

## Chapter 1

**Managerial Finance:** The field of finance that focuses on the acquisition and use of financial resources to maximize the value of a business.

**Financial Managers:** Professionals responsible for managing a company's financial resources, making investment decisions, financing decisions, and managing working capital.

**Investment Decisions (Capital Budgeting):** Deciding where to allocate a company's resources for the best potential returns, evaluating opportunities like new projects, equipment purchases, and acquisitions.

**Financing Decisions:** Determining the optimal mix of debt and equity financing to minimize the cost of capital and maximize value.

**Working Capital Management:** Ensuring that the company has sufficient liquidity to meet its short-term obligations by managing current assets (cash, receivables, inventory) and current liabilities (payables, short-term debt).

**Goal of Financial Management:** To maximize shareholder wealth, reflected in the company's stock price.

**Financial Markets:** Platforms where buyers and sellers trade financial assets, such as stocks and bonds, facilitating capital formation and liquidity.

**Agency Problem:** The conflict of interest that can arise when managers (agents) act in their own best interest rather than in the best interests of the shareholders (principals).

**Financial Environment:** The external factors, including interest rates, inflation, regulations, and tax policies, that influence financial decision-making.

**Types of Businesses and Legal Forms:** Businesses can be organized as sole proprietorships, partnerships, or corporations, each with different legal and tax implications.

**Ethical Considerations in Finance:** Financial managers have a responsibility to make decisions that are ethical and prioritize long-term value creation over short-term gains that may harm stakeholders.

## Chapter 2

**Financial Markets:**

Facilitate the flow of capital from savers to borrowers, supporting economic growth.

**Primary Markets:** Where new securities are issued.

**Secondary Markets:** Where existing securities are traded.

**Financial Instruments:**

**Equity Securities (Stocks):** Represent ownership in a company, offering potential returns through dividends and capital appreciation.

**Debt Securities (Bonds):** Loans made by investors to corporations or governments, providing fixed income through interest payments.

**Derivatives:** Contracts that derive their value from an underlying asset, used for hedging or speculation.

**Financial Institutions:**

**Commercial Banks:** Offer lending, deposit, and credit services.

**Investment Banks:** Underwrite securities offerings and advise on mergers and acquisitions.

**Mutual Funds:** Pool investor funds to create diversified portfolios.

**Pension Funds:** Manage retirement savings.

**Regulatory Bodies:** Ensure transparency, fairness, and stability in financial markets (examples: SEC, Federal Reserve).

**Interest Rates:**

**Risk-Free Rate:** The return on a riskless asset.

**Risk Premium:** The additional return required for taking on risk.

**International Financial Environment:** Global markets and currency markets significantly influence interest rates, exchange rates, and investment decisions.

## Chapter 4

**Financial Planning Process:** Involves forecasting future needs and developing strategies to achieve goals, encompassing analysis of current financial conditions, setting objectives, and crafting both short-term and long-term plans.

**Short-Term Financial Planning:**

**Working Capital Management:** Focuses on balancing short-term assets and liabilities to ensure liquidity while minimizing costs.

**Cash Budgets:** Project cash inflows and outflows to identify potential shortages or surpluses.

**Short-Term Financing:** Using lines of credit or other short-term funding sources to address temporary cash needs.

**Long-Term Financial Planning:**

**Capital Budgeting:** The process of evaluating and selecting long-term investment projects that support strategic goals.

**Pro Forma Financial Statements:** Forecasted financial statements that project future performance.

**External Financing Needs:** Determining how much funding is needed from outside sources to achieve objectives.

**Sales Forecasting:** A crucial input for financial planning, impacting operational planning and long-term investments.

**Sustainable Growth:** The maximum rate at which a company can expand without requiring external equity financing.

**Factors Influencing SGR:** Profit margins, asset utilization, financial leverage, and dividend policy.

## Chapter 5

**Time Value of Money (TVM):** The concept that money available today is worth more than the same amount in the future due to its potential to earn interest or investment returns.

**Future Value (FV):** The value of a sum of money at a specific future date, accounting for interest or investment growth.

**Present Value (PV):** The current value of a future cash flow, discounted to reflect the time value of money.

**Annuities:** A series of equal payments or receipts occurring at regular intervals.

**Ordinary Annuity:** Payments made at the end of each period.

**Annuity Due:** Payments made at the beginning of each period.

**Perpetuities:** An annuity with an infinite number of payments.

**Discount Rate:** The interest rate used to calculate present values, representing the opportunity cost of capital.

**Compounding Frequency:** The number of times interest is calculated and added to the principal in a year.

More frequent compounding results in higher future values.

**Effective Annual Rate (EAR):** The actual annual rate of return, taking into account compounding frequency.

## Chapter 6

**Interest Rates:** Represent the cost of borrowing or the return on lending money, playing a central role in financial decisions.

**Determinants of Interest Rates:**

**Supply and Demand for Funds:** Rates rise when demand exceeds supply and fall when supply is greater than demand.

**Inflation Expectations:** Higher expected inflation leads to higher nominal interest rates.

**Risk:** Lenders require higher rates for riskier loans.

**Liquidity Preference:** Borrowers pay a premium for more liquid (short-term) loans.

Federal Reserve and Monetary Policy: The central bank influences interest rates through tools like the federal funds rate.

Types of Interest Rates:

Nominal Rate: The stated rate, not adjusted for inflation.

Real Rate: The nominal rate adjusted for inflation.

Risk-Free Rate: The return on a riskless investment.

Market Interest Rates: Determined by market forces (supply and demand).

Term Structure of Interest Rates:

Yield Curve: A graph showing the relationship between interest rates and maturities.

Normal Yield Curve: Long-term rates are higher than short-term rates.

Inverted Yield Curve: Short-term rates exceed long-term rates.

Flat Yield Curve: Little difference between short- and long-term rates.

Importance in Managerial Finance: Interest rates affect the cost of capital, investment appraisals, and financing decisions (debt vs. equity).

## Chapter 7

Stock Valuation: Focuses on methods for determining the value of a company's stock.

Dividend Discount Model (DDM): Values a stock by discounting expected future dividends.

Constant Dividend (No Growth):  $\text{Price} = \text{Dividend} / \text{Required Rate of Return}$

Dividend Growth:  $\text{Price} = \text{Dividend in One Year} / (\text{Required Rate of Return} - \text{Dividend Growth Rate})$

Multistage Dividend Discount Model: Used for stocks with varying dividend growth rates over time.

Price/Earnings (P/E) Ratio: Compares a stock's price to its earnings per share, offering insights into market expectations and potential valuation.

Free Cash Flow Valuation: Values a stock based on the free cash flow available to shareholders, discounted to the present.

Market Efficiency: The Efficient Market Hypothesis (EMH) proposes that stock prices fully reflect all available information.

Risk and Required Return: Investors require higher returns to compensate for higher risk, often assessed using the Capital Asset Pricing Model (CAPM).

Stock Price and Market Factors: Influenced by market conditions, investor sentiment, interest rates, and company performance.

## Chapter 9

Cost of Capital: The minimum return a company must earn to satisfy its investors.

Weighted Average Cost of Capital (WACC): The average cost of all the company's financing sources, weighted by their proportions.

Formula:  $\text{WACC} = (E/V \times Re) + (D/V \times Rd \times [1 - T])$ , where E is the market value of equity, V is the total value of the firm, Re is the cost of equity, D is the market value of debt, Rd is the cost of debt, and T is the tax rate.

Cost of Debt (Rd): The interest rate a company pays on its debt, adjusted for the tax deductibility of interest expense.

Cost of Equity (Re): The return required by equity investors, commonly estimated using the Capital Asset Pricing Model (CAPM).

CAPM Formula:  $Re = Rf + \text{Beta} \times (Rm - Rf)$ , where Rf is the risk-free rate, Beta is a measure of systematic risk, and Rm is the market return.

Retained Earnings and New Equity: The costs of using internal funds (retained earnings) and external funds (new equity issuance).

Debt Financing vs. Equity Financing: Debt is generally cheaper due to the tax deductibility of interest, but excessive debt increases financial risk.

Capital Structure and Risk: The mix of debt and equity in a company's financing impacts its overall risk profile.

Investment Decisions and WACC: The WACC serves as the discount rate for evaluating the Net Present Value (NPV) of projects.

## Chapter 10

Capital Budgeting: The process of evaluating and selecting long-term investments to maximize company value.

Steps in Capital Budgeting:

Identify potential projects.

Estimate future cash flows.

Evaluate projects using various methods.

Select the best project(s).

Implement and monitor.

Techniques for Evaluating Projects:

Net Present Value (NPV): Discounts all future cash flows to their present value, accounting for the time value of money.

Internal Rate of Return (IRR): The discount rate that makes the NPV of a project equal to zero.

Profitability Index (PI): The ratio of the present value of future cash flows to the initial investment.

Payback Period: The time it takes to recover the initial investment.

Discounted Payback Period: Similar to the payback period but considers the time value of money.

Mutually Exclusive Projects: When choosing between projects where only one can be selected, compare their NPVs or IRRs.

Project Risk and Sensitivity Analysis: Assess how changes in assumptions (e.g., cash flows or discount rates) impact a project's profitability.

Real Options: Recognize that investment opportunities may offer flexibility to adjust over time (e.g., options to expand, delay, or abandon).

Capital Rationing: When a company has limited funds and must prioritize the most valuable projects within its budget constraints.

## Chapter 12

Leverage: The use of debt financing to amplify returns, but also increases risk.

Operating Leverage: From fixed costs in a company's cost structure. High operating leverage means that changes in sales result in larger changes in operating income.

Financial Leverage: Arises from the use of debt financing. It magnifies both potential returns and losses to shareholders.

Combined Leverage: The overall effect of operating and financial leverage on a company's earnings volatility.

Budgeting: The process of planning, forecasting, and controlling financial resources.

Operating Budget: Focuses on day-to-day operations, including sales, production costs, and expenses.

Capital Budget: Plans for long-term investments in assets.

Cash Budget: Manages short-term cash flows, ensuring liquidity.

Flexible Budgets: Adjust for changes in activity levels, allowing for better performance evaluation.

Static Budgets: Remain fixed regardless of activity changes.

Risk and Return Considerations: Using high levels of leverage can lead to higher potential returns during favorable periods but significantly increases the risk of bankruptcy during downturns.

## Exam 1 Review

Goal of the Firm: The primary goal of a firm is to maximize shareholder wealth.

### Manager's Key Decisions:

Investment: Choosing where to allocate resources to create value for the owners.

Capital: Deciding how to raise the necessary funds, weighing debt versus equity.

Capital Budgeting: Determining which projects will create the most value.

Evaluating Decision Alternatives: Managers should consider the following when making decisions:

Time Value of Money: A dollar today is worth more than a dollar in the future because it can be invested and earn a return.

Risk vs. Return: Higher-risk investments require higher potential returns to compensate investors.

Cash Flow: Prioritize cash flows that are received sooner rather than later.

Impact on Share Price: Focus on decisions that will increase the company's stock price, reflecting increased shareholder wealth.

### Finance Roles:

Treasurer: Manages the company's cash, invests surplus funds, and handles financing activities.

Controller: Responsible for accounting, budgeting, and performance evaluation.

Investor Relations: Communicates information about the company to the public, particularly to investors and analysts.

Internal Audit: Ensures that the company is complying with internal policies and procedures, as well as external regulations.

FX Manager: Handles transactions involving foreign currencies.

Finance Relationship to Economics:

Marginal Cost-Benefit Analysis: Only pursue projects where the marginal benefits exceed the marginal costs.

### Relationship to Accounting:

Accounting: Focuses on accrual accounting, which records transactions when they are incurred, regardless of when cash changes hands.

Finance: Emphasizes cash flows, as they are critical for a company's liquidity and ability to operate and invest.

### Legal Forms of Business:

Sole Proprietorship: A single owner assumes all liabilities and files taxes individually

Partnership: Two or more people share ownership, file taxes individually, and may be personally liable for business debts.

Corporation: A separate legal entity that assumes liability, files corporate taxes, and can issue stock to raise capital. Corporate profits are subject to double taxation (at the corporate level and again when distributed as dividends).

Principal-Agency Costs: These costs arise when managers (agents), who are hired by shareholders (principals), do not act in the best interests of the shareholders.

Board of Directors: The board oversees the company's management, hires and fires the CEO, approves strategic goals, and major expenditures.

Marginal Taxes: Refer to the Excel sheet for calculations and examples of marginal tax rates.

### Financial Markets:

Financial Institutions: Intermediaries that channel funds between savers and borrowers, including commercial banks, investment banks, and shadow banks.

Money Market: Trades in short-term debt securities (maturities less than one year), generally considered low-risk.

Capital Market: Trades in longer-term securities (maturities greater than one year), including stocks and bonds.

Primary Market: Where companies and governments initially sell securities to large private investors (private placements).

Secondary Market: Where securities are traded among individual investors.

Broker Market: Securities are traded through brokers, who match buyers and sellers and earn commissions.

**Dealer Market:** Dealers take ownership of securities and trade them using a bid/ask arrangement, making a profit on the spread between the bid and ask prices.

**Efficient Market Hypothesis:** This theory states that stock prices reflect all available information and are fairly priced.

#### Regulations and Crisis:

**Glass-Steagall Act (1933):** Separated commercial and investment banks and established the Federal Deposit Insurance Corporation (FDIC) to protect depositor funds.

**Securities Act of 1933:** Regulates the sale of securities to the public, requiring registration with the government and financial disclosures from issuers.

**Securities Exchange Act of 1934:** Created the Securities and Exchange Commission (SEC) to oversee the secondary market, requiring ongoing disclosures from issuers and limiting insider trading.

**Graham-Leach-Bliley Act (1999):** Repealed the separation of commercial and investment banks, allowing for greater consolidation in the financial industry.

**Dodd-Frank Wall Street Reform and Consumer Protection Act (2010):** Established reforms to prevent future financial crises, including the creation of the Consumer Financial Protection Bureau (CFPB).

**The Great Depression:** Triggered by the stock market crash of 1929, leading to bank failures, widespread unemployment, and a sharp economic decline.

**The Great Recession (Credit Crisis of 2008):** Caused by the collapse of the housing market and the proliferation of subprime mortgages, resulting in a severe global recession.

#### Issuing Securities:

**Investment Bank:** Underwrites the security offering and promotes the sale of the stock, earning a fee (typically a percentage of the offer price).

**Underwriting Syndicate:** A group of investment banks that share the risk of selling the securities.

**Selling Group:** Financial firms that assist in selling the shares to investors.

**Prospectus:** A document that describes the share issuance, the firm, and its financial position, filed with the SEC.

#### Interest Rates:

**Nominal Interest Rate:** The stated interest rate.

**Real Interest Rate:** The interest rate adjusted for inflation ( $\text{Real Rate} = \text{Nominal Rate} - \text{Inflation Rate}$ ).

**Risk Premium:** The additional return required by investors to compensate for the risk of an investment, compared to a risk-free asset (like US Treasury securities).

**Credit Ratings:** Ratings assigned by agencies to assess the creditworthiness of borrowers. Higher-rated borrowers have lower risk and can borrow at lower interest rates.

**Yield to Maturity (YTM):** The total return an investor can expect on a bond if it is held to maturity.

#### Exam 2 Review

**Financial Leverage:** A company increases its financial leverage when it borrows more money, which can widen the gap between ROE and ROA.

#### Short-Term Financial Planning:

**Key Inputs:** Sales forecast, operating data, and financial statements.

**Key Outputs:** Operating and cash flow budgets, pro forma financial statements.

#### Types of Cash Flows:

**Inflows:** Decreases in assets, increases in liabilities, net profit after tax, and depreciation.

**Outflows:** Increases in assets, decreases in liabilities, net losses, and dividend payments.

**Operating Cash Flow (OCF):**  $\text{OCF} = \text{EBIT} \times (1 - \text{Tax Rate}) + \text{Depreciation}$ .

Uncertainty in Cash Budgets: Using multiple scenarios (higher and lower than base assumptions) helps manage uncertainty.

Pro Forma Financial Statement Weaknesses:

Percent of Sales Approach: Assumes all costs are variable, which can underestimate profit growth when sales are rising.

Judgmental Approach: Assumes variables like cash, accounts receivable, and inventory can be forced to take on specific values.

Annuities:

Ordinary Annuity: Cash flows occur at the end of each period.

Annuity Due: Cash flows occur at the beginning of each period.

Financial Ratios:

Return on Assets (ROA):  $ROA = \text{Net Income} / \text{Total Assets}$ . A higher ROA indicates the company is generating more sales revenue from its asset base.

## Final Exam Review

Financial Institutions:

Commercial banks take consumer deposits and make loans to consumers, businesses, and governments. Investment banks help companies raise capital through advising on mergers, stock offerings (IPOs), loans, and bond issuances.

Shadow banks are financial institutions that operate outside of standard banking regulations.

Money Market: The money market consists of securities that mature in less than one year, such as treasury bills, commercial paper, and certificates of deposit. This is considered the least risky market.

Capital Market: This market deals in stocks and bonds with maturities greater than one year.

Debt Instruments:

Bonds are used by governments and businesses to raise capital.

US Treasury securities are considered very low-risk because they are backed by the full faith and credit of the US government.

Sarbanes Oxley Act of 2002: This act created the Public Accounting Oversight Board in response to corporate financial scandals.

Financial Ratios: If a firm carries no debt on its balance sheet, its Return on Equity (ROE) will be equal to its Return on Assets (ROA).

Fixed Income Investment Strategy: This strategy takes advantage of an upward-sloping yield curve, in which longer-term maturities pay higher interest rates.

Yield Curves:

Normal yield curve: Longer-term securities pay higher rates of return, indicating a healthy economy.

Inverted yield curve: Longer-term securities pay lower rates of return than shorter-term securities, often signaling an economic downturn.

Flat yield curve: All maturities pay similar rates of return, indicating economic uncertainty.

Judgmental Approach to Financial Forecasting: This approach solves for a "plug" number, representing the cash a firm needs to raise through loans or bonds.

Debt Holder Priority: Secured creditors are paid first if a company goes bankrupt.

Lender's Debt Covenants: To reduce the risk of default, lenders may require borrowers to maintain minimum levels of net working capital.

Equity Required Rate of Return: Since stockholders are paid after bondholders in a bankruptcy, they require a higher rate of return on their investment.

Price/Earnings (P/E) Multiple Approach to Valuation: This method estimates a firm's share value by multiplying its expected earnings per share (EPS) by the average P/E ratio for the industry.

Financial Manager Actions: When a company projects an increase in revenue, investors may anticipate higher dividends and an increase in the firm's value (stock price).

Stock Valuations:

Fixed Dividend: Price (P) = Dividend (D) / Required Return (r)

Growing Dividend: Price (P) = Dividend in one year (D1) / (Required Return [r] - Dividend Growth Rate [g])

Cumulative Preferred Stock: All unpaid dividends, including the current year's dividend, must be paid to preferred shareholders before any dividends can be paid to common stockholders.

Weighted Average Cost of Capital (WACC):

Minimizing the WACC allows companies to take on more projects.

The optimal capital structure balances risk and return to maximize the stock's market value.

As the use of debt in the capital structure increases, the WACC initially declines, then stabilizes, and finally starts to rise again.

Capital Budgeting: The process of choosing long-term investments to maximize shareholder wealth.

Project Evaluation:

Payback Period: The time it takes for a project's incoming cash flows to cover the initial investment.

Net Present Value (NPV): This calculation discounts future cash flows to their present value using the firm's cost of capital (WACC). A positive NPV suggests the project will add value.

Internal Rate of Return (IRR): The discount rate at which a project's NPV equals zero. If the IRR exceeds the company's WACC, the project is generally worth pursuing.

Leverage:

Operating Leverage: The degree to which a company uses fixed costs in its operations. Higher operating leverage leads to greater profit changes in response to changes in sales revenue.

Financial Leverage: The use of debt to finance a company's operations. This can amplify returns but also increase the risk of financial distress.

Total Leverage: The combined effect of operating and financial leverage, reflecting a company's overall risk profile.