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Remarks:

- These notes are primarily written after completing the pre-MBA Finance course (FIN 400) at GUST university (Gulf University for Science and Technology). I have incorporated information from other sources in some sections to help me better understand the material. These notes are based on my understanding and they are intended to be used as a summary for me to go back to from time to time. Anyone reading this document should not rely on my summary and should always revert to the original sources.
- Main source material (i.e., book name): Principles of Managerial Finance, 14th edition, by Lawrence J. Gitman and Chad J. Zutter

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Chapter 1: The role of managerial finance

- Finance: The science and art of managing money.
- Career opportunities in finance:
    - Financial services
    - Managerial finance
- Professional certifications in finance:
    - CFA
    - CTP
    - CFP
- Relationship of finance to economics:
    - Economics is the precursor to finance
- Accounting differs from accounting by having an:
    - Emphasis on cash flows
    - Emphasis on decision making
- What is the goal of the firm?
    - Maximize shareholder wealth
- Types of firms:
    - Sole proprietorship
    - Partnership
    - Corporation
- Corporate organization structure (page 54):
    - Treasurer: The firm's chief financial manager, who manages the firm's cash, oversees its pension plans, and manages key risks.
    - Controller: The firm's chief financial accountant, who is responsible for the firm's accounting activities, such as corporate accounting, tax management, financial accounting and cost accounting.
- Corporate related terms:
    - Limited liability
    - Corporate governance
- How to keep management aligned with the goal of the firm of maximizing shareholder wealth?
    - Incentive plans → depends on share price
    - Performance plans → depends on earnings
- Marginal cost-benefit analysis: Economic principle that states that financial decisions should be made and decisions taken only when the added benefits exceed the added costs.
    - Nearly all financial decisions ultimately come down to an assessment of their marginal benefits and marginal costs
- Types of investors:
    - Individual investors
    - Institutional investors

Chapter 2: The Financial Market Environment

- Methods of obtaining funds:
    - Private placement
    - Financial institutions
        - Customers:
            - Individuals (net suppliers of funds)
            - Businesses (net demanders of funds)
            - Governments (net demanders of funds)
        - Types:
            - Commercial banks
            - Investment bank
            - Savings and loans banks
            - Credit unions
            - Insurance companies
            - Mutual funds
            - Pension funds
    - Financial markets
        - Money market == short-term funds
            - T-bills
            - Commercial paper
            - Negotiable CDs
        - Capital market == long-term funds
            - Bond
            - stock
- Important Laws:
    - 1933 → Glass-Steagall act, FDIC and separated the activities of commercial and investment banks
    - 1933 → Securities act, primary market regulations
    - 1934 → securities act, secondary market regulations
    - 1999 → Gramm-Leach-Bliley, repealed Glass-Stegall act
    - 2002 → Sarbanes-Oxley act, PCAOB

Chapter 3: Financial Statements and Ratio Analysis

- Types of financial statements:
  - Income statement
  - Balance sheet
  - Statement of stockholder's equity
  - Statement of cash flows
- Types of ratio analysis:
  - Time-series analysis
  - Cross-sectional analysis
  - Combined analysis
- Categories of financial ratios:
  - Measuring risk
    - Liquidity
    - Activity
    - Debt
  - Measuring return
    - Profitability
  - Measuring risk and return
    - Market
- Summary of ratios → page 134-135
- Dupont system of analysis: system used to dissect the firm's financial statements and to assess its financial condition.
  - $ROE = ROA * FLM$
  - $ROE = (net\ profit\ margin * total\ asset\ turnover) * FLM$
    - The $net\ profit\ margin$ measures profits on sales
      - $\frac{earnings\ available\ for\ common\ stockholders}{sales}$
    - The $total\ asset\ turnover$ measures the efficiency of asset use
      - $\frac{sales}{total\ assets}$
    - The FLM measures the financial leverage of the firm
      - $\frac{total\ assets}{common\ stock\ equity}$

Chapter 4: Cash Flow and Financial Planning

- Depreciation: A portion of the costs of fixed assets charged against annual revenues over time.
- Modified accelerated cost recovery system (MACRS): system used to determine the depreciation of assets for tax purposes.
- Notes:
    - Keeping two different sets of records (using different depreciation methods) is legal in the United States (i.e., one for the IRS and another for the SEC)
    - Property classes under MACRS → page 165
    - MACRS depreciation → page 166
- Categories of a firm's cash flows:
    - Cash flow from operating activities
    - Cash flow from investment activities
    - Cash flow from financing activities
- Inflows and outflows of cash → page 167
- Free cash flow: The amount of cash flow available to investors (creditors and owners) after the firm has met all operating needs and paid for investments in net fixed assets and net current assets.
- Cash budget scenario analysis (example) → page 183
- Note: chapter 22 of accounting is more elaborate for budgeting

Chapter 5: Time Value of Money

- The time value of money refers to the observation that it is better to receive money sooner rather than later. Money that you have in hand today can be invested to earn a positive rate of return, producing more money tomorrow. For that reason, a dollar today is worth more than a dollar in the future.
- Patterns of cash flow:
    - Single amount
    - Annuity
        - Ordinary annuity
        - Annuity due
        - Perpetuity
    - Mixed stream
- Important equations:
    - Future value
        - $FV_n = PV * (1 + r)^n$
    - Present value of a perpetuity
        - $\frac{cash\ flow}{r}$
    - Future value of a continuously compounding amount
        - $FV_n = PV * e^{r*n}$
    - Effective annual rate
        - $(1 + \frac{r}{periods\ per\ year})^{periods\ per\ year} - 1$
    - Effective annual rate (continuous compounding)
        - $e^r - 1$
- Loan amortization schedule → page 241

Chapter 6: Interest Rates and Bond Valuation

- Who is the largest debtor in the world? The U.S. federal government
  - One third is held by the U.S. federal reserve and other intragovernmental bodies
  - One third is held by domestic investors
  - One third is held by foreign investors
- Types of treasury securities and their maturity periods:
  - T-Bills ($n < 1\ year$)
  - T-Notes ($n \in [2, 10]$)
  - T-Bonds ($n \in [10, 30]$)
- The interest rate prevailing in the market at any given time reflects the equilibrium between savers and borrowers.
- Equilibrium interest rate is affected by:
  - Inflation
  - Risk
  - Liquidity preference
- Nominal rate of interest
  - $risk\ free\ rate\ of\ return = \ real\ rate\ of\ interest + inflation\ premium$
  - $nominal\ interest = \ risk\ free\ rate\ of\ return + risk\ premium$
- Corporate bond: a long-term debt instrument indicating that a corporation has borrowed a certain amount of money and promises to repay it in the future under clearly defined terms.
- Bond indenture provision types:
  - Standard
    - Maintain satisfactory accounting records
    - Periodically supply audited financial statements
    - Pay taxes and other liabilities when due
    - Maintain all facilities in good order
  - Restrictive
    - Require a minimum level of liquidity
    - Prohibit the sale of accounts receivable
    - Impose fixed asset restrictions
    - Constrain subsequent borrowing
    - Limit the firm's annual cash dividend payments
    - Sinking-fund requirement
    - Security interest
- Factors determining the cost of bond financing:
  - Bond maturity
  - Offering size
  - Issuer's risk
  - Cost of money
- General features of a bond issue:
  - Conversion feature
  - Call feature
  - Stock purchase warrants

- Bond yield calculations:
  - Current yield
    - $\frac{annual\ payment}{current\ price}$
  - Yield to call
  - Yield to maturity
- Note: to value bonds paying interest semi-annually, do the following:
  - Divide I by 2 (annual interest)
  - Multiply n by 2 (number of years)
  - Divide r by 2 (required rate of interest)
- International bond terminology:
  - Eurobond: NBK issues a KWD bond and sells it in the U.S. market
  - Foreign bond: NBK issues a USD bond and sells it in the U.S. market

Chapter 7: Stock Valuation

- When a firm is liquidated, its assets are divided in the following order:
    - Secured creditors
    - Unsecured creditors
    - Equity holders
- Key differences between debt and equity → page 319
- Different states for a share:
    - Authorized to be issued
    - Issued and in circulation (outstanding + treasury stock)
    - Outstanding shares (held by private and public investors)
- Types of stock:
    - Preferred stock
    - Non-voting stock
    - Voting stock
    - Super-voting stock
- Features of a preferred stock:
    - Cumulative
    - Non-cumulative
    - Callable
    - Convertible
- A firm can sell its stock in the primary market through a:
    - Public offering
    - Rights offering
    - Private placement
- The selling process for a large security issue → page 329
- Important terms and definitions:
    - Prospectus: a portion of a security registration statement that describes the key aspects of the issue, the issuer, and its management and financial position.
    - Investment banker: a financial intermediary that specializes in selling new security issues and advising firms with regards to major financial transactions.
    - Underwriting: the role of the investment banker in bearing the risk of reselling, at a profit, the securities purchased from an issuing corporation at an agreed-on price.
    - Underwriting syndicate: a group of other bankers formed by an investment banker to share the financial risk associated with underwriting new securities.
    - Selling group: a large number of brokerage firms that join the originating investment banker(s); each accepts responsibility for selling a certain portion of a new security issue on a commission basis.
- Efficient market hypothesis:
    - Securities are typically in equilibrium
    - Security prices fully reflect all information available about the firm and its securities
    - Investors need not waste their time trying to find mispriced securities
- Stock valuation methods:
    - Zero-growth model

    - $\frac{Dividend}{required\ rate\ of\ return}$
- Constant growth model (also called Gordon growth model)
    - $\frac{expected\ dividend\ for\ next\ year}{required\ rate\ of\ return - growth\ rate}$
- Variable-growth model
    - $present\ value\ of\ dividends\ during\ initial\ growth\ period + present\ value\ of\ stock\ price\ at\ the\ end\ of\ the\ initial\ growth\ period$
- Free cash flow model
    - $Value_{entire\ company} = discounted\ values\ of\ all\ future\ free\ cash\ flows$
    - $Value_{common\ stock} = Value_{entire\ company} - Value_{debt} - Value_{preferred\ stock}$
    - $Value\ per\ share = \frac{Value_{common\ stock}}{number\ of\ common\ stock\ shares}$
- Book value
- Liquidation value
- P/E multiples
    - $expected\ EPS * industry\ average\ P/E$

Chapter 8: Risk and Return

- Total rate of return
  - $\frac{cash\ flows\ received + selling\ price - purchase\ price}{purchase\ price}$
- Risk is a measure of uncertainty
- Risk preferences:
  - Risk averse
  - Risk neutral
  - Risk seeking
- To decrease portfolio risk
  - Choose assets with the lowest possible correlation
  - Choose assets from countries with business cycles that are not highly correlated with yours
- Total risk components:
  - Diversifiable risk (un-systemic risk)
  - Non-Diversifiable risk (systemic risk)
- CAPM (capital asset pricing model): the basic theory that links risk and return for all assets
  - Beta coefficient: An index of the degree of movement of an asset's return in response to a change in market return
  - Market return: the return on the market portfolio of all traded securities
  - $required\ rate\ of\ return\ on\ an\ asset =$

$$risk\ free\ rate\ of\ return + [\beta_{asset} * (market\ return - risk\ free\ rate\ of\ return)]$$

- Important formulas:
  - Expected value of a return → page 368
  - Standard deviation of returns → page 369
  - Coefficient of variation → page 371
  - Portfolio return → page 373
  - Beta of a portfolio → page 384

Chapter 9: The Cost of Capital

- Cost of capital: represents the firm's cost of financing and is the minimum rate of return that a project must earn to increase a firm's value.
- Sources of capital:
    - Short-term capital
        - Current liabilities
    - Long-term capital
        - Long-term debt
        - Stockholders' equity
            - Preferred stock
            - Common stock equity
                - Common stock
                - Retained earnings
- Flotation cost: The total costs of issuing and selling a security
- Cost of long-term debt
    - Before tax cost of debt
        - Using market quotations (similar to chapter 6)
        - Calculating the cost (similar to IRR)
        - Approximating the cost (equation is on page 415)
    - After tax cost of debt
        - $before\ tax\ cost\ of\ debt * (1 - tax\ rate)$
- Cost of preferred stock
    - $\frac{preferred\ stock\ dividend}{net\ proceeds\ from\ the\ sale\ of\ the\ preferred\ stock}$
- Cost of common stock
    - Retained earnings
        - The retention of earnings increases common stock equity in the same way that the sale of additional shares of common stock does
        - Thus, you can calculate it similar to the methods described in chapter 7
    - New issues
        - $\frac{next\ year\ dividend}{net\ proceeds\ of\ the\ sale\ of\ common\ stock} + growth\ rate$
- Weighted average cost of capital → page 422
- Weighting schemes
    - Book value vs. market value
    - Historical vs. target weights

Chapter 10: Capital Budgeting Techniques

- Capital budgeting process:
  - Proposal generation
  - Review and analysis
  - Decision making
  - Implementation
  - Follow-up
- Basic terminology:
  - Independent vs. mutually exclusive projects
  - Unlimited funds vs. capital rationing
  - Accept-reject vs. ranking approaches
- Capital Budgeting Techniques:
  - Payback period
  - NPV
    - NPV and the profitability index
    - NPV and the economic value added
  - IRR
- Differences between NPV and IRR do occur
  - Theoretically, NPV is better
  - Practically, IRR is preferred