



EQUITY INVESTMENTS ANALYSIS

STUDY NOTES

JULY 2018 SYLLABUS

PAPER NO. 10 EQUITY INVESTMENTS ANALYSIS

GENERAL OBJECTIVE



This paper is intended to equip the candidate with the knowledge, skills and attitude that will enable him/her to value and analyze equity investments

10.0 LEARNING OUTCOMES

On successful completion of this paper, the candidate should be able to:

- Undertake industry and company analysis
- Determine the value of equity securities
- Apply various models in valuing equity investments
- Calculate and interpret equity valuation multiples
- Undertake valuation of private companies
- Apply the concepts of equity market equilibrium.

CONTENT

- Structure of the equity market: Financial system and intermediaries types of orders
- Primary and secondary markets for securities
- Trading equity securities
- Types of equity securities; ordinary shares and preference shares, private versus public
- Investing in foreign equity securities
- Risk and return characteristics of different types of equity securities
- Market value and book value of equity securities
- Comparison of a company's cost of equity, accounting rate of return and investors required rate of return
- Equity security and company value

10.2.1 Overview of company analysis

- Elements that should be covered in a thorough company analysis; forecasting of the following costs: cost of goods sold, selling general and administrative costs, financing costs, and income taxes
- Comparing estimated values and market prices; information efficiency and efficient market hypothesis
- Approaches to balance sheet modeling
- Growth companies and growth stocks; defensive company and stocks; cyclical companies and stocks; speculative companies and stocks.

10.2.2 Overview of industry analysis

- Relationship between industry and company analysis
- Approaches to grouping companies Industry classification systems Factors that affect the sensitivity of a company to the business cycle
- Elements that need to be covered in a thorough industry analysis.
- Principles of strategic analysis of an industry; Competitive forces that shape strategy; effect of competitive forces on prices and costs
- Effects of barrier to entry, industry concentration, industry capacity, and market share stability on pricing power and return on capital.

- Product and industry life cycle models; Classification of industry as to life cycle phases (embryonic, growth, shakeout, maturity and decline); limitations of life-cycle concept in forecasting industry performance
- Comparison of representative industries from various economic sectors
- Demographic, governmental, social and technological influences on industry growth, profitability and risk

10.3 Technical analysis......41

- Overview of technical analysis: definition, assumptions, advantages and disadvantages
- Dow theory: overview ; assumptions; interpretation
- Elliott wave theory: overview ; assumptions; interpretation
- Chart types used in technical analysis
- Trend analysis
- Technical indicators, rules, momentum indicators, pure price and volume techniques; relationships between market efficiency and technical analysis; application of behavioural finance in technical analysis
- Forecasting methodology: conditional forecasting, economic forecasting

- The scope of equity valuation: definitions of value, valuation and intrinsic value, sources of perceived mispricing
- Valuation and portfolio management
- Valuation concepts and models: Valuation of speculative stocks; capital asset pricing model, asset valuation, market capitalisation, shareholder value
- Performing valuations: the financial analyst's role and responsibilities
- Alternative to traditional analysis techniques: cash flow return on investment (CFROI)
- Effects of inflation on the valuation process

- Valuation model of common stock: dividend discount model (DDM)
- Gordon growth model; underlying assumptions; implied growth rate of dividends using growth model and current share price; calculation and interpretation of present value of growth opportunities; strengths and weaknesses of Gordon model
- Valuation of non-callable fixed rate perpetual preferred shares
- Zero-growth model
- Constant growth model
- Multiple growth model
- Multistage dividend discount models: valuing a non-dividend-paying company, first-stage dividend ,H-model, three-stage dividend discount models
- Finding rates of return for any dividend valuation model
- Terminal value in a dividend valuation model
- Determination of whether a stock is overvalued, fairly valued, or undervalued by the market based on a DDM estimate of value
- The financial determinants of growth rates: sustainable growth rate, dividend growth rate, retention rate, and return on equity (ROE) analysis
- Financial models and dividends
- Investment management and DDM

10.6 Free cash flow valuation.....139

- Free cash flow to firm (FCFF) and free cash flow to equity (FCFE) valuation approaches: defining free cash flow, present value of free cash flow, single-stage FCFF and FCFE growth models
- Appropriate adjustments to net income, earnings before interest and taxes(EBIT),earnings before interest, taxes, depreciation, and amortisation (EBITDA) ,and cash flow from operations(CFO) to calculate FCFF and FCFE
- Forecasting free cash flow: computing FCFF from net income(NI), computing FCFF from the statement of cash flows, noncash charges

- Computing FCFE from FCFF, finding FCFF and FCFE from EBIT or EBITDA: Single stage, two-stage, and three stage FCFF models; calculating terminal value in a multistage valuation model
- Uses of sensitivity analysis and scenario analysis in FCFF and FCFE

10.7 Valuation Multiples......163

- Overview of valuation multiples: definition and importance; rationale and drawbacks for using valuation multiples

10.7.1 **Price multiples**

- Method of comparables and the method based on forecasted fundamentals as approaches to using price multiples in valuation
- Alternative price multiples and dividend yield in valuation; fundamental factors that influence alternative price multiples and dividend yield
- Normalised earnings per share(EPS) and its calculation
- Measures of relative value: Price-to-earnings (P/E) ratio, Price-to-book (P/B) ratio, Price-to-cash flow ratio and Price-to-sales (P/S) ratio
- Predicted P/E regression

10.7.2 Enterprise value multiples

- Alternative definition of cash flow
- Enterprise value multiples and its use in estimating equity value
- Momentum indicators and their use in valuation
- Sources of differences in cross boarder valuation comparisons

- Residual income; economic value added(EVA) and market value added(MVA)
- The Residual Income Valuation Model: uses of residual income models; fundamental determinants of residual income ;calculation of intrinsic value of common stock using the residual income model
- The General Residual Income Model: residual income valuation in relation to other approaches(single-stage residual income valuation, multistage residual income valuation)
- Comparison of residual income model to divided discount and free cash flow models
- Determination of whether a stock is overvalued, fairly valued, or undervalued by the market based on a residual income model

10.9 **Private company valuation.....232**

- Public and private company valuation comparison
- Reasons for private company valuation
- Private business valuation: definition of value and how different definitions of value could lead to different estimates of value; income, market, and asset-based approaches to private companies valuation and factors relevant to the selection of each approach
- Cash flow related to private company valuation; valuation of a private company using free cash flow, capitalised cash flow and/or excess earnings methods
- Factors that require adjustment when estimating the discount rate for private companies
- Valuation of private company using capital asset pricing model (CAPM), market approach methods and asset-based approach
- Role of valuation standards in valuing private companies

- Justification for the short term and long term equilibrium
- Grinold-Kroner model
- Yardeni model
- Tobins q
- Short term valuation methods
- Stock market diversity and its measure (entropy)

CHAPTER ONE

12877631 **OVERVIEW OF EQUITY MARKET AND STRUCTURE**

Introduction

Equity market is one of the key sectors of financial markets where long-term financial instruments are traded. The purpose of equity instruments issued by corporations is to raise funds for the firms. The provider of the funds is granted a residual claim on the company's income, and becomes one of the owners of the firm.

For market participants equity securities mean holding wealth as well as a source of new finance, and are of great significance for savings and investment process in a market economy.

Purpose of equity

- 1. A new issue of equity shares is an important source of external corporate financing;
- 2. Equity shares perform a financing role from internally generated funds (retained earnings);
- 3. Equity shares perform an institutional role as a means of ownership.

Within the savings-investment process magnitude of retained earnings exceeds that of the new stock issues and constitutes the main source of funds for the firms. Equity instruments can be traded publicly and privately.

Financial factors that determine external financing through equity instruments

- 1. The degree of availability of internal financing within total financing needs of the firm:
- 2. The cost of available alternative financing sources;
- 3. Current market price of the firm's equity shares, which determines the return of equity investments.

Internal equity financing of companies is provided through retained earnings. Which is scarce making companies turn to look for external financing sources. Firms may raise funds by issuing equity that grants the investor a residual claim on the company's income.

Low interest rates provide incentives for use of debt instruments, thus lowering demand for new equity issues.

Equity markets are markets which organize trading nationally and internationally in such instruments, as common equity, preferred shares, as well as derivatives on equity instruments

THE FUNCTIONS/ROLES OF THE FINANCIAL SYSTEM



1. Save money for the future.

Saving here means buying notes, CDs, bonds, stocks, mutual funds or real estate assets

2. Borrow money for current use.

This is the opposite of the first purpose above. Individuals, companies and governments may need money to spend now (consumption, investment, paying taxes, expenses etc).

3. Raise equity capital.

Companies can sell ownership rights to raise equity capital they need.

4. Manage risks.

People can use financial contracts to offset risks.

5. Exchange assets for immediate (in spot markets) and future (in the futures markets) deliveries.

6. Trade on information.

Information-motivated traders can (or they believe they can) use the financial system to earn a return in excess of the fair rate of return because they have information whose value declines over time (as it becomes recognized by other market participants).

FINANCIAL INTERMEDIARIES

Financial intermediaries are institutions that function as the line of communication between buyers and sellers in the financial system. They seeks to match investors who have specific financial goals with investments opportunities that can aid in the achievement of those goals.

Brokers, Exchanges, and Alternative trading system

A broker executes trade orders on behalf of a customer.

An exchange is like a market where stocks, bonds, options and futures, and commodities are traded. Most exchanges offer different categories of membership and regulate their members' behavior when trading on the exchange.

Alternative trading systems (ATSs) are non-exchange trading venues that bring together buyers and sellers of Securities. ATSs do not exercise regulatory authority over their subscribers and do not discipline subscribers other than exclusion from trading. For example, an electronic communication network (ECN) connects major brokerages and individual traders so that they can trade directly between themselves without having to go through a middleman. **Dark pools** are ATSs that don't display the orders which are usually very large.

Dealers

A dealer trades for its own accounts. Individual dealers provide liquidity to investors by trading the securities for themselves. They buy or sell with one client and hope to do the

offsetting transaction later with another client. In practice, most brokerages are in fact broker-dealer firms.

Securitizers

Securitization is a structured finance process that distributes risk by aggregating assets in a pool (often by selling assets to a special purpose entity), then issuing new securities backed by the assets and their cash flows. The securities are sold to investors who share the risk and reward from those assets.

Depository Institutions and Other Financial Corporations

They accept monetary deposits from savers and investors, and then lend these deposits to borrowers. Both the depositors and borrowers benefit from the services they provide. Depository institutions also provide other services such as transaction services, credit services, etc.

Insurance Companies

Insurance involves pooling funds from many insured entities (e.g. policyholders) in order to pay for relatively uncommon but severely devastating losses which can occur to these entities. The insured entities are therefore protected from risk for a fee. In other words, risks are transferred from these entities to the insurance company.

The insurance company connects customers who want to insure risks with investors who are willing to bear those risks. Insurance companies make money in two ways: Through underwriting, the process by which insurers select the risks to insure and decide how much in premiums to charge for accepting those risks; By investing the premiums they collect from insured parties.

Arbitrageurs

Arbitrage is the practice of taking advantage of a price difference between two or more markets (The law of one price). Simply put, it is the possibility of a risk-free profit at zero cost. The transactions must occur simultaneously to avoid exposure to market risk, or the risk that prices may change on one market before both transactions are complete. Arbitrage has the effect of causing prices in different markets to converge.

Settlement and Custodial Services

A clearinghouse is a financial institution that provides clearing and settlement services for financial and commodities derivatives and securities transactions. A clearinghouse stands between two clearing firms (also known as member firms) and its purpose is to reduce the risk of one (or more) clearing firm failing to honor its trade settlement obligations.

Equity market transactions

Bid-ask spread

Spread = ask price - bid price.

The market bid-ask spread is the excess of the lowest ask price over the highest bid price and is normally smaller than the spreads of individual market-makers.

From the perspective of investors, dealers (in their role as market-makers) provide two important services:

- 1. Possibility to execute a trade immediately from inventory, without having to wait for counterparty to emerge.
- 2. Maintenance of price stability in the absence of corresponding sell or buy orders. By trading from their own stockholdings, dealers reduce price fluctuations.

The dealer costs include the administrative costs of transferring shares.

The dealer risks arise from price fluctuations and information-based investors.

Factors influencing the spread

- Order costs costs of processing orders, including clearing costs and costs of recording transactions;
- \checkmark Inventory costs include the costs of maintaining an inventory of particular shares;
- ✓ **Competition** the larger the number of market makers, the greater their competition, and the narrower is the spread;
- ✓ Volume the larger the trading volume, the more liquid are the shares, the less risk of share price change;
- ✓ **Risk** the more risky are company operations, the more volatile are its shares, the higher spread is se

NOV 2017 Q4b

i. Ann Nyabuto has 1000 shares to sell at sh.19.83 Identify from the limit size any price that is sh.19.83 and above.

	Sh.
Joan: 200 x 19.84	3,968
John: 400 x 19.89	7,956
Answer: 300 x 20.02	<u>6,006</u>
	17,930

ii. In spite of not of all the shares being taken up, the shares were able to be sold at an average price of sh.19.92 which is slightly higher than the price Ann Nyabuto submitted.

NOV 2016 Q1 (a)

Placing order

An investor who wants to buy shares on a stock exchange has a possibility to submit different types of orders through a broker.

Market order is the simplest and most common. It requires that the shares should be traded at the most favorable price available.

Limit order places a limit on the price at which shares can be bought or sold. Thus it specifies purchase or sale of shares at maximum buying price or minimum selling price, respectively.