

Overview of Finance

Overview of Finance – Structured Study Notes

1. What Is Finance?

- **Definition:** The management, creation, and study of money, investments, and other financial instruments.
 - **Core Purpose:** Allocate resources efficiently, manage risk, and maximize value for individuals, firms, and societies.
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2. Main Branches of Finance

Branch	Focus	Typical Participants
Personal Finance	Managing an individual's or household's money (budgeting, saving, investing, retirement planning).	Consumers, financial advisors, insurance agents.
Corporate (Business) Finance	Funding operations, capital budgeting, capital structure, dividend policy.	CFOs, treasurers, investors, analysts.
Public (Government) Finance	Taxation, public expenditure, debt issuance, fiscal policy.	Government agencies, central banks, policymakers.
Financial Markets & Institutions	Trading of securities, intermediation, market regulation.	Banks, stock exchanges, mutual funds, hedge funds.

3. Key Financial Concepts

3.1 Time Value of Money (TVM)

- **Principle:** A dollar today is worth more than a dollar tomorrow because of earning potential.
- **Formulas:**
 - **Future Value (FV):** $(FV = PV \times (1 + r)^n)$
 - **Present Value (PV):** $(PV = \frac{FV}{(1 + r)^n})$
 - PV = present value, FV = future value, r = periodic interest rate, n = number of periods.

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3.2 Risk & Return

- **Risk:** Uncertainty about the size or timing of future cash flows.
- **Return:** Gain or loss generated by an investment, expressed as a percentage.
- **Risk?Return Trade?off:** Higher expected returns generally require taking on higher risk.

3.3 Diversification

- Spreading investments across different assets to reduce unsystematic risk.
- **Modern Portfolio Theory (MPT):** Optimal portfolio lies on the *efficient frontier*—maximum return for a given risk level.

3.4 Cost of Capital

- **Weighted Average Cost of Capital (WACC):**
($WACC = \frac{E}{V} \times Re + \frac{D}{V} \times Rd \times (1 - T)$)
 - E = market value of equity, D = market value of debt, $V = E + D$, Re = cost of equity, Rd = cost of debt, T = corporate tax rate.

3.5 Capital Budgeting

- Decision tools for long-term investment projects:
 - **Net Present Value (NPV)** – sum of discounted cash flows; accept if $NPV \geq 0$.
 - **Internal Rate of Return (IRR)** – discount rate that makes $NPV = 0$; accept if $IRR \geq WACC$.
 - **Payback Period** – time to recover initial investment; useful for liquidity assessment.

4. Financial Statements – The Core Reporting Tools

Statement	Primary Purpose	Key Elements
Balance Sheet	Snapshot of financial position at a point in time.	Assets = Liabilities + Equity
Income Statement	Shows profitability over a period.	Revenues – Expenses = Net Income
Cash Flow Statement	Tracks cash inflows/outflows by activity.	