this purpose".

Dividend is the portion of profit left over after taxes that is given to the company's shareholders. To put it another way, a business's earnings after paying taxes might be used towards:

i. Distribution of dividend or

ii. Can be retained as surplus for future growth



5.1.2 Dividend Decision

One of the most relevant corporate decision areas is dividend policy. It is simple to comprehend yet challenging to put into practice. Let's use an example to better understand this. Assume that X Limited, a firm that consistently pays dividends at a typical growth rate, has enormous earnings in the year. Now, the company must choose whether to keep paying dividends at the current rate or to increase it. Why is it like this?

The reason for this is that if management chooses to pay a bigger dividend, it is likely that the firm won't see the same level of growth the next year, which will cause the payout of the next year to be lower than the current year. However, if the corporation chooses to maintain the current dividend rate, the excess amount of retained earnings would sit idle and lead to overcapitalization if there are no opportunities to use the cash retained.

5.1.3 Significance of Dividend Decision

Following are the reasons why the Dividend Decision is considered to be one of the crucial decisions finance managers have to make;

A. Long Term Financing Decision

As it is well known, equity is one of the funding options. Retained earnings can be used to build internal equity whereas external equity can be raised through the issuance of equity shares. But because retained earnings do not incur flotation expenses, they are preferred.

However, the basis for this choice is whether to keep or share the gains. Paying cash dividends reduces the amount of cash available for financing attractive investment opportunities.

Under this purview, the decision is based on the following:

1. Whether the organization has opportunities in hand to invest the amount of profits, if retained?
2. Whether the return on such investment (ROI) will be higher than the expectations of shareholders.

B. Wealth Maximization Decision

Within this heading, we are dealing with the issue of the dividend payout ratio (D/P) which is the amount of dividend to be disbursed in connection to the market price of the shares (MPS).

1. Because of market imperfections and uncertainty, shareholders give higher value to near dividends than future dividends and capital gains. Payment of dividends influences the market price of the share. Higher dividends increase value of shares and low dividends decrease it. A proper balance has to be struck between the two approaches.
2. When the firm increases retained earnings, shareholders' dividends decrease and consequently market price is affected. Use of retained earnings to finance profitable investments increases future earnings per share.

Paying out more profits in the form of dividends may restrict the company from taking up new investment projects due to lack of surplus money and in turn reduces the future profits.

Hence, it is important for management to decide a dividend policy balancing the amount to be distributed and the money to be kept with the company in an optimum manner which allows the firm to maximise wealth for owners in a long run. Optimum policy will be affected by future projects available to the firm and the dividend payouts compared with the investors capital gains.-

5.1.4 Forms of Dividend / Types of Dividends

A company can choose to distribute its dividend in many ways depending on several factors (which will be discussed in the later sections)

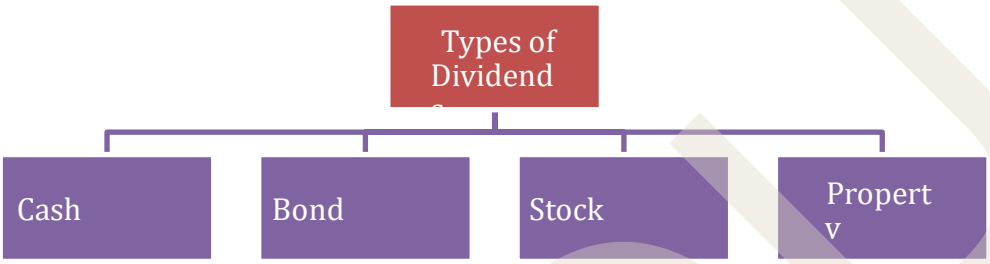


Figure 5.1.2 Types of Dividends

1. **Cash dividend:** It is by far the typical kind of payout. Here, the term "cash" refers to only cash and not cheques, warrants, demand draft, pay orders, or directly through the Electronic Clearing Service (ECS).

2. **Bond Dividend:** Scrip dividend is another name for bond dividend. If the business does not have enough funds to pay dividends in cash, it may issue notes or bonds for amounts due to the shareholders. These kinds of dividend bears interest and is accepted as a collateral security.

3. **Property Dividend:** Various assets other than cash are used to pay out property dividends. It will be given out in some unusual situations. In India, dividends of this kind are not familiar.

4. **Stock dividend (Bonus Shares):** Existing shareholders will receive a distribution of shares rather than cash dividend. Bonus shares are those shares that a corporation issues to its current owners free of cost. By distributing these shares appropriately, the firm retains its proportionate ownership. When a 10% dividend is issued, a shareholder who previously owned 100 shares will now own 110 shares, increasing the equity share capital and decreasing reserves and surplus (retained earnings). The bonus issue has no impact on overall net worth.

5.1.5 Determinants of Dividend Decisions

The dividend decision is affected by the following factors:

1. **Access to finance:** Retained earnings may be a valuable source of funding if the company needs it. Because it avoids the flotation charges and further prevents the diluting of ownership that would occur with additional share capital allocation.

2. **Cost of financing:** It is desirable to distribute more dividends if the financing

requirements can be met with debt (a relatively less expensive source of financing), but if the financing must be accomplished with a new issue of equity shares, it is preferable to use retained earnings as high as feasible.

3. **Shareholder's desire:** When determining the dividend, the company should take into account the interest of its various groups of shareholders. Investors who view dividends as a source of return for meeting their living expenses expects regular dividends whereas other groups of investors such as a wealthy investor in a high income tax bracket may not benefit by high current dividend incomes.

4. **Security price:** In this case, we're referring to the share's current market value. In general, greater dividends boost share value while lower dividends drag it down.

5. **Investment opportunities in hand:** If the company has new investment opportunities in hand, it may choose to retain more of the earnings rather than distributing it as dividend.

6. **Trend of earnings:** As dividends can be paid only out of present or past year's profits, earnings of a company fix the upper limit on dividends. The trend of earnings of the company should also be considered while making the dividend decision.

7. **Availability of liquid resources:** A firm may declare dividends only if it have sufficient liquid resources available with it. So even if a firm generates sufficient profits it may not distribute dividend if it lacks the availability of liquid resources.

8. **Age of the Company:** A new company needs fund for its future growth and development and hence it may prefer to retain its profit instead of distributing it as dividends whereas an old company which is established will have enough reserve funds and can thus satisfy its shareholders by paying liberal dividends.

9. **Stability of dividends:** Shareholders generally prefer regular payment of dividend. Stability of dividend is a significant factor in the determination of dividend policy. Companies which expects stable earnings over years or which have sufficient reserves may follow a policy of constant dividend per share so that they distribute dividends irrespective of high or low earnings. Others may follow a policy of constant payout ratio as dividend is paid based on the the ability of the firm to pay dividends. (i.e. paying a fixed percentage of net earnings). Another dividend policy is that of constant low dividend per share plus some extra dividend in years of high profits. This can be followed by companies having fluctuation in earnings from year to year.

10. **Taxation Policy:** The net earnings of the company are affected by the taxation policy of the government. As the earnings of the company are affected by the tax rate, it will have its impact on the dividend policy. Also shareholders who are highly taxed prefer bonus shares and capital gains rather than cash dividends as they are in high income tax bracket.

5.2.1 Types of Dividend Policy

The firm's nature, the type of shareholders, and the profitable position all affect dividend policy. The following sorts of dividend policies can be identified based on the firm's dividend declaration:

- ◊ Regular dividend policy
- ◊ Stable dividend policy
- ◊ Irregular dividend policy
- ◊ No dividend policy.

5.2.2.1 Regular Dividend Policy

Dividend payable at the usual rate is called as regular dividend policy. This type of policy is suitable to the small investors, retired persons and other economically weaker persons. A regular dividend policy helps in creating confidence among the shareholders and establishes a profitable record of the company.

5.2.2.2 Stable Dividend Policy

A stable dividend policy calls for the regular payment of a minimum amount of dividend regularly. In practice, the management of the majority of corporations views dividend stability as a good policy. According to numerous surveys, shareholders appear to like this policy in general and place a higher value on consistent payouts than fluctuating ones. The consistent dividend policy might increase the market price of the share, all else being equal.

Even while the dividend amount may change over time and may not be correlated with earnings, dividend stability also refers to the regularity with which a certain amount is paid out each year. Numerous businesses have a lengthy history of paying dividends without interruption.

More precisely, stability of dividends refers to the amounts paid out regularly. Three forms of such stability may be distinguished:

- ◊ Constant dividend per share or dividend rate
- ◊ Constant payout ratio
- ◊ Stable rupee dividend plus extra dividend.

Constant Dividend per Share or Dividend Rate

Companies in India declare dividends as a percentage of each share's paid-up capital. You can translate this into dividends per share. Numerous businesses in India adhere to the policy of paying an annual fixed rate of paid-up capital as dividends, regardless of changes in profitability. The dividend per share or dividend rate may be increased at any time, contrary to this policy. The yearly dividend per share (or dividend rate) may be

raised when the company achieves new levels of earnings and anticipates maintaining them.

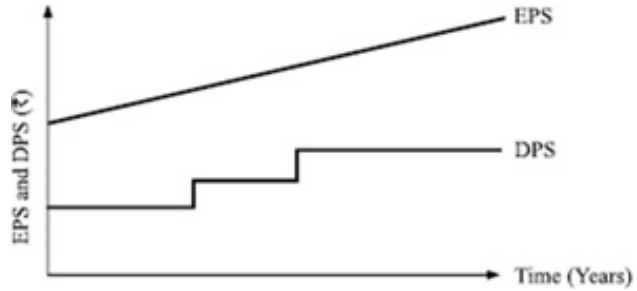


Figure 5.2.2 Constant dividend per share or dividend rate

Constant Payout

Here, payout ratio is the ratio of dividends to earnings. This means payment of a fixed percentage of net earnings as dividends every year. Some businesses may adhere to the constant payout ratio policy, which entails paying a set portion of net earnings each year. According to this policy, dividend payments will vary in direct relation to earnings. When a corporation chooses a 40% payout ratio, 40% of net earnings will be distributed to shareholders as dividend. This policy may be preferred by firms because it is related to their ability to pay demands.

Figure 5.2.3 Constant Payout

Stable rupee dividend plus extra dividend

The practice of paying a minimum dividend per share with a step-up feature is preferable for businesses with erratic earnings. To lessen the chance that a dividend payment will ever be missed, the tiny dividend per share is fixed. This policy involves the payment of a constant low dividend per share plus an extra dividend in the years of high profits. (Many Indian companies pay an interim dividend followed by a normal, final dividend).

This kind of policy gives a company the ability to consistently pay a fixed amount of dividend without default and gives it a lot of flexibility to supplement shareholders' income only when the company's earnings are higher than usual, without pledging to make larger payments as part of the fixed dividend in the future. Due to the predictable income flow in the form of regular dividends and the opportunity to periodically receive additional dividends, some shareholders like this approach.

Merits of Stability of Dividends

The stability of dividends has several advantages as discussed below:

- ◊ Elimination of investor uncertainty: If a corporation maintains a consistent dividend policy, it will not alter the dividend payment even if its earnings experience brief fluctuations. As a result, when a company's earnings decline but it pays the same dividend as in the past, it tells investors that the company's future is more promising than its declining earnings would imply.
- ◊ The need for current income among investors: Many investors, including women, the elderly, and retired people, want to be paid on a consistent basis. With the intention of using dividends as a source of income to cover their living expenses, they invest their money in the shares.
- ◊ The prerequisites for institutional investors: Every company wants to include these financial institutions on their list of investors. These institutions may often invest in the stock of those businesses that have a track record of paying dividends on a regular basis. These institutional investors might not like a business that has a track record of implementing irregular dividend policies.
- ◊ Raising more funds: A company's shares are more likely to be considered a quality investment than a speculative one when it has a consistent and regular dividend policy. These shares are being bought by investors who want to keep them for a very long time. A steady dividend policy improves shareholders' loyalty and goodwill toward a company.

5.2.2.3 Irregular Dividend Policy

When the companies are facing constraints of earnings and unsuccessful business operation, they may follow irregular dividend policy. Also lack of liquid resources as well as fear of adverse effects of regular dividends on the financial standing of a company may force a firm to follow irregular dividend policy.

5.2.2.4 No Dividend Policy

Sometimes the company may follow no dividend policy because of its unfavourable working capital position or on account of the amount required for future growth of the concerns.

Recap

- ◊ Dividends are the net earnings that a company distributes to its shareholders.
- ◊ Dividend is the portion of profit left over after taxes that is given to the company's shareholders.
- ◊ Retained earnings can be used to build internal equity whereas external equity can be raised through the issuance of equity shares.
- ◊ Paying out more profits in the form of dividends may restrict the company from taking up new investment projects due to lack of surplus money and in turn reduces the future profits.
- ◊ Scrip dividend is another name for bond dividend.
- ◊ Bonus shares are those shares that a corporation issues to its current owners free of cost.
- ◊ Retained earnings avoid flotation charges and further prevent the diluting of ownership that would occur with additional share capital allocation.
- ◊ Investors who view dividends as a source of return for meeting their living expenses expect regular dividends.
- ◊ Interim dividend is declared by the directors and approval by shareholders at annual general meeting is not necessary
- ◊ Dividend on equity shares can be paid only after declaration of dividend on preference shares.
- ◊ Undistributed profits for any previous financial year available after providing depreciation can also be used to declare dividend.
- ◊ Paying out more profits in the form of dividends may restrict the company from taking up new investment projects due to lack of surplus money and in turn reduces the future profits.

Objective Questions

1. What is dividend?
2. What is interim dividend?

3. Why dividend decision is significant?
4. What are the major types of dividends?
5. What is another name for bond dividend?
6. What do you mean by stock dividend?
7. Mention any two determinants of dividend decisions.
8. How does age of the company determines its dividend decisions?
9. What are the various dividend sources?
10. What is the time period for the payment of dividend after the declaration of dividend by the company?

Answers

1. Portion of profit distributed to Shareholders.
2. Dividend declared between two annual general meetings.
3. It is long term decision and it affects wealth.
4. Cash, Property, Stock and Bond Dividends.
5. Scrip dividend is another name for bond dividend.
6. Stock dividend or Bonus shares are those shares that a corporation issues to its current owners free of cost.
7. Security price and Shareholders' desire
8. A new company needs fund for its future growth and development and hence it may prefer to retain its profit whereas an old company which is well established tries to satisfy its shareholders by paying liberal dividends.
9. Current profits, past profits and Government funds
10. Once dividend is declared by the company, it must be paid within 30 days by the company.

Self-Assessment Questions

1. What is dividend? Explain the types of dividends.
2. What variables influence company's choice to pay a particular amount of dividend?
3. Describe each of the various payout options. What responses do investors have to these options?
4. What is a bonus issue or stock dividend? What are its advantages and disadvantages?
5. What are the major constraints on dividend payments?
6. What are the various determinants of dividend decisions?
7. What are the conditions that need to be fulfilled when a company declares dividends out of past profits or reserves?
8. Explain various dividend sources.
9. How stability of dividends determine the dividend decision of a company?
10. What is the difference between bond dividend and stock dividend?

Assignments

1. Choose three businesses from three different industries. Develop a report on the dividend payouts of the chosen companies using the information obtained.
2. Visit a business organisation of your choice and analyse the various aspects of payment of dividend that you have learned with that followed by them.
3. Identify two companies of your choice and try to understand the various sources of their dividend.
4. Analyze the dividend policy of a public company over the past three years and find out the factors influencing their dividend decisions.

Suggested Reading

1. Rustogi, R.P (2016). *Fundamentals of Financial Management* (11th Edition), Taxman's Publication, New Delhi.
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1. Gupta, S. K., Sharma, R. K., & Gupta, N. (2018). *Financial management:* Theory and practice (9th ed.). Kalyani Publishers.
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Unit - 2
Dividend Models

Learning Outcomes

At the conclusion of this unit, the learner will be able to:

- ◊ familiarise various dividend models
- ◊ describe the goals of dividend policy in actual practice
- ◊ explain the elements that affect a company's dividend policy

Prerequisite

Britannia Industries is one of the prominent companies in the Indian food industry. It is primarily engaged in the business of manufacturing and selling fast moving consumer goods (FMCG) products in categories like biscuits, breads, cakes, dairy, etc. Britannia has been paying dividends consistently since 1995. The company has paid 26 dividends in the past. Britannia's dividend payout has grown at a CAGR of 98.7% in the last five years.

Meanwhile the story of Amazon is far different from this. Amazon has been a fascinating company to watch. Amazon created a new global market 20 years ago - online retailing - and it has dominated the market ever since, but it has never been able to figure out how to make a profit from it. It has never paid a dividend and never plans to in the future. At first glance it sounds like a crazy business plan and a lousy investment. Surely a company that never intends to pay a dividend is a crazy gamble.

See, the two companies have taken two extremely different strategies on payment of dividend. This is a normal thing to experience in the corporate world. The dividend policy of individual companies will be decided at their own discretion. Now, in this unit we are going to discuss different dividend policies and the related models available.

Keywords

Irrelevance theory, Relevance Theory, Dividend Policy, Regular Dividend, Stable Dividend, Irregular Dividend, Dividend Payout Ratio

Discussion

Dividend policy of a firm, affects the long term financing and the wealth of shareholders. The firm's decision to pay dividends should be formulated in such a manner so that there is an equal apportion of dividends as well as retained earnings. There are conflicting opinions regarding the impact of dividend decision on the valuation of firm. Certain theories state that dividend decision does not affect the shareholder's wealth whereas other theories state that it affects the wealth of shareholders. In this unit we will look into detail the various theories of dividend decision or dividend models.

5.2.2 Dividend Models/Theories

Given its financing and investment choices, the company will have a specific amount of cash available for paying dividends. Therefore, choosing a dividend includes balancing the retained earnings and issuing new shares. The impact of dividend adjustments must be distinguished from the impact of investment and financing choices. Do changes to the dividend policy alone have an impact on the company's value? What aspects should be taken into consideration when creating a dividend policy?

Diverse views have been put out regarding the connection between the dividend policy and the firm's worth. Two sorts of theories can be made out of them:

a. theories that view the decision to take a dividend as irrelevant and

b. theories that view a firm's dividend decision as an active factor affecting its value.

There have been two contrasting points of view in the latter, namely (i) dividends are good because they raise shareholder value and (ii) dividends are bad because they lower shareholder value. The analysis of a few key theories that represent these points of view is provided below.

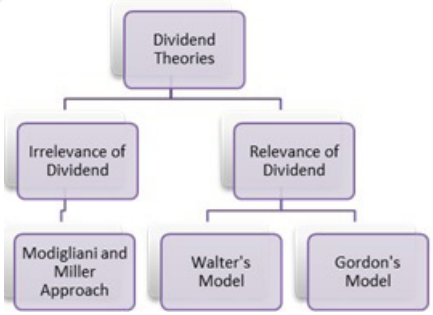

Figure 5.2.1 Dividend theories

5.2.1.1 Irrelevance of Dividend

Modigliani and Miller contend that the company's share price is unaffected by the dividend policy. The firm's worth and the dividend rate have no relationship. The choice of dividend has no bearing on the company's worth. They are of the opinion that the dividend policy has no effect on the market price of the shares and the value of the firm is determined by the earning capacity of the firm or its investment policy. The division of earnings as retention or dividends may be in any manner the firm desires, does not affect the value of the firm. An important method for demonstrating the irrelevance dividend concept was developed by Modigliani and Miller.

Modigliani and Miller's Approach

According to MM, in a perfect market environment the dividend policy of the company is immaterial and has no bearing on the firm's worth.

"Under conditions of perfect market, rational investors, absence of tax discrimination between dividend income and capital appreciation, given the firm's investment policy, its dividend policy may have no influence on the market price of shares".

MM argues that when a firm's value increase as a result of payment of dividend, it will be exactly set off by the decline in market price of shares due to external financing and there will be no change in the total wealth of the shareholders.

Assumptions

The key presumptions on which the MM method is built are as follows:

1. Perfect capital market.
2. Investors are rational.
3. There are no tax.
4. The firm has fixed investment policy.
5. No risk or uncertainty.

Proof for MM approach

MM approach can be proved with the help of the following formula:

$$P_o = \frac{D_1 + P_1}{(1 + K_e)}$$

Where,

Po = Prevailing market price of a share.

Ke = Cost of equity capital.

D1 = Dividend to be received at the end of period one.

P1 = Market price of the share at the end of period one.

P1 can be calculated with the help of the following formula.

$$P_1 = P_o (1 + K_e) - D_1$$

The number of new shares to be issued can be determined by the following formula:

$$m = \frac{I - (E - nD_1)}{P_1}$$

Where,

m = Number of new share to be issued.

P1 = Price at which new issue is to be made.

I = Amount of investment required.

E = Total earnings of the firm during the period.

nD1= Total dividend paid during the period (number of shares x dividend per share)

The value of the firm can be ascertained with the help of the following formula:

$$nP_0 = \frac{(n + m)P_1 - (I - E)}{1 + K_e}$$

Where,

nP0 = Value of the firm

n = Number of shares outstanding at the beginning of the period.

m = Number of new share to be issued.

P1 = Price at which new issue is to be made.

I = Amount of investment required.

E = Total earnings of the firm during the period.

Ke = Cost of equity capital

Criticism of MM approach

There are some criticisms of the MM approach as well. The main criticisms to the MM approach are as follows.

1. The MM approach presupposes the absence of tax. It is not applicable in the firm's day- to-day operations.
2. MM approach assumes that, there is no risk and uncertain of the investment. It is also not applicable in present day business life.

3. MM approach does not consider floatation cost and transaction cost. In reality a firm have to incur floatation costs while issuing securities

4. The investors have to pay brokerage, fees, etc. while doing transactions.

5. MM approach assumes that, investor behaves rationally. But we cannot give assurance that all the investors will behave rationally.

5.2.1.2 Relevance of Dividend

This theory holds that the dividend policy has an impact on the value of the firm. Two distinguished individuals, Walter and Gordon, support the relevance of the dividend notion. They are of the opinion that dividends communicate information to the investors about the profitability of the firm and those firms which pay higher dividends will have greater value as compared to those which do not pay dividends.

Walter's Model

Prof. James E. Walter argues that the dividend policy almost always affects the value of the firm. Walter model is based on the relationship between the following important factors:

◊ Rate of return (r)

◊ Cost of capital (k)

According to the Walter's model, if r > k, the firm is able to earn more than what the shareholders could by reinvesting, if the earnings are paid to them. The implication of r < k is that the shareholders can earn a higher return by investing elsewhere. If the firm has r = k, it is a matter of indifference whether earnings are retained or distributed.

In the case of growth firms, where the rate of return (r) is greater than the cost of capital (k) i.e. r > k, the firm should retain the earnings. This will help to maximize the value of shares. In this case, the optimum pay out would be zero.

In the case of declining firms where the rate of return (r) is less than the cost of capital (k) i.e. r < k, the firm should distribute the entire earnings as dividend. These are firms which do not have the option of any profitable investments and hence the shareholders would gain if the firm distributes its earnings. Here the optimum ay out would be 100%.

In case of those firms where rate of return (r) is equal to cost of capital (k) i.e. r = k, the dividend policy will not affect the market value of shares. Here the shareholders get the same return as expected by them. There is no optimum pay out for such firms and its value is not affected by change in the rate of dividend.

Assumptions

Walters model is based on the following important assumptions:

1. The firm finances all investment through retained earnings; that is, debt or new equity is not issued. The firm does not use external sources of funds.

2. The firm's rate of return (r) and its cost of capital (k) are constant.

3. All earnings are either distributed as dividends or reinvested internally immediately.

4. Beginning earnings and dividends never change while determining the value.

5. The firm has a very long or infinite life.

Walter has evolved a mathematical formula for determining the value of market share. Walter's formula to determine the market price per share is as follows:

$$P = \frac{D + r\frac{(E - D)}{K_e}}{K_e}$$

Where,

P = Market price of an equity share

D = Dividend per share

r = Internal rate of return

E = Earning per share

Ke = Cost of equity capital

Criticism of Walter's Model

When examining the implications of dividend policy on all equity firms under various rates of return, Walter's model is quite helpful. However, the model's simplification can result in findings that, although valid for the model, are not valid generally.

The following is a critical evaluation of some of the assumptions underlying the model.

◊ No outside funding: Walter's share valuation methodology combines the firm's investment and dividend policies. The model posits that retained earnings, not debt or equity from outside sources, finance the firm's investment opportunities. When this occurs, the firm's dividend policy, investment strategy, or both will be sub-optimal.

◊ Constant return: Walter's approach is predicated on the notion that r is a constant return. In actuality, rate of return changes with changes in investment. This represents the idea that the best investments are made first, followed by the less successful ones.

◊ Constant cost of capital: A company's cost of capital does not remain constant. As a firm's risk pattern changes, cost of capital also changes.

Gordon's Model

One of the well-liked models that presume a company's dividend policy affects its

value was proposed by Myron Gordon. The model created by Myron Gordon clearly links the firm's market value to its dividend policy.

Assumptions

Gordon's model is based on the following assumptions:

◊ All-equity firm: The firm is an all-equity firm, and it has no debt.

◊ No external financing: No external financing is available. Consequently, retained earnings would be used to finance any expansion. Thus, just as Walter's model, Gordon's model too confounds dividend and investment policies.

◊ Constant return: The internal rate of return, r, of the firm is constant.

◊ Constant cost of capital: The appropriate discount rate, k for the firm remains constant. Thus, Gordon's model also ignores the effect of a change in the firm's risk class and its effect on k.

◊ Perpetual earnings: The firm and its stream of earnings are perpetual.

◊ No taxes: Corporate taxes do not exist.

◊ Constant retention: The retention ratio, b, once decided upon, is constant. Thus, the growth rate, g = br, is constant forever.

◊ Cost of capital is greater than growth rate: The discount rate is greater than growth rate, k > br. If this condition is not fulfilled, we cannot get a meaningful value for the share.

Gordon's model can be proved with the help of the following formula:

$$P = \frac{E(1-b)}{K_e - br}$$

Where,

P = Price of a share

E = Earnings per share

1 – b = D/p ratio (i.e., percentage of earnings distributed as dividends)

Ke = Capitalization rate

br = Growth rate i.e. rate of return on investment of an all equity firm.

Criticism of Gordon's Model

Gordon's model consists of the following important criticisms:

◊ Gordon model assumes that there is no debt finance used by the firm. It is not applicable to present day business.

◊ Ke and r cannot be constant in the real practice.

◊ According to Gordon's model, there are no tax paid by the firm. It is not practically applicable.

5.2.3 Objectives of Dividend Policy

A company's dividend policy has the effect of separating its net earnings into two parts: retained earnings and dividends, as was covered in the previous chapter. The company's long-term expansion is financed by the retained earnings. In actuality, it is the most significant source of funding for a firm's investments.

When dividend payments are made, the firm's cash on hand is used for the distribution of earnings. A company that wants to distribute dividends and also finance its investment prospects will need to turn to outside sources of funding, including the issuance of debt or equity. Thus, the firm's dividend policy has an impact on both long-term financing and shareholder value. As a result, the following two scenarios may influence the company's choice to pay dividends.

Firm's Need for Funds

A firm's net earnings can be used as a source of long-term funds when the decision to pay dividends is considered as part of the overall financing strategy. This approach typically restricts dividend payments to periods when the company has no attractive investment opportunities. When the company has profitable investment opportunities, the earnings may be retained rather than distributing it as dividend.

When a company undertakes highly profitable projects, it tends to expand more quickly, requiring additional capital for financing. While external equity (such as issuing new shares) is an option to raise funds, retained earnings are often preferred because they do not incur flotation costs, unlike external equity. In addition, companies in India must pay a dividend distribution tax (DDT) on the dividends they distribute, making retained earnings even more appealing as a financing source.

Shareholders' Need for Income

It can be argued that capital markets are not perfect, meaning shareholders do not always have a clear, optimal choice between receiving dividends and benefiting from retained earnings. Due to imperfections and uncertainty in the market, investors may prefer immediate dividends over the potential for future capital gains. As a result, dividend payments can significantly influence a company's stock price. Higher dividend payouts may lead to an increase in the stock price, while lower dividend payouts may cause the stock price to decrease. In an uncertain environment, some investors believe that paying sufficient dividends is essential to maximize shareholder wealth, as it provides a more predictable and immediate return.

5.1.6 Legal and Procedural Aspects of Payment of Dividend

Dividend is that part of profit which is distributed by a company to its shareholders. Dividends are paid periodically by a company out of its divisible profits (profits which are legally available for distribution to shareholders as dividend). Section 123 to 128

of the Companies Act, 2013 describes the legal provisions relating to the declaration of dividend. Let's discuss about some of the important provisions and procedural aspects of payment of dividend.

5.1.6.1 Dividend Sources

i. **Current Profits:** Current year's profit (after providing depreciation) can be used by a company to declare dividends.

ii. **Past Profits:** Undistributed profits for any previous financial year available after providing depreciation can also be used to declare dividend.

iii. **Government Fund:** Dividends may be also paid out of the fund provided by the central government in pursuance of a guarantee by the government.

5.1.6.2 Transfer to Reserves

According to the Companies (Transfer of Profits to Reserves) Rules, 1975, a company which provides more than 10 per cent dividend is required to transfer a certain percentage of current year's profits to reserves as below:

◊ If the proposed dividend exceeds 10 per cent of the paid up capital but is less than 12.5 per cent, then amount not less than 2.5 per cent of the current year's profits needs to be transferred to reserves.

◊ If the proposed dividend exceeds 12.5 per cent of the paid up capital but is less than 15 per cent, then amount not less than 7.5 per cent of the current year's profits needs to be transferred to reserves.

◊ If the proposed dividend exceeds 15 per cent of the paid up capital but is less than 20 per cent, then amount not less than 2.5 per cent of the current year's profits needs to be transferred to reserves.

◊ If the proposed dividend exceeds 20 per cent of the paid up capital, then amount not less than 10 per cent of the current year's profits needs to be transferred to reserves.

5.1.6.3 Paying Dividends out of past profits or reserves

When a company decides to declare dividends out of past profits or reserves, then it has to follow the below conditions:

◊ The rate of dividend should not be more than the average of rate of dividends declared in five years immediately preceding that year or ten per cent of paid up capital, whichever is less.

◊ If dividend is declared from past profits, then it should not be more than 10 per cent of the sum of its paid capital and reserves.

◊ The balance of reserves after payment of dividend should not go below 15 per cent of its paid up capital.

5.1.6.4 Other Important Aspects of Payment of Dividend

- ◊ Dividends paid or declared are subject to corporate dividend tax as per Finance Act 1997.
- ◊ Decision regarding the payment of final dividend is made based on the recommendation of the board of directors and is subject to approval by the shareholders at the annual general meeting.
- ◊ Interim dividend is declared by the directors and approval by shareholders at annual general meeting is not necessary
- ◊ Dividend on equity shares can be paid only after declaration of dividend on preference shares.
- ◊ Once dividend is declared by the company, it must be paid within 30 days.

5.2.4 Factors Determining Dividend Policy

1. **Profitable Position of the Firm:** Dividend decision depends on the profitable position of the business concern. When the firm earns more profit, they can distribute more dividends to the shareholders.
2. **Uncertainty of Future Income:** Future income is a very important factor, which affects the dividend policy. When the shareholder needs regular income, the firm should maintain regular dividend policy.
3. **Legal Constrains:** The Companies Act 1956 has put several restrictions regarding payments and declaration of dividends. Similarly, Income Tax Act, 1961 also lays down certain restrictions on payment of dividends.
4. **Liquidity Position:** Liquidity position of the firms leads to easy payments of dividend. If the firms have high liquidity, the firms can provide cash dividend otherwise, they have to pay stock dividend.
5. **Sources of Finance:** If the firm has finance sources, it will be easy to mobilise large finance. The firm shall not go for retained earnings.
6. **Growth Rate of the Firm:** High growth rate implies that the firm can distribute more dividend to its shareholders.
7. **Tax Policy:** Tax policy of the government also affects the dividend policy of the firm. When the government gives tax incentives, the company pays more dividend.
8. **Capital Market Conditions:** Due to the capital market conditions, dividend policy may be affected. If the capital market is prefect, it leads to improve the higher dividend.

Recap

- ◊ Dividend policy of a firm, affects the long term financing and the wealth of shareholders
- ◊ Dividend theories can be classified as two: Irrelevance of Dividend and Relevance of Dividend
- ◊ Irrelevance of Dividend: Modigliani and Miller's Model
- ◊ Relevance of Dividend: Walter's Model and Gordon's Model
- ◊ Modigliani and Miller argues that when a firm's value increase as a result of payment of dividend, it will be exactly set off by the decline in market price of shares due to external financing and there will be no change in the total wealth of the shareholders.
- ◊ Assumptions of MM approach include perfect capital market, rational investors, absence of tax discrimination between dividend income and capital appreciation and no risk and uncertainty.
- ◊ Walter argues that the dividend policy almost always affects the value of the firm.
- ◊ Walter model is based on the relationship between rate of return (r) and cost of capital (k).
- ◊ Gordon's model is based on the following assumptions: All equity firm, no external financing, constant return and cost of capital, perpetual earnings, no tax etc.

Objective Questions

1. Who proposed the theory of irrelevance of dividend?
2. Name two thinkers who believed in relevance of dividend?
3. What does MM approach states?
4. What are the assumptions of MM approach?
5. Mention any one criticism of MM approach.
6. Name the two models of theories of relevance of dividend.
7. Mention any one criticism of Gordon's model.

Answers

1. Modigliani and Miller
2. Walter and Gordon
3. According to MM, in a perfect market environment the dividend policy of the company is immaterial and has no bearing on the firm's worth.
4. Perfect capital market, Investors are rational, no taxes, fixed investment policy, no risk or uncertainty.
5. MM approach does not consider floatation cost and transaction cost. But in reality a firm has to incur floatation costs while issuing securities.
6. Walter's model and Gordon's Model
7. Gordon model assumes that there is no debt finance used by the firm. But it is not applicable to present day business.

Self-Assessment Questions

1. Explain the factors affecting the dividend policy.
2. Discuss the various types of dividend policy.
3. Explain the irrelevance and relevance dividend theories.
4. State the criticism of MM approach.
5. What are the assumptions of Walter's model?
6. What are the advantages of stability of dividend?
7. Briefly explain the assumptions of Gordon's Model?
8. What are the objectives of dividend policy?
9. Explain the criticisms of Walter's model.
10. Explain the factors determining the dividend policy.

Assignments

1. Search and read articles on dividend practices of companies in India and elsewhere. Prepare a brief report explaining that dividend is a puzzle.
2. Identify the dividend policy followed by a company of your choice and try to associate it with the theories discussed in this unit.
3. Compare the dividend policy of two or more companies and explain the effect of dividend policy followed on the market value of these firms.
4. Find out a growth company which has attractive investment opportunities as well as declining company. Identify the dividend policy followed by the firms and relate it with Gorden's model of relevance of dividend.

Suggested Reading

1. Pandey, I. M. *Financial management* (11th ed.). Vikas Publications.
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MODEL QUESTION PAPER SETS

MODEL QUESTION PAPER
SET - 01

SREENARAYANAGURU OPEN UNIVERSITY

QP CODE: ……
…….....

Reg. No :

Name :

……...

THIRD SEMESTER BACHELOR OF BUSINESS ADMINISTRATION (BBA) EXAMINATION
DISCIPLINE CORE - 5- B21BB05DC- FINANCIAL MANAGEMENT
(CBCS - UG)
2023-24 - Admission Onwards

Time: 3 Hours Max Marks: 70

Section A

(Answer any 10, each carry 1 mark)

(10×1= 10)

1. Define financial management.
2. What is Net Present Value?
3. Mention any one short term finance decision.
4. What do you mean by capital budgeting?
5. What are indivisible projects?
6. What is soft rationing?
7. Define working capital management.
8. What are receivables?
9. What is fixed capital?
10. What is cost of capital?
11. What is retained earnings?
12. What does the term “leverage” refer to?
13. What is dividend?
14. Mention the two important factors on which Walter’s model is based?
15. What is no dividend policy?

Section B

(Answer any 5 each carry 2 marks)

(5×2=10)

16. What are the various objections to profit maximisation?
17. How financial management helps in risk management?
18. List the nature of investment decisions.
19. What is the difference between capital cost and administrative cost?
20. Briefly explain any two factors that influence the receivables size?
21. What are the objectives of dividend policy?
22. Briefly explain some factors that determine the dividend policy.
23. What is capital gearing?
24. What are the steps followed in capital rationing for indivisible projects?
25. What is optimum credit policy?

Section C

(Answer any 4 each carry 5 marks)

(4 x 5 = 20)

26. Compare the financing decisions and investment decisions involved in financial management.
27. Analyse the role of financial management in modern business?
28. Discuss the nature of financial management.
29. What are the characteristics of a sound investment evaluation criterion?
30. Define working capital. Why is it significant?
31. One of the crucial elements of current assets is cash. If so, what is cash management? What are the motives for holding cash?
32. What is cost of preference shares? Briefly explain its categories.
33. Explain the irrelevance of dividend model.

Section D

(Answer any 2 each carry 15 marks)

(2 x 15 = 30)

34. Explain the functions of finance?

35. Explain the steps in the process of capital rationing. What are the various reasons for hard rationing and soft rationing?

36. Discuss the various techniques of inventory management? Explain the main objectives of inventory management.

37. What is leverage and explain its various types? What are the various techniques for calculating cost of equity?

MODEL QUESTION PAPER
SET - 02

SREENARAYANAGURU OPEN UNIVERSITY

QP CODE: ……
…….....

Reg. No :

Name :

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THIRD SEMESTER BACHELOR OF BUSINESS ADMINISTRATION (BBA) EXAMINATION
DISCIPLINE CORE - 5- B21BB05DC- FINANCIAL MANAGEMENT
(CBCS - UG)
2023-24 - Admission Onwards

Time: 3 Hours Max Marks: 70

Section A

(Answer any 10, each carry 1 mark)

(10 x 1 = 10)

1. What is financial management?
2. What is Shareholder Wealth Maximisation?
3. What are the long term financial decisions?
4. Define capital budgeting.
5. What is capital rationing?
6. What are divisible projects?
7. What is working capital?
8. What are the various long term sources of working capital?
9. Briefly explain default cost?
10. What is capital structure?
11. What is capital?
12. What is external equity?
13. What are the other names for combined leverage?
14. Mention any two assumptions of Walter's model.
15. What is bond dividend?

Section B

(Answer any 5 each carry 2 marks)

(5 x 2 = 10)

16. Briefly explain the aims of financial management.
17. Dividend decision is often a complex managerial decision. Why?
18. What are the various types of investment decisions?
19. What is the significance of performance review in capital budgeting process?
20. What is the difference between gross working capital and net working capital?
21. Explain factoring.
22. What is the significance of the cost of capital?
23. What are the significances of dividend decisions?
24. What is the difference between regular and irregular dividend policy?
25. What are the various forms of stable dividend policy?

Section C

(Answer any 4 each carry 5 marks)

(4 x 5 = 20)

26. Discuss the scope of financial management.
27. Explain the role of a financial manager.
28. Describe the reasons why investment decisions require special attention?
29. Explain the capital budgeting process.
30. What are the various non-discounted techniques of capital budgeting?
31. What do you mean by capital rationing? Explain its benefits.
32. What is credit limit? What are the various forms of bank finance?
33. When does a capital structure is said to be optimum? Explain the FRICT analysis.

Section D

(Answer any 2 each carry 15 marks)

(2x 15 = 30)

34. Discuss the various capital budgeting techniques.

35. Describe the factors that affect the working capital requirements. What are the various types of working capital?

36. What are the various factors that determine the capital structure? Analyse the differences between net income approach and net operating income approach of capital structure theories.

37. What is a dividend decision and what are its determinants? Explain the various forms or type of dividends.

സർവ്വകലാശാലാഗീതം

വിദ്യയാൽ സ്വതന്ത്രരാകണം
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ഗുരുപ്രകാശമേ നയിക്കണേ

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