NATIONAL OPEN UNIVERSITY OF NIGERIA

SCHOOL OF MANAGEMENT SCIENCES

COURSE CODE: BHM721

COURSE TITLE: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

COURSE GUIDE

BHM721: SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Course Code	BHM721
Course Title	Security Analysis and Portfolio Management
Course Developer/Writer	Dr. J. N. Obi National Open University of Nigeria
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BHM721 **COURSE GUIDE**

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INTRODUCTION

BHM721: Security Analysis and Portfolio Management, is a one semester course work having two credit units. It is available to students on Postgraduate Diploma Programme in the School of Management Sciences at the National Open University of Nigeria.

The course of made up of 16 units covering essential topics in Security Analysis and Portfolio Management. It also treated in detail valuation of common stocks, bonds and preferred stock and discussed the sources of common stock value

This course guide tells you what the course is all about, the relevant textbooks you should consult, and how to work through your course materials to get the best out of it. It also contains some guidelines on your tutor-marked assignments.

COURSE CONTENTS

The aim of this course is to introduce you to the subject of Security analysis and the management of portfolios of investment. The course contains core security analysis topics such as types of stock and risk and returns inherent in each type, how to measure risks and returns in your investment, random walk of stock prices, efficient markets, and how to manage investment portfolios.

Security analysis and choice of investment instrument are almost daily affairs in human life. Sometimes we carry out security analysis and investment activity without even being aware that what we are performing the exercise. Before we put money into any business undertaking or attempt to buy shares from any company (blue chip or otherwise), we have to, first of all, analyze the stock and understand how safe and profitable it will be for us.

COURSE AIMS

The course aims to groom the student in the process of security analysis which prepares him for life journey through investment and portfolio management. Sooner or later, the student, after his studies, will be involved in making one investment or another to make gains to sustain himself and his family. Also, knowledge of security analysis and portfolio management, and the understanding of the tricks and intricacies of risks and returns on investment instruments will be useful to the student in other areas of human endeavour.

COURSE OBJECTIVES

In order to achieve the full aims of the course, the study is divided into coherent units and each unit states, at the beginning, the objective it is out to achieve. You are therefore advised to read through the specific objectives before reading through the unit. However, the following represent some of the broad objectives of the course. That is to say, after studying the course as a whole, you should be able to:

* Overview of Security Analysis and Portfolio Management.
* Describe the participants in the investment process and the various types of investors
* Explaining random walk of stock prices and efficient markets
* Describe the basic types of security markets and the characteristics
* Processes of investment in bond
* Describe steps in the investment process and the establishment of investment goals
* Explaining deficiencies of financial statements
* Evaluation of common stocks
* Review the concept of return, its components and its importance
* Analysis of investment return
* Risk and returns on investment
* Investment in fixed income securities
* Preferred stocks and convertible securities

WORKING THROUGH THIS COURSE

It is imperative that you read through the units carefully consulting the suggested texts and other relevant materials to broaden your understanding. Some of the units may contain self-assessment exercises and tutor-marked assignments to help you. Only when you have gone through all the study materials provided by the National Open University of Nigeria (NOUN) can you satisfy yourself that indeed you have completed the course. Note that at certain points in

the course you are expected to submit assignments for assessment, especially the Tutor-Marked Assignment (TMAs). At the end of the course, there will be a final examination to test your general understanding of the course.

COURSE MATERIALS

Major components and study units in the study materials are:

Course Title: BHM721 SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Study Units

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Module 1

Module 2

Module 3

Module 4

TEXTBOOKS AND REFERENCES

You should use the prepared text for the course made available to you by NOUN. However, in your own interest, do not limit yourself to this study text. Make effort to read the recommended texts to broaden your horizon on the course.

ASSIGNMENT FILE

The assignment file will be made available to you (where applicable). There, you will find details of all the work you must submit to your tutor for marking. The marks you obtain from these assignments will count towards the final mark you will obtain to hit the required pass-mark for the course.

ASSESSMENT

Your performance on this course will be determined through two major approaches. The first is through your total score in the Tutor-Marked Assignments, and the second is through the final examination that will be conducted at the end of the course. Thus, your assessment in the course is made up of two components:

Tutor-market Assignment	30%
Final Examination	70%

The self-assessment tests which may be provided under some units do not form part of your final assessment. They are meant to help you understand the course better. However, it is important that you complete work on them religiously so that they will help in building you strongly and serving you as mock-examination.

TUTOR-MARKED ASSIGNMENT

At the end of each unit, there is a Tutor-Market Assignment (TMA), which you are encouraged to do and submit accordingly. The study centre manager/ tutorial facilitator will guide you on the number of TMAs to be submitted for grading.

Each unit of this course has a TMA attached to it. You can only do this assignment after covering the materials and exercise in each unit. Normally, the TMAs are kept in a separate file. Currently, they are being administered on-line. When you answer the questions on-line, the system will automatically grade you. Always pay careful attention to the feedback and comments made by your tutor and use them to improve your subsequent assignments.

Do each assignment using materials from your study texts and other sources. Try to demonstrate evidence of proper understanding, and reading widely will help you to do this easily. The assignments are in most cases easy questions. If you have read the study texts provided by NOUN, you will be able to

answer them. Cite examples from your own experience (where relevant) while answering the questions. You will impress your tutor and score higher marks if you are able to do this appropriately.

FINAL EXAMINATION AND GRADING

At the end of the course, you are expected to sit for a final examination. The final examination grade is 70% while the remaining 30% is taken from your scores in the TMAs. Naturally, the final examination questions will be taken from the materials you have already read and digested in the various study units. So, you need to do a proper revision and preparation to pass your final examination very well.

HOW TO GET THE BEST OUT OF THIS COURSE

The distance learning system of education is quite different from the traditional or conventional university system. Here, the prepared study texts replace the lecturers, thus providing you with a unique advantage. For instance, you can read and work through the specially designed study materials at your own pace and at a time and place you find suitable to you.

You should understand from the beginning that the contents of the course are to be worked on carefully and thoroughly understood. Step by step approach is recommended. You can read over a unit quickly y to see the general run of the contents and then return to it the second time more carefully. You should be prepared to spend a little more time on the units that prove more difficult. Always have a paper and pencil by you to make notes later on and this is why the use of pencil (not pen or biro) is recommended.

FACILTATORS/TUTORS AND TUTORIALS

Full information about learning support services or tutorial contact hours will be communicated to you in due course. You will also be notified of the dates, time and location of these tutorials, together with the name of your tutors. Your tutor will mark and comment on your assignments. Pay attention to the comments and corrections given by your tutor and implement the directives as you make progress.

USEFUL ADVICE

You should endeavour to attend tutorial classes since this is the only opportunity at your disposal to come face to face with your tutor/lecturer and to0 ask questions on any grey area you may have in your study texts. Before attending tutorial classes, you are advised to thoroughly go through the study texts and then prepare a list of questions you need to ask the tutor. This will afford you opportunity to actively participate in the class discussions.

SUMMARY

Security analysis and portfolio management is at the heart of every investor. Some investors do it locally or traditionally and others do it in a sophisticated way through experienced analysts. As we have earlier noted, the ultimate purpose of security analysis is to guide us to make wise investment that will yield us profits. You put the money you have today in an asset with the hope of earning profit or

interest on it tomorrow. If you put money in the wrong stock, you will make loss. Careful security analysis will always reveal profitable stocks in which the would-be investor can invest.

BHM721 SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

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MODULE 1

UNIT 1 THE INVESTMENT SETTING

CONTENTS

1.0 INTRODUCTION

Investment has many facets. It may involve putting money into bonds, Treasury bills, or notes, or common stock, or paintings, or real estate, or mortgages, or oil ventures, or cattle, or the theatre. It may involve speculating in bull markets or selling short in bear markets. It may involve choosing growth stocks, or blue chips or defensive stocks or income stocks.

2.0 OBJECTIVES

At the end of this unit, the student should be able to:

* Give the true definition of security analysis
* Understand how inflation affects common stock value
* Know different types of common stock

3.0 MAIN CONTENT

3.1 What Investment Means

Investment could mean buying 100 shares of Coca Cola at N10 per share, and watching it appreciate over a few years and be able to sell them and make capital gain. It could mean buying Xerox shares at N20 per share and seeing it grow to N35 per share. When stock prices appreciate, the investors make capital gain and when prices fall he investor suffers losses of capital loss.

3.1.1 How Investment Alternatives Compare

Every investment is a balancing of objectives and purposes. A very safe investment may not provide protection against inflation. An inflation resistant investment may not provide liquidity. And there is still an on-going debate over the risk-return trade off

It has been widely assumed that the higher the risk undertaken in an investment, the more ample the return and, conversely, the lower the risk, the more modest the result. But recent research has shown that this is often not the case. Different investment media fit different investment objectives but the fit is seldom perfect. The average investor seeks a safe, inflation resistant investment, which provides a good return, with capital gains opportunities, but which can be liquidated quickly if necessary.

3.1.2 Common Stock and Inflation

To most individuals, investment means buying common stock. There are several reasons why this is so. First, the bull market in the 1980 provided substantial capital gains for many of those in the market. In fact, over a longer period, a study conducted by the Centre for Research in Security Prices of the University of Chicago found that anyone who had invested in common stock broadly from 1980 on and had held through 1987 would have realized an average annual rate of return compounded annually.

3.1.3 Common Stock Hedge

How effective has the common stock hedge been over the long run? A study by the Anchor corporation Chicago, U.S.A. indicated that living costs rose in 62 percent of the one-year period since 1980 and in 66 percent of the ten-year period. When longer periods were tabulated, it was found that living costs increased in 73 percent of the 15-year period, 80 percent of the 20 –year period, and in 95 percent of the 30-year period. Whether they had invested for one year or longer, investors have had inflation in store for them more than half the time since 1982. Over 20-year span they have experienced inflation three quarters of the time; over 30-year span nearly all the time.

3.2 Types of Common Stock

There is a diversity in common stock which extends not only to industry and to company but to type of stock as well. In the loose and flexible language of the street, it is customary to speak of blue chip stocks, of growth stocks, of cyclical stocks, of income stocks, of defensive stocks, and of speculative stocks. Lines of demarcation between types are not precise and clear, but investors have a general notion of what is meant by each of these imprecise categories.

3.2.1 Blue Chip Stocks

Blue chip stocks are high-grade investment quality issues of major companies which have long and unbroken records of earnings and dividend payments. Stocks such as American Telephone and Telegraph, and Liver Brothers in Nigeria are generally considered “blue chips.” The term is used to describe the common stock of large, well-established, stable, and mature companies of great financial strength. The term was originally derived from Poker Card Game where blue chips (in contrast with white and red chips) had the greatest money value.

The ability to pay steady dividends over bad years as well as good for a long period is, of course, an indication of financial stability. Some of the “blue chips” of yester-years have fallen from greatness. What constitutes a blue chip does not change over time but the stocks that qualify as blue chips do change from time to time.

3.2.2 Growth Stocks

Many of the blue chips may also be considered growth stocks. A growth stock is the stock of a company whose sales and earnings are expanding faster than the general economy and faster than the average for the industry. The company is usually aggressive, research-minded, paying dividends but plowing back enough earnings to facilitate expansion.

Growth stocks are usually quite volatile. They go up faster and farther than other stocks, but at the first hint that the high rate of earnings is either leveling off or not being sustained, prices can come tumbling down. For example, Texas instrument, a high-flying growth company of the late 1970s saw its earning fall from N300 million in 1970 to about N80 million in 1975.

3.2.3 Different Criteria for Measuring Growth Stock

Some prominent American fastest growing companies use somewhat different criteria to measure growth stock. Under this method, a company is listed as growth stock company if its annual profits per shared have grown without interruption over the most recent three years at a minimum compound rate of 10 percent a year and if there is evidence of continued growth at the time of listing. A company is removed from the list (a) when profits in any 12-month period decline more than 10 percent from its most recent fiscal year period or when a reliable forecast reveals that such a decline is in prospect or (b) if annual growth in earnings over the most recent two years averages less than 5 percent and growth in the latest reporting is less than 10 percent over the like period of the prior year.

3.3 Income Stocks

Some people, particularly the elderly and retired, buy stock for current income. While in recent years stocks have yielded less, on the average, on current dividends, than bonds or the return on savings accounts. There are also some stocks which may be classified as income stocks because they pay a higher than average return. Income stocks are those that yield generous current returns. They are often sought by trust funds, pension funds, university and college endowment funds, and charitable educational and health foundations.

Selecting income stocks can be a very tricky business. The stock can be paying high return because price has fallen due to the fact that there is considerable uncertainty as to whether the dividend can be maintained in the light of declining earnings or the stock may be that of a lackluster company in an unpopular industry, with little future.

3.3.1. Cyclical Stocks

Cyclical shares, in Wall Street terminology, refer to stocks of companies whose earnings fluctuate with the business cycle and are accentuated by it. When business conditions improve, the company's profitability is restored and enhanced. The common stock price rises. When conditions deteriorate, business for the cyclical company falls off sharply, and profits diminish greatly.

Industries which may be regarded as cyclical include steel, cement, paper, machinery and machine tools, airlines, railroads and railroad equipment, and automobiles.

3.3.2 Defensive Stocks

At the opposite pole from cyclical stocks are the so-called defensive stocks. Defensive stocks are shares of a company which is likely to do better than average, from an earnings and dividends point of view, in a period of deteriorating business cycle . If a recession is anticipated, a growing interest tends to develop in certain recession-resistant companies. While such stocks lack the glamour of the fallen market leaders, they are characterized by a degree of stability desirable when the economy faces a period of uncertainty and decline.

Utility stocks are generally regarded as defensive since their slow (5 to 7 percent) but steady growth rate tends to hold up in recession years as well as in boom years. They are, however, very sensitive to interest rate changes. They fall in price if interest rates rise sharply, and, on the other hand, they increase in price if interest rates decline.

In addition to the electric and gas utilities, the shares of gold mining companies have tended to be effective defensive issues. The price of gold either rises or remains stable during recessions, while the cost of mining may decrease due to lower costs. Also, the market demand for gold seems to hold up or even increase. Other defensive issues are found among companies whose products suffer relatively little in recession periods. These include shares in companies producing tobacco, snuff, soft-drinks, candy bars and other staples. Also, companies that provide the essentials of life, particularly food and drugs tend to hold up well. Packaged foods and grocery chain companies are good examples.

3.3.3 Speculative Stock

Speculation can be defined as a transaction or business that leaves its profit to chance and luck. That is a conjectural transaction with no certainty of profit. In this sense, it means that all common stock investments are speculative business. When you buy shares you have no promise, no certainty that the funds you will receive ultimately when you sell the stock will be more, less or the same as the dollars or Naira you originally paid.

Yet in the accepted parlance of the street, speculative shares or speculative stocks have a more limited or restrictive meaning. High-flying glamour stocks are speculative. Likewise, hot new issues and penny mining stocks are speculative. Other types can be identified as they come and go from time to time. Some are easy to identify and others are quite difficult to analyze and classify.

4.0 CONCLUSIONS

We have discussed in this unit that investment may involve putting money into bonds, Treasury bills, or notes, or common stock or real estate. The basic objective in any form of investment is to earn more profit or to increase your wealth. We also noted that all investments are a balancing of objectives and purposes. A very safe investment may not provide protection against inflation. An inflation-resistant investment may not provide liquidity in times of need. Common stock can be categorized as blue chip stocks, growth stocks, cyclical stocks, income stocks, defensive stocks and speculative stocks.

5.0 SUMMARY

This unit has looked at what investment stands for – putting money into shares, stocks and real estate with a view to earning future profits. The student has been taught that most investments involve risks since one cannot be sure today what the earnings will be tomorrow. Common stock can be broken into many types and each time has its own peculiar characteristics.

6.0 TUTOR-MARKED ASSIGNMENT

* All investments are a balancing of objectives and purposes. Explain this statement.
* What are the outstanding qualities of a blue chip firm?

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
Published by McGraw-Hill Company Inc., 1221 Avenue, New York, U.S.A.

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Glorious Hope Printers, Glorious Hope House, 53 Jagunmolu Street, Bariga, Lagos.

UNIT 2 RANDOM WALKS AND EFFICIENT MARKETS

CONTENTS

1.0 INTRODUCTION

This unit will look at what is known as Random Walks and Efficient Markets. The basic concept is the fact that it is not clear what causes changes in stock price. Movement of Price may not follow conventional rules and price movement becomes random and difficult to understand.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

- The Random Walks of stock price
- The meaning and characteristics of Efficient Market

3.0 MAIN CONTENT

3.1 Random Walks and Efficient Markets

Before beginning to look at common stock and its analysis, the aspiring security analyst must, first of all, navigate the perils of two widely held academic concepts: "Efficient Market" and "Random Walk." Both concepts will engage the security analyst and the portfolio manager in an academic exercise which sometimes seems futile and endless

3.1.1 The Meaning of Random Walks and Efficient Markets

According to one authority, an efficient market is one in which prices always fully reflect all available relevant information. Adjustment to new information is virtually automatic and instantaneous, while a random walk implies that there is no discernible pattern of travel or movement of stock price. The size and direction of the next movement of stock price cannot be predicted from the size and direction of the previous movements. Random walk is a term used in mathematics and statistics to describe a process in which successive changes and movements are statistically independent.

Combined, in the words of another authority, "first, the theory (random walk and efficient markets) says that new information about a company, its industry, or anything that affects the prospects of the company is disseminated very quickly, once it becomes public. Second, the price of a stock at any particular time represents the judgment of all investors, based on all the information that is public. And third, new information about as company is disseminated randomly over time.

3.1.2 Forms of Random Walk

A guru in security analysis pointed out that there are two forms of random walk – narrow and broad random walks. He further said "thus an accurate statement of the narrow form of the random-walk hypothesis goes as follows: The history of stock price movement contains no useful information that will enable an investor to consistently out-perform a buy and hold strategy in managing a portfolio. If this is correct, then the technical analysis (predicting future stock prices based on analysis of past stock prices and other internal market factors such as volume, breadth, highs and lows) are simply futile academic exercise.

Fundamental analysis of stock is also not of any significant importance. The guru in security analysis demolished the useful of fundamental analysis of stock in his broad form statement which says: The broad form states that fundamental analysis of stock is not helpful either. It says that all that is known concerning the expected growth of the company's earnings and dividends, all of the possible favourable developments affecting the company that might be studied by the fundamental analyst, are already reflected in the price of the company's stock.

3.1.3 Stocks that Do Better

The position of some investment experts has even been more extreme than the strong form of the random walk hypothesis. They argue that attempts to pick stocks that do better than others are not successful. Actively managed portfolios do not do better than buy-and-hold portfolios gross of expenses, and do worse than buy-and-hold portfolios when transactions and administrative costs are taken into consideration.

This is particularly true when you adjust the performance of actively managed portfolios for the extra risk that they incur, because they tend to concentrate their investments in a relatively small list of stocks. Thus, they said that it is better to buy a well diversified portfolio of stocks at a chosen risk level and hold it. An investor should change his list of stocks only to compensate for changes in the risk of stocks that he holds and to keep his portfolio well diversified.

3.2 The Dilemma of the Aspiring Security Analyst

What does all these theoretical jargon mean for the aspiring security analyst? To many, it may suggest that he is pursuing a career that has no real purpose of function. Why? Because in an efficient market, buyers and sellers factor into their buying and selling decisions all known influences and knowledge, both public and private that has impacted, or is currently impacting or will in future impact on the price of a security. Since the current price reflects all the facts about the security and since prices generally reflect swiftly any new developments, all the digging by the security analyst can add little or nothing to the body of knowledge, which has itself determined the current price of a security. In its strongest form, the random-walk, efficient market hypothesis maintains that past stock prices or earnings cannot be used to forecast future prices or earnings since both series behave randomly and already reflect all known facts and information about the market, an industry, a company, stock prices, or the price of a single stock.

Yet all is not lost. It is the thousands of trained security analysts who are the eyes and ears of the efficient market. It is the industrious, probing, prying analyst who ensures that relevant information, and even rumour and hypothesis, is quickly reflected in the current price, and who, by the collective weight and chain reaction to prospective trends, helps determine the future price.

3.2.1. Development of Index Funds

One response of the investment community to the efficient market concept has been the development of “index” funds. A small but growing number of money managers administering pension accounts have placed part of their investment assets in so-called index funds. The idea is that, since the average

money manager cannot do as well as the averages, the way to be sure of at least keeping up with the averages is via the index fund approach. This has the added advantage of doing away with so-called analytical judgment and attendant investment fees. The portfolio manager is, in essence, replaced by a computer. In the process, brokerage fees are held down since these funds have low portfolio turnover rates.

3.2.2 Styles in Stocks

Fads and enthusiasms can be either very costly or very profitable to investors. Styles in common stocks, an expert analyst pointed out change almost as rapidly as women's fashion. Reviewing past enthusiasms, one can go back as far as World War I, during the course of which a company like Bethlehem Steel was in high fashion. It jumped from $10 a share in 1914 to $200 in one year.

In more recent years, aluminum stocks were very much in style in the early 1950s. Alcoa went from 46% in 1949 to the equivalent of 352% in 1955. Raynolds Metal rose from 19% to the equivalent of 300% over the same period. As a group, the aluminum stocks rose some 430% in the early 1950s and then fell out of bed in 1957, declining by more than 50%. The advent of the computers helped push IBM from 40% to over 600% and Control Data from 2% to over 100%

3.2.3 Conversion into Common Stock

The bonds were subsequently converted into common stock at $10.75 per share. The preferred shares were converted into common stock at $1 per share. There followed, after conversion, a 2.5% stock dividend, a 2 for 1 stock split, and another 2.5% stock dividend. When LIT common stock hit q high of $143 per share by 1961, each $29,200 unit had grown to 29,416 shares of common stock worth $4.2 million.

Other investors were not so fortunate. Towards the end of 1961 Business Week reported that Glamour Industry took its lumps. Shake-out among electronics companies is starting as industry matures after a decade of fast, youthful growth. To survive, the report said, a company will need sharp management.

3.3 Fundamental Analysis

The heart of the investment process is choosing what to buy and when to buy it, deciding what to sell and when to sell it. Coal and Steel (seemingly both basic industries), why buy one and not buy the other? The choice to the casual investor may not have appeared very crucial or complicated but over the recent decade coal shares were among the best performers. If you had bought Eastern Gas and Fuel, you would have a 142% gain.

The Pittson Company shares rose 687%. On the other hand, national Steel fell 39%, while Republic Steel declined 37%. By and large, investments in utilities, aerospace, automobiles, food and food chains, life insurance, cement, telephone, aluminum, and apparel would likely have had poor results, while, on the other hand, coal, gold mining, beverages (soft drinks), retail variety stores, office equipment, distillers, and drugs would have done well.

3.3.1 Fundamental Analysis of Common Stock

By security analysis we mean, of course, fundamental analysis. This is the basic process of ther evaluation of common stock by studying earnings, dividends, price-earnings multiples, econ omic outlook for the industry, financial prospects for the company, sales penetration, market share, and quality of management. Selecting the industry or industries which are likely to do best over the next three to five years and then choosing the company or companies within the selected industries which are likely to out-perform their competitors – this is the essence of fundamental analysis.

In general terms, there are four aspects of any complete and concise analysis: (a) the sales analysis and forecast, (b) the earnings analysis and forecast, (c) the multiplier analysis and forecast, and (d) the analysis of management, a qualitative consideration.

Basic to any estimate of earning power is a sales analysis and forecast. Growth of demand for a company's products is essential for common stock appreciation. While expanding production and sales do not guarantee rising profits, rising demand or the introduction of new products, at least gives a company an opportunity to earn a rising profit.

What the analysis is seeking is a working forecast of sales in order to determine the profit implications of the sales forecast. But just as a sales forecast is essential to an effective profits forecast, an economic forecast is a preliminary pre-requisite to the sales forecast. The starting point of an effective industry and company forecast may be a GNP forecast, with a breakdown of components. For example, a forecast of sales for the automobile industry may be tied to the gowth of real GNP by using historic figures on the number of cars sold per billion dollar increase in real GNP.

3.3.2 Obtaining the Estimate of Prospective Earnings Growth Rates

Having obtained an estimate or range of estimates of prospective sales growth rates, the next step is to proceed to obtain an estimate, or range of estimates, of prospective earnings growth rates. To achieve this, an analysis of earnings is necessary. One approach is to start with the GNP forecast and drive from it a prospective corporate profits trend for all industry. Then factor out a profits trend for the particular industry under review, making such adjustments as special industry characteristics suggest a greater or lesser rate of growth than that or the total corporate profits series. From this develop a company estimate, again making adjustment for special company characteristics.

One can also prefer to start with the sales forecast developed earlier and relate this to the company's profit margin, operating income, equity turnover, rate of return on equity, earnings before interest and taxes. Net income after interest and taxes, returns on total capital, and net earnings per share. By dissecting the anatomical character of a corporation's profitability and measuring the impact of prospective changes on each element, it is possible to derive an estimate of a range of future earnings from one to three years ahead.

Once an earnings forecast, or a range of forecasts, is derived, it remains to develop and apply a multiplier, the price earnings ratio. Many factors help to determine a price-earnings ratio. Among these are the growth rate of earnings, actual and anticipated, the dividend payment, the marketability and volatility of the stock, the stability or volatility of earnings, and the quality of earnings and of management. Of these, perhaps, the growth rate of earnings is the most significant. In general, there seems to be a consensus that the higher the growth rate of earnings, the higher the price earnings ratio.

From this brief summary of fundamental analysis, it should be clear that the modern approach to common stock, evaluation centres on a two-part question. That is the potential growth of earnings and dividends of a company whose stock is being analyzed and what is a reasonable price to pay for that potential?

3.3.3 Investment Timing

Decision as to when to buy and sell stocks is as important as the choice of what stocks to buy. Investment timing is possibly even more difficult a task than investment choice. But the competent analyst must constantly make a judgment as to the trend and level of the market as a whole to provide the appropriate environmental setting for portfolio additions or deletions.

4.0 CONCLUSION

Under this unit we studied the efficient market and the random walk as they affect the stock price movement. We stated that in an efficient market, prices reflect all available relevant information. The random walk, on the other hand, implies that there is no discernible pattern of travel of stock prices. We also discussed that the heart of the investment process is choosing what to buy and when to buy it.

5.0 SUMMARY

The key topic of this unit is the efficient market and the random walk of stock prices. The price of stocks change from time to time but there is no definite pattern followed by this change in price. In investment practice, the choice of what stocks to buy is essential and it requires careful analysis. Investors should also be aware that investment timing is as important as the choice of stocks to buy.

6.0 TUTOR-MARKED ASSIGNMENT

* Briefly explain what you understand by Random Walks and Efficient Markets
* Investment timing and the choice of stock in which to invest are not important. Discuss.

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
Published by McGraw-Hill Company Inc., 1221 Avenue, New York, U.S.A.

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UNIT 3 BOND INVESTMENT

CONTENTS

1.0 INTRODUCTION

The two most popular financial instruments in which investors can invest are the common stocks and bonds. While the common stock makes the investor part owner of the company, the bond holder is largely a provider of funds on which interest is to be paid. This unit will discuss the various types of bond an investor can invest on.

2.0 After studying this unit, the student will be familiar with the following:

* Different types of bond
* Bond pricing and interest rates
* Bond Analysis and Ratings

3.0 MAIN CONTENT

3.1 Investment in Bonds

When a bull market begins to near its peak, when blue chips begin to sag, when speculative high fliers and low-priced cats and dogs begin to get the play, when stock yields fall to 3 percent or less and the yield spread between stocks and high-grade bonds widens to 4 percent in favour of bonds, when business is booming and interest rates are tight, the shrewd institutional investment manager who has choice and flexibility will quietly withhold funds from new common stock commitments and place the funds in high-grade bonds.

When prosperity tops out into recession, when business and common stock prices begin to slide, high-grade bonds come into favour. As interest rates decline, high-grade bond prices rise. High-grade bond prices tend to vary inversely with interest rates and with common stock prices. As recession turns into recovery, reverse trends set in. Interest rates and common stock prices which have fallen start to rise and high-grade bond prices tend to weaken. Generally speaking, high-grade bonds are those bonds rated AAA or AA by the Rating Services.

3.1.1 Primary Investment Interest in Bonds

The primary investment interest in bonds comes from institutions such as banks and insurance companies which must pay obligations in fixed number of dollar or Naira. If you have a $50,000 Life Insurance Policy, for example, at some point in the future, whether 5 years or 30 years later, the company will have to pay the $50,000. If it invests in securities (bonds) which will return it a fixed number of dollars, it is in a position to meet its obligation. It does not matter in this case whether the dollars it gets back buy half as little as when they were invested. It has a fixed dollar obligation, not a purchasing power obligation.

The individual investor may shy away from high-grade bonds because of the purchasing power risk, but most institutional investors have less need to worry about this problem. Individual investors, especially wealthier ones, find special interest in several types of bonds particularly tax-exempts and convertibles. As a hedge against recession and deflation, however, switching from common stock to high-grade bonds as a boom tops out may be an excellent, profitable move for any investor.

3.1.2 Bond Price and Interest Rates

The principal price risk in high-grade bonds is related to the trend of interest rates. If a commercial bank holds high-grade bonds, and interest rates, which had been low, start to rise, and the bank must sell its bonds, because funds are needed for some other purposes, such as expanding business loans, then a capital loss results. Why? If the bonds carry a coupon rate of interest of, say 6 percent, and similar quality bonds now are being issued with coupons of 7.5 percent or higher, no one will be willing to purchase the 6 percent bond at par value.

The unwillingness of buyers to pay the previously prevailing prices, coupled with the actual selling pressure of investors who are seeking to raise funds for other investments, forces the price of the old 6 percent issue down, and it will fall to the point where its price in the market yields the new purchaser approximately the same rate of return as the average new, higher level of rates in the market. Thus, as the boom moves ahead, the demand for funds expands, and interest rates rise, high-grade bond prices will fall as stock prices rise.

At the peak of the expansion, when the central banking authorities are pursuing a tight money policy, which has driven interest rates up, bond prices down, the institutional investment manager may start switching from common stocks to high-grade bonds. As expansion turns to recession, tight money will be relaxed, interest rates will be allowed to fall, and they will go down because the demand for funds has slacken, and high-grade bond prices will rise. In fact, the deeper the recession, the higher will go the prices of high-grade bonds as institutional investment demand switches to them and thus bids up their prices. However, if inflation accelerates during a recession, interest rates will rise since lenders will demand a premium to cover the inflation.

3.2 Types of Bonds

Bonds may be either secured or unsecured and may range from first-mortgage bonds on the one hand to subordinated debentures on the other. The security behind a bond, while important, is not crucial. The earning power, financial condition, and quality of management are vital. Because of this, one company's unsecured bonds may be rated higher than another company's secured obligations. For example, the debentures of AT&T Company are rated higher than the first-mortgage bonds of Indianapolis Power and Light Company in the United States.

Mortgage bonds are secured by a conditional lien on part or all of a company's property. Id the company defaults (fails to pay interest or repay principal), the bond holder, through the trustee appointed to represent them and look after their rights, may foreclose the mortgage and take over the pledged property.

Some corporate mortgages have what is called "after acquired" property clause, which provides that all property thereafter acquired will become subject to the mortgage and automatically be pledged to secure the bond issue. While this is not widely found, it is very favourable to the investor, and where it exists, if the company wishes to float another bond issue secured by mortgage on its property, this second mortgage will be a junior lien, subordinate to the first mortgage or senior lien on the property.

3.2.1 Junior Issues

Usually, when companies float junior issues, secured by junior liens, they do not clearly label them as such. They call them "general" or "consolidated." A prospective investor determines the security status of bonds by reading the bond indenture. The indenture is the formal, and usually lengthy, legal contract between the borrowing company and the creditor bond holders. The indenture spells out all the detailed terms and conditions of the loan. It also indicates whether more bonds may be issued with the same security or under the same mortgage. If so, the mortgage is said to be "open-ended." Additional issues of bonds under an "open-end" mortgage will naturally dilute the security available for earlier issues. If the mortgage is "close-ended," no additional bonds may be issued under the same mortgage, and the issue therefore has better protection and value.

3.2.2 Pledge of Specific Securities

A bond secured by a pledge of specific securities is known as a "collateral trust bond." These are issued mainly by holding companies, close-ended investment companies, and finance companies. They have not been popular in recent years. The "equipment trust bond" or "equipment trust certificate." is usually used to finance the purchase of rail-road stocks. Under this arrangement, title to equipment (freight cars. Locomotives, passenger cars and so on) being bought by a railroad rests in a trustee who holds it for the benefit of certificate holders. The railroad makes a down payment say 20%, and the trustee issues equipment trust certificate to cover the balance of the purchase price of the equipment. The trustee then leases the equipment to the railroad under an agreement whereby the railroad obtains title to the equipment only when all obligations have been met.

3.2.3 Debentures

Debentures are unsecured bonds protected only by the general credit-worthiness of the borrowing corporation. They may contain a "covenant of equal coverage" which means that if any mortgage bond is issued in the future, which ordinarily would take precedence over the debentures, the issuer agrees to secure the debentures equally. This type of security is protected only by the general promise to pay. In the event of default, the debenture holder is merely a general creditor. The value of a debenture must be judged wholly in terms of the earning power and overall financial status and outlook of the issuing company, which, sometimes, is the best way for evaluating any bond.

Convertible Bonds: Convertible bonds are bonds which may be exchanged, at the option of then holder, for a specified number or amount of other securities, usually common stock. Usually the bond is convertible into a fixed number of shares of common stock.

Income Bond: An income bond is a debt instrument whose distinguishing characteristic is that interest need be paid only if earned. Originally, many income bonds arose out of railroad reorganizations and reflected the effort to reduce the burden of fixed charges to manageable proportions.

Tax-Exempt Bonds: Tax-exempt bonds are of special interest to wealthy investors and to certain institutional investors. The income from State and Municipal bonds is not subject to the United States Federal income tax. This may mean that a non-taxable yield of 3.5% on a state or municipal bond may be equivalent to twice or three times as much as on a taxable security, depending on the investor's income tax bracket.

3.3 Bond Analysis and Ratings

For the individual investor and smaller institutional investor, an initial step in bond analysis is to go to one of the financial services firm such as Standard and Poors or Moody Company and see what rating they have assigned to the bond you want to invest in. While these rating companies are not infallible, their expert staff are accustomed to judging the relative merits of fixed income securities, and the rating will give you a clear idea of the approximate quality of the bond. It is a useful orientation for looking further into the merits, or lack of merits of the proposed purchase. It may be that when the rating assigned is seen, there may be no further interest in the bond.

In one sense, bond evaluation is not very different from stock evaluation. The real basis for evaluation lies in the financial status and earning power of the corporation borrowing or governmental unit. The far-sightedness and efficiency of management, the outlook for the industry, the position of the particular firm in the industry, the company's earning power and then soundness of its internal finances as reflected in its balance sheet and income account, all must be carefully considered.
The security behind a bond is, in itself, no guarantee of soundness, since the value of the pledged property is usually dependent on earning power. If the company fails, its fixed assets may prove to be worth very little.

3.3.1 Risk and Return on Bonds

Investors are subject to major types of investment risks. These include the following:

1. Business risk (i.e., a decline in earning power), which reduces a company's ability to pay interests or dividends.
2. Market risk (i.e., a change in "market psychology"), which causes a security's price to decline irrespective of any truly fundamental change in earning power.
3. Purchasing power risk (i.e., a rise in prices), which reduces the buying power of income and principal.
4. Interest rate risk (i.e., a rise in interest rates), which depresses the prices of fixed income type securities.
5. Political risk (for example, price control, wage control, tax increases, changes in tariff and subsidy policies).

4.0 CONCLUSION

Under this unit, we discussed investment in bonds. There are many types of bond which include secured and unsecured bonds, debentures, convertible bonds income bonds and tax-exempt bonds. We noted that the principal price risk in high-grade bonds is related to the trend of interest rates.

5.0 SUMMARY

We discussed under this unit that investment in bonds differ from investment in common stocks. Bonds produce a fixed interest yield while common stock gives the investor dividend which is dependent on the earnings power of the company. Bonds can be secured or unsecured. Unsecured bonds are usually referred to as debentures.

6.0 TUTOR-MARKED ASSIGNMENT

- The primary Investment interest in bonds comes from institutions such as banks and insurance companies. Discuss.
- Name and explain two types of bond you know.

7.0 REFERENCE/FURTHER READING

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BHM721 MODULE 1

UNIT 4 DEFICIENCIES OF FINANCIAL STATEMENTS

CONTENTS

1.0 INTRODUCTION

Of all the sources of investment information, a company's financial statements are among the most vital. They are indispensable ingredients of any effort to determine the value of a corporate stock or bond. They are the principal reference we turn to for information on the level and trend of a company's earning power and debt repayment ability. However, some investment experts are of the opinion that financial statements leave much to be desired.

2.0 After studying this unit, the student will be familiar with the following:

- The methods of interpreting financial statements
- The format of income statement
- Determination and measurement of revenue

3.0 MAIN CONTENT

3.1 Courteousness over Financial Statements

Many years ago, security analysts had to guard against the possibility that corporate financial statements might be fraudulent. But today regulations of the Securities and Exchange Commission and the Nigerian Stock Exchange have reduced this fear. Nevertheless, a security analyst cannot accept, at face value, the figures designated by a company as net income or net worth.

The net income and net worth figures shown in a company's annual report may be given a "clean opinion" by the independent auditors. This means that they certify that:

(a) No circumstances precluded the application of reasonable auditing procedures
(b) The accounts are fair and adequate representation of the company's financial position and of the results of its operations, conforming to "generally accepted accounting principles."
(c) No substantive uncertainties exist which cannot be reasonably provided for in the accounts.

Notwithstanding the clean opinion, "generally accepted accounting principles" are neither unambiguous nor uniformly interpreted and applied to be truly reliable and useful from an investment point of view.

3.1.1 Income Statement Format

For purposes of security analysis, it is convenient to adopt as an income statement format something similar to the following:

3.1.1 Interpretation problem

Problem of interpretation are involved in almost every item of this sample income statement. Among the most common problems are the following, which we shall examine in detail:

(1) even so apparently simple an item as "sales" causes difficulty. For example, when a Company sells merchandise on an installment payment plan, questions arise as to when the sale should be recorded as revenue in the income statement. Will it be at the time of sale or when payments are received? Similar questions arise when a company fills an order on a gradual basis because a long production process is involved, or when a company leases merchandise rather than sells it outright.

(2) Cost of goods sold is affected by a company's method of evaluating (costing) Inventories. Different companies use different methods. Furthermore, a breakdown of the materials versus labour cost components of cost of goods sold is of vital interest to the investor, but information providing such breakdowns is seriously deficient. Of particular concern are inter-company differences in accounting for obligations under employee pension plans.

(3) Depreciation and depletion charges are subject to a great deal of managerial discretion and are further affected by legislative changes.

(4) Problems are caused by the need to distinguish between the basic profitability of a firm's primary activities – manufacturing, wholesaling, retailing, and the like – and profits or losses resulting from "non-operating" transactions or "extraordinary" occurrences.

(5) Many companies report to the Internal Revenue Service one way and to stockholders another way.

3.2 Sales

An authority on accounting theory stated that revenue (and related expenses) should be recognized only when it is "captured," "measurable," and "earned." Revenue is said to be "captured" when the company is reasonably certain that it will be paid for what it has sold, or when it is clear that the portion which might be lost is small and can be estimated in terms of amount.

But this innocent-sounding phrase can create problems, as has been illustrated dramatically in the case of land development companies. These companies sell parcels of land to buyers who pay in periodic installments over a period of many years. Now, after how many payments can it be assumed that the buyer has a sufficient stake to be likely to continue his payments? Accounting guidelines have been issued on minimally acceptable standards, but some companies choose a more conservative accounting policy than suggested by then guidelines while others follow only the minimally acceptable standards.

3.2.1 Measurability of Revenue

Revenue is said to be "measurable" if the medium of payment can be valued without serious difficulty. Clearly, cash payment presents no difficulties at all. Nor do accounts receivable if the terms of trade are clearly stated to be 60 or 90 days. But what if the terms are, as in the case of the land companies 10 or 15 years? The "value" of such long-lived receivable should be" discounted" at a rate which reflects appropriately the credit worthiness of the buyer. But what should this discount rate be? Some companies are likely to be more liberal than others in choosing a rate.

Finally, revenue is said to be "earned" when no significant activities remain to be performed for the customer. But it is not uncommon for revenue to be "captured" and "measurable" but not fully "earned." For example, machinery companies usually undertake substantial potential future costs in connection with service contracts and warranties. This may create an important element of non-comparability among companies which use different methods of providing for such possibilities.

3.2.2 Different Perspectives on Revenue Allocation

Another way of viewing the problems inherent in revenue recognition is to consider a company's schedule of activities, such as marketing, production, deliver and collection. There are various points in this cycle at which accountants will differ on how revenue should be recorded. Among the obvious possibilities are to record revenue (a) at the time the company produces the product or service which it has agreed to sell; (b) at the time the company delivers
; and (c) at the time it receives payment. Among the various questions which arise in this context, and which have caused numerous problems in comparing the income of firms in similar industries but using different methods of revenue recognition, are the following:

1. Many products have a very long production period – ships, planes, buildings, process-control systems, and so on. Some companies follow a conservative policy of refraining from recording revenues on the income statement until an order has been completed and delivered. Many other companies, however, record revenues on a "percentage completion" basis. That is as each critical phase of the production process is completed, a percentage of the final value of the product is recorded as a sale. But how do we determine this critical phase objectively? Furthermore, what will happen if, after booking 80 percent of the value of, say, an order of aircraft, some serious design defect is discovered which causes the entire project to fail or to require renegotiation?

2. Some products such as computers may be either sold outright or leased. Leasing involves some extremely complex problems of revenue recognition because of the many varieties of lease terms. In some cases, the leased product is viewed as remaining the property of the lessor (the party who receives the rental payments). This results in a straightforward procedure whereby each payment is income to the lessor and expense to the lessee. But in other cases, the lease is viewed as a method of financing an acquisition of the property by the lessee – that is, as a sale by the lessor. This creates problems for the lessor company similar to those described above for the land development companies. When is the sale assumed to be consummated? Do we need to discount the future payments and, if so, at what rate?

3.2.3 Outright Sale versus Leasing

Additional difficulties are presented because the mix between outright sale and leasing, and among the different types of leases, varies both among companies and, for any given company, from one year to the next. This creates very erratic movements in trends of income over time.

While one may find it frustrating that we have enumerated many questions and problem areas without offering solutions, it is a fact of life that there are no clear solutions. But the analyst who recognizes the existence of the problems should be better able to make at least qualitative adjustments to net income when evaluating, say, two companies, one o which follows very conservative practices in recording revenues and one of which typically opts for the most liberal treatment available under Generally Accepted Accounting Principles (GAAP).

3.3 Cost of Goods Sold.

Accountants calculate cost of goods sold in an indirect manner. At the beginning of an accounting period, the value of the firm's inventories on hand is ascertained. The sum of this value plus the value of goods subsequently acquired for sale equals the cost of all goods available for sale during the period. By subtracting from this sum the value of inventories on hand at the end of the period, a determination is made of the cost of what was actually sold. For wholesale and retail firms, this is simply the value of merchandise which they bought from others. For manufacturing firms, cost of goods sold includes not only merchandise (that is, cost of raw material) but also wage and other costs directly associated with the manufacturing process (e.g., depreciation of owned plants and rents on leased plants).

3.3.1 Inventory Accounting

If prices were stable and consistently unchanging, the method of determining cost of goods sold would involve no problems. It would merely boil down to counting the number of units in inventory at the start of the period, adding the number purchased or produced during the period, and subtracting the number on hand at the end of the period. But the fact is that, prices do change. And this means that the number of units is only one variable in determining cost. Let us illustrate this with an example. Suppose that a Goods Retail Company begins the year with no inventory, and during the year buys three lots of 1,000 units for an item at successive prices of N15, N16, and N17 per unit respectively. Its purchases, then, will be:

1,000 units at N15	=	N15,000
1,000 units at N16	=	N16,000
1,000 units at N17	=	N17,000
Total purchases	=	N48,000
		=======

Assume now that during this same year, the firm sold 2,500 of the 3,000 units purchased. This being the case, it will end the year with 500 units of inventory. A key question is how value these 500 units. The traditional rule will favour valuing the inventory at the "current market price."

On the one hand, the firm can assume that units were sold in the same order as they were purchased. This is the so-called first-in-first-out (FIFO) method of inventory accounting. Using FIFO accounting, final inventory will have a unit cost equal to the most recent price (i.e. N17) and will be worth N8,500. On the other hand, it can be argued that when prices are rising or falling, FIFO does not properly match current costs with current selling prices. Those holding this view prefer last-in-first-out (LIFO) accounting, whereby the most recent purchase costs are charged against sales before earlier costs. Under this method, the unit cost of the final inventory in our example would be the earliest price (i.e., N15) and the total inventory would be N7,500.

Thus, both accepted accounting procedures produce different inventory "costs" N8,500 and N7,500. When final inventory is subtracted from the N48,000 of purchases, cost of goods sold becomes either nN39,500 or N40,500. But the value of sales during the period was what it was,

regardless of the method of inventory accounting adopted. Therefore, the gross profit on these sales will be highest under FIFO accounting (i.e., sales minus N39,500), and lowest under LIFO accounting (i.e., sales minus N40,500). This occurs during a period of rising prices. During a period of falling prices, FIFO would produce the lowest profits and LIFO the highest profits.

3.3.2 FIFO and LIFO Inventory Accounting

Note that FIFO accounting reported profits to move in the direction of price changes as compared with LIFO accounting. Stated another way, FIFO accounting incorporates inventory profits and losses while LIFO accounting does not.

Since FIFO incorporates inventory gains and losses, it usually causes profits to be more volatile during the course of the business cycle than LIFO. During prosperous methods, when profits are normally rising, prices also frequently rise, and FIFO accounting causes inventory profits to be recorded on top of regular operating profits. LIFO does not. The opposite often occurs during recessions, when normal operating profit declines are augmented by inventory losses under FIFO but not under LIFO

4.0 CONCLUSION

Under this unit, we discussed financial statements and their uses. We also stated that financial statements do not contain all the information required to guide the investors in their investment decisions. Security analysts also differ in their interpretation of financial statements. There is usually problems in the valuation of inventory under FIFO and LIFO accounting methods.

5.0 SUMMARY

We have seen that financial statements though useful documents that provide information for the prospective investors and analysts, they are not completely reliable since some information contained are not completely accurate. FIFO and LIFO are different methods of valuing stocks and they provide different profits levels when used. This is a serious problem to accountants and investment analysts who must give accurate advice to the prospective investor.

6.0 TUTOR-MARKED ASSIGNMENT

* What are the uses of financial statements to a prospective investor.

* What kind of information does an income statement carry

7.0 REFERENCE/FURTHER READING

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aluation

MODULE 2

UNIT 1 EVALUATION OF COMMON STOCKS

CONTENTS

1.0 INTRODUCTION

The objective of common stock evaluation is to obtain standards against which prevailing prices of stocks may be judged. It is assumed that investors, as a whole, are essentially rational over

the long run, and that rational individuals attempt to measure the economic, or "going concern" values of the corporations whose stocks they buy and sell. Since there are millions of investors, there will exist vastly different ideas about the value of any given stock at any given time, and purchases and sales of the stock will be made in accordance with this multitude of ideas. Therefore, over an extended period of time, prices will fluctuate in a wide range but they will tend to fluctuate around some consensus of value.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* How to evaluate common stock
* The general sources of common stock value
* Dividend payment and Dividend Growth Prospects

3.0 MAIN CONTENT

3.1 The Sources of Common Stock Value

Readers who ponder over the problem of common stock valuation will realize that a common stock has value for only three possible reasons. First, the ownership of common stock confers a claim to a corporation's net income. This claim bears fruit when the corporation's board of directors declares dividends. Second, if the corporation enjoys growing success, earnings and dividends will rise, and the price of its stock may rise also. The third, and least significant, source of common stock value is that if a corporation is liquidated, the common stock owner has a pro rata claim to any asset value that may remain after all creditors and the preferred stockholders have been paid. This residual claim, therefore, may give the common stock some value. But it is not a very important source of value because an efficiently operating corporation is not usually liquidated. And if it is liquidated because it is not operating efficiently, the asset value is not likely to be high enough to leave much of residual gain for the stockholders.

3.1.1 Dividend and Common Stock Value

When earnings and dividends are put together and considered in the context of common stock value, it gives rise to an interesting question on both a practical and a philosophical plane. We often hear the argument that dividends are distinctly subordinate to earnings as a

determinant of stock values. The evidence offered in support of this argument is the activity of thousands, perhaps millions, of investors whose dominant objective in buying common stock is to sell it to someone else to at a higher price to make capital gain rather than to keep it in order to collect dividends on it.

It is, of course, true that many individual stockholders do not intend to hold their stocks for dividends, ho9ping instead to sell then stocks to others at capital gains. But to conclude from this observation that "dividends do not count" would be quite misleading. In the first place, it is a frequent occurrence for the price of common stock to change substantially when a dividend increase or dividend reduction is announced. One likely explanation for this is that since reported earnings do not necessarily "true" earnings, investors look to dividends for an indication of what management really thinks earnings are (or are going to be in the future).

3.1.2 What the Investor Thinks of Dividend Payment

On a more theoretical plane, the significance of dividends has some time been illustrated by hypothesizing the existence of a corporation which has written into its bylaws a perpetual prohibition of dividend payments or a return of capital to stockholders via sale of assets or by any other means. With these byelaws, no rational investor will be willing to purchase the corporation's stock, no matter how high its earnings or how low the asking price. Of course, people sometimes become irrational or follow the "the greater fool theory" where each buyer assumes that he or she will be able to sell at a higher price to a "greater fool." Bus such bubbles must inevitably burst. Our hypothetical corporation's stock might trade for a while, but people must eventually recognize that they are buying and selling a mere piece of paper, without any value in the absence of an ability to pay dividends. Thus, while much of a stock's value to an investor undoubtedly lies in the prospect of price appreciation prices cannot be divorced from dividend prospects any more than they can be divorced from prospective earning power.

3.2 The Concept of Present Value of Future Dividends

Those who recognize the significance of dividends as a determinant of stock values can understand the reasoning behind a widely accepted tenet of investment theory. The tenet is that a common stock is "worth" the present value of all future dividends.

The concept of present value is really quite simple and can be illustrated with easy understanding. Assume that Mr. A wants to borrow money from Mr. B, repayable at a future date. Mr. B is willing to make the loan, but feels that, considering the risk involved, he is entitled to a 10 percent annual rate of return. This being the case, how much money will Mr. B advance Mr. B on IOU for $10 payable one year hence? The answer is $9.09, because the $10 paid next year provides 91 cents interest, which is 10 percent of a $9.09 loan. Thus $9.09 is the present value of $10 payable one year hence at a "discount" rate of 10 percent.

Likewise, if Mr. A offers $10 IOU payable two years hence, how much will Mr. B be willing to lend? Answer: $8.26. Ten percent of $8.26 is 83 cents (first year's interest); $8.26 plus $0.83 = $9.09. Ten percent of $9.09 is 91 cents (second year's interest; $9.09 plus $0.91 = $10. The present value of $10 payable two years hence is $8.26 at a discount rate of 10 percent.

3.2.1 Present Value of Perpetual Dividend Growth

Let return to the matter of future dividends on common stock, suppose we estimate that dividends on Standard & Poors Stock Price Index will grow at a rate of 7 percent far into the future. Suppose we estimate that "the market" (not any individual investor but all investors as a group) will always demand a 10 percent rate of return in order to undertake the risks of common stock investment. Recognizing that these assumptions are made purely for illustrative purposes, what is the value of the S & P Index today?

There is a simple formula for approximating the present value of perpetual dividend growth, at a constant discount rate. The formula is:

$$\text{Present Value} = \frac{\text{Current dividend rate}}{\text{Discount rate minus growth rate}}$$

Under our illustrative assumption, this becomes:

$$\frac{\text{Current dividend rate}}{0.10 \text{ minus } 0.07}$$

3.2.2 Today's Investors and Dividend Growth

Does it mean then that today's investors actually have to estimate dividend growth and discount rates to perpetuity in order to utilize the theoretical concept of present value of future dividends? This is not really so because the proportion of the total value represented by distant years' dividends diminishes rapidly unless the discount rate is quite close to the growth rate. Under most reasonable discount and growth rate assumptions (for example, where the discount rate is at least several percentage points higher than the growth rate), two thirds or more of the total "value" is accounted for by the first 30 years of dividends. Note that if one assumes a growth rate equal to, or greater than, the discount rate, a nonsense "value" results.

Of course, 30 days is by no means a short period for estimating either growth rates or discount rates. Indeed, most security analysts consider themselves fortunate if their growth rate estimates for the companies they follow hold good for five years. On the other hand, while long-term estimates are highly uncertain for individual stocks, the potential errors are diminished when considering all stocks in aggregate.

3.3 Growth Prospects for Stocks in Aggregate

As economists, the authors have a proclivity to relate most economic variables to gross national product, which they feel can be subjected to future estimation more accurately than most other variables. The question of aggregate dividend growth, therefore, is broken into three parts. First, what rate of GNP growth can be expected in the years ahead; second, will earnings per share of common stock keep pace with GNP; and third, will dividend growth keep pace with earnings growth? It should be emphasized at the outset that our main purpose is to provide a frame-work for thinking about these problems rather than to argue that our specific perspectives and specific answers are correct.

3.3.1 Growth of Gross National Product (GNP)

The growth of gross national product can be conveniently divided into four variables for analytical purposes: The growth of the employed labour force; the trend of average hours worked per week; the trend of output per hour worked (productivity); and the rate of change in the price level. By combining forecasts of the first three of these variables, a forecast of growth of so-called GNP is derived, that is, growth of physical output of goods and services excluding the effects of price changes.

The three determinants of real GNP have had a stable enough history during the past century to enable us to make some long-term estimates with a far degree of confidence. Without outlining their views in detail, it can be said that the estimates of most economists fall within the following ranges; approximately 1.5% to 2% annum growth in the employed labour force; 0.5% per annum decline in hours worked per week; and 2% to 3% per annum growth of output per hour worked. These elements combine to produce a 3% to 5% range of real GNP growth possibilities, with about 3% to 4% being the most common forecast.

3.3.2 Earnings Per share Relative to GNP

Turning to the question whether earnings per share will keep pace with GNP, a look at the past is in order. That is to say, we should study the history of earnings of the company for the past six years. The trend will generally give us an idea as to whether then earning per share is keeping pace with the GNP.

Dividends Relative to Earnings: Except during periods of recession, when dividend payout ratios may rise sharply because management may wish to maintain payments to stockholders even in the face of declining earnings. Most well-established companies adopt this strategy to ensure that stock prices in the market are not affected by a decrease in the dividend pay out to shareholders.

4.0 CONCLUSION

Under this unit, we made it clear that the objective of evaluating common stock is to obtain standards against which prevailing prices of stocks may be judged. We mentioned that there are three sources of common stock value. These are: Through ownership of stock which confers part-ownership of the company to the investor, dividend payment by the company, and third, possible residual gains from the company's assets in the event of liquidation.

5.0 SUMMARY

Common stock is valued to obtain standard or yardstick for measuring prevailing prices of stocks in the market. It is assumed generally that investors are rational human beings and that rational individuals attempt to measure the economic value of the company whose stocks they buy and sell. Since there are many investors, there will always be different ideas about the value of any given stock at a given time. Dividend payment level to shareholders has tremendous impact on the price of a company's shares.

6.0 TUTOR-MARKED ASSIGNMENT

* What is the reason for evaluating common stocks
* Enumerate and explain the three sources of common stock value
* What do you understand by “present value of future dividends”?

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
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aluation

UNIT 2 ANAYSIS OF SALES GROWTH

CONTENTS

1.0 INTRODUCTION

Virtually any logical approach to the evaluation of a corporation's common stock requires, as primary information an estimate of the corporation's probable growth in earning power (either in absolute terms or relative to the growth of all corporations in aggregate). So important is the estimate of earning power that we shall devote time in the survey of techniques that can assist the analyst in making such estimates.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with the following:

* Analysis of growth in the sales of an organization
* Understand the stages in industrial life cycle

3.0 MAIN CONTENTS

3.1 Why Start with Sales?

Since the 1930s, when common stocks first attained a degree of respectability as a sound investment vehicle, security analysts have stressed growth of demand for a company's products as the key determinant of investment success. Why the emphasis on growing demand" and on "growing sales"? Probably the main reason is that overhead has been a factor of steadily increasing importance in many industries. Taking American economy s an example, except during depressions, the economy has always had a shortage of skilled labour. Pressure has therefore constantly been in the direction of increasing utilization of labour-saving plant and equipment. But capital equipment carries a heavy fixed overhead in the form of interest on debt incurred in buying the equipment, depreciation, maintenance, insurance, taxes, and supervisory salaries. This raised the break-even point of companies, that is, the number of units which must be produced and sold in order to cover costs alone without making any profit. In order for a company to operate profitably under conditions of increasing mechanization and skilled-labour shortage, it is essential that its market expands so that its plants can operate at a high percentage of capacity.

Not that expanding production and sales automatically guarantee rising profits, which in the final analysis is what investors are after. But rising demand does, at least, give a company an opportunity to earn a rising profit. In many cases, rising demand can even absorb losses from managerial errors that must be expected to occur from time to time. Indeed, without the cushion of rising demand, management may be unwilling to take risks, and without risk-taking, little can be expected in the way of rising profits.

3.1.1 History as a Guide

Experience indicates clearly that the best way to begin to estimate future development is to examine what has happened in the past. Analysts first become familiar with the historical data, with the actual record of sales growth. They then try to learn why the past record was what it was. For example, if sales growth had been exceptionally rapid relative to the sales of competitors, analysts might want to find out the extent to which exclusive patent rights accounted for the competitive advantage.

As they begin to understand the conditions that created the past trends, analysts question whether these conditions are likely to persist6 in the future. Continuing the above illustration, analysts would investigate whether any basic patents were nearing expiration or whether any other companies had developed some improvements that would render the existing product technologically obsolete. If the conditions that created the past trends seem likely to persist in the future, analysts can simply project the past trends forward. But if, as is more likely, analysts believe that certain past conditions will probably be altered in form, or disappear entirely, they will try to estimate the impact of the changes and make allowance for them in their projections of the past record. In either event, however, the key to the future lies in the understanding of the past.

3.1.2 Variety of Economic Conditions

If possible analysts should try to gather data for a period which encompasses a variety of economic conditions. In this way they have an opportunity to observe the impact of changing conditions on the company's sales (and on its prices, labour costs, raw material supplies, and other profit determinants). They also can examine management's response to change more adequately than if they have only a few years of data available.

3.2 The Industrial Life Cycle

An analysis of the sales growth record and growth prospects of an industry or a company frequently can be conducted within the frame-work of the so-called industrial life cycle. Many students of economic history have argued that industries, like people, go through a few fairly well-defined stages of development. In the early part of their lives they grow at a very rapid rate. After a time the growth rate slows down; they continue to expand, but at a more moderate pace. Finally, they stop growing and either live a relatively stable existence for a long time or die.

3.2.1 Pioneering Stage

Exponents of the industrial life cycle concept, see the pioneering stage of an industry's development as being characterized by rapid expansion of the market with concomitant opportunities for large profits. These opportunities, however, give rise to fierce competition and high risk of bankruptcy. The automobile industry provides a dramatic example of this phenomenon. Between 1900 and 1908, more than 500 automobile companies were organized.

Of these, about300 quickly went out of business, either voluntarily involuntarily. By 1917, 76 companies were active in the industry, but 10 produced three quarters of the total output. Today, of course, only a few companies dominate the American automobile industry. More recent examples of rampant competition in new fields include air conditioners, television manufacturing, and electronic components such as semi-conductors.
Some investment authorities recommend that the best way to participate in the pioneering phase of the industrial life cycle is to buy the stocks of several competing companies. By spreading risks in this way, investors take the position that even if only one of the several companies survives, the profits on that one will more than make up for the losses on the others.

3.2.2 Investment Maturity and Stabilization Stages

Most of the discussion in the balance of this chapter, and in those which follow, will focus on the phase of growth that follow the pioneering stage. The second stage of growth is labeled "investment maturity." It refers to the fact that after some years, through consolidations and internal expansion, a relatively few companies usually take over a fairly large percentage of a young industry's total volume of business. They broaden the market by improving the quality and reducing the price of the product or service. They establish a strong financial position and a record of dividend payments, even if the dividends are quite modest. Growth of the industry's market continues to be quite rapid. It is not as rapid as in the pioneering stage, but neither are the risks as great. Then air-conditioning, television manufacturing, and semi-conductor industries all can be said to have passed from the pioneering to the investment maturity stage.

Gradually, however, even this second stage of growth begins to slow down. Technological advances become fewer and occur after longer time lags. Unit costs become more difficult to reduce, and the ability to broaden markets through reduced prices is thereby restricted. The market itself tends to become saturated, a process which is aggravated by the inroads of newer products and services.

3.2.3 New Perspective on the Industrial Life Cycle

The theory of the industrial life cycle departs from a strict conventional analogy at this point. Although the industry may, in fact, die, it is not argued that an aging industry necessarily must ultimately die. Indeed, in absolute terms, its sales may continue to grow may be below

average. The industry's sales may expand less rapidly than the economy during periods of general prosperity, and they may decline more rapidly during recessions. This stage in the evolution of an industry is labeled "stabilization."

To many proponents of industrial life cycle concept, the investment implications of the stabilization stage are quite bleak. In their view, investors should dispose of their stockholdings in the industry before stabilization takes hold. If they wait until it is common knowledge that the industry is leveling off, it may be too late. Stock prices may decline, and opportunities for a good rate of return may disappear. According to this approach, investment success will be achieved by:

(a) Detecting growth industries that are about to emerge from the pioneering phase.
(b) Investing in the stocks of the dominant companies in those industries.
(c) Selling the stocks just before the industries enter the stabilization phase.

3.3 Critique of the Industrial Life Cycle

In many respects, the life cycle approach offers a convenient method of classifying the growth pattern of different companies. But while the industry life cycle concept is useful, several criticisms can be leveled at the concept and at its investment implications. First, it is not necessarily true that a new industry is pioneered by large numbers of small companies which kill each other off in a bitter competitive struggle. For example, the synthetic fiber industry was largely pioneered by a single giant company called Du Pont. The company did not face any vigorous competition until many years after the original introduction of nylon.

Furthermore, the latter years of an industry's life are not necessarily characterized by permanent stagnation. Many industries go through a long period of oscillation between prosperity and recession. This type of oscillation is more common in the cement and copper industries.

3.3.1 The Factor of Security Prices and Values

Finally, the most important criticism of the life cycle approach to investment analysis is that to equate automatically each growth stage with a different degree of investment attractiveness is to overlook the factor of security prices and values. A major premise of this text is that it is possible to pay too much for growth and that at the right price even a no-growth situation can be attractive. Surely, the disastrous price declines which befell the stocks of many growth

companies in the last decade, in spite of continued above-average sales gains, attests to the importance of being careful not to pay too much for growth.

Illustrations. For all of its deficiencies, the life cycle framework does provide an interesting basis for at least an initial review of an industry's sales history. The Aluminum and Semi-conduct industries have been chosen for illustration.

The history of the American Aluminum industry is a long one. Aluminum production was begun long ago in 1888 by the Pittsburg Reduction Company, a predecessor of the Aluminum Company of America. The industry's growth rate at its formative years was in excess of 20% per annum, and 15% growth rate was maintained from 1910 to 1920. As its markets became increasingly saturated, the growth rate slowed down in the 1920s, but evidence of the continued vitality of the industry was the 6% growth rate achieved during the years of the Great Depression. World War II gave rise to major new aluminum-consuming industries such as mass-produced aircraft, and the industry's growth rate accelerated. Since 1960, a slowing has taken place once again, but a rate well in excess of aggregate real economic growth has been maintained. Thus, one can categorize the aluminum industry as having been in its pioneering phase until about 1920, and in extended investment maturity phase since them.

3.3.2 The Semi-conductor Industry

In contrast to the long history of the aluminum industry, the semi-conductor industry was born in the early 1950s, although research in this field can be traced to the 19th century. Another significant difference is that semi-conductors are not a homogeneous product like aluminum. One major segment of the market, "discreet" devices such as transistors, exhibited ten years of explosive growth and then entered an investment maturity phase which, as will be shown in succeeding pages, exhibited many of the characteristics of the stabilization phase. The other major segment of the market, integrated circuits, arose early in the 1960s and since then has exhibited the same explosive growth as in the early years of transistors. Whether a rapid maturation process will similarly occur will be considered below.

4.0 CONCLUSION

Under this unit we noted that the logical approach to the evaluation of a corporation's common stock requires an estimate of the corporation's probable growth in earning power either in absolute terms or relative to the growth of all corporations in aggregate. In the industrial life cycle analysis, we saw that each phase is characterized by different investment response in the investment market

5.0 SUMMARY

Common stocks attained a degree of respectability as sound investment vehicle in the 1920s. Since then, security analysts have stressed the growth of demand for a company's products as a keystone of investment success. The industrial life cycle affects the response of investment to a large extent. However, critics of industrial life cycle have argued that it is not right to equate each growth stage in the industrial life cycle with a different degree of investment attractiveness. They maintained that to do so would be tantamount to ignoring the factor of security prices and values.

6.0 TUTOR-MARKED ASSIGNMENT

* Why is the growth of demand for a company's product important for investment Success?
* Explain the three phases of the Industrial Life Cycle.

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
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UNIT 3 RELATIVE GROWTH OF SALES IN RECENT YEARS

CONTENTS

1.0 INTRODUCTION

Having examined the historical record of the aluminum and semiconductor industries from a broad life cycle perspective, this unit turns to a more intensive study of the recent history of these industries.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* Method of comparing the performance of different Industries
* Competitive factors to look out for when comparing two industries
* Computing Industry Dollar Sales and Unit Sales

3.0 MAIN CONTENT

3.1 Recent History of Aluminum and Semiconductor Industries

An adequate study of the recent history of the aluminum and semiconductor industries should include a comparison a comparison of the Naira sales of the industry with the Naira sales of competing industries if such can be identified (for example, aluminum competes with copper but semiconductors have no direct competitor), and with one or more broad economic measures such as gross national product, personal consumption expenditures, and durable goods manufacturing.

Similar comparisons to those above can also be carried out in physical unit rather than Naira terms. Sole reliance on Naira sales data is inadvisable. Naira sales are equal to the number of units sold multiplied by the sales price per unit. But as is well known, the prices of different commodities, such as aluminum, copper and steel, do not change uniformly. Differences in price movement exist both in timing and in magnitude. Thus it is quite possible to conceive of the following situation. Industry A expands its unit sales faster than competing Industry B. In order to accomplish this, Industry A has gradually reduced its prices relative to those of Industry B. As a result, the Naira sales of A have expanded less rapidly than those of B.

3.1.1 Competitive Factors

Analysts who concern themselves solely with Naira sales comparisons in this example would miss an opportunity to gain real insight into the competitive forces at work. If they project future sales relationships on the basis of the past without recognizing that the past record reflects sharply contrasting price-volume patterns, their projections will turn out to be very inaccurate. This is because it is most unlikely that the past price-volume patterns will remain unchanged. Accordingly, it is strongly recommended that inter-industry and industry-economy sales comparisons be carried out in terms of volume in addition to Naira.

3.1.2 Industry Naira Sales

Admittedly, a summation of leading companies' revenues usually is not equivalent to aggregate U.S. industry sales, because (a) there are other firms in each industry, and (b) the sales of most large companies are not exclusively concentrated in the products of a single industry and often include foreign operations. However, up-to-date aggregate industry data, in Naira amounts,

usually are available only for broader categories than we are interested in. For example, all non-ferrous metals (and summations of leading companies' revenues generally serve as a convenient and useful substitute. Until recently, the semiconductor industry was an exception to this generalization. Aggregate Naira sales data were published for each major product line. After a few years, a major producer stopped submitting its data, and it became necessary to rely on "expert opinion" for such information. It should be noted that almost every important industry in the United States has at least one trade association publication, and these often serve as valuable data sources for industry analysis.

3.1.3 Industry Unit Sales

For both aluminum and semiconductors industries, unit volume data have been published by the respective trade associations. Interestingly, volume data are often available for industry aggregate while they may be unavailable for individual companies. The situation is quite the opposite from that of Naira sales. Sources of industry volume statistics often are found in the Statistical Abstract of the United States, together with summary data for selected years. The Conference Board and trade journals are other excellent sources of statistics. In addition, one of the several dozen industry subgroups of the Federal Reserve Board Index of Industrial Production may be used. Many of these sub-indexes are published monthly in the Federal Reserve Bulletin, and additional details are contained in the monthly releases by the Board, which are kept on file at most business libraries.

3.2 Aggregate Economic Data

Industry dollar sales of aluminum and semiconductors are usually compared with gross national product. Industry unit sales, on the other hand, are usually compared with "constant dollar" or "real" gross national product. The constant dollar data for GNP and its major components are published regularly along with the current dollar data in "Survey of Current Business."

3.2.1 Ratio Analysis of the Data

Industry sales are divided by GNP and the resulting quotients, or ratios, are plotted on a graph. The underlying data need not be expressed in similar units (example, dollars versus dollars) to make ratio analysis possible. Pounds of one product can be compared with bushels, or quarts of another. The absolute amounts of the ratios are not significant but the changes in the ratios are. In examining each ratio line, answers should be sought to four questions:

1. Is the line rising or falling (that is, is the numerator of the ratio growing more or less rapidly than the denominator) over the whole length of the period
2. Has the relative growth (or relative decline) of the numerator been fairly uniform or has it occurred in fits and starts? The less the variability around trend, the more confidence one can have in using the past trend as the starting point of an analysis. Indeed, if the variability is slight it may be possible to use some type of mechanical trend projection technique. Remember that stability is an important determinant of stock's price-earnings ratio.

3. Is there any sign that the overall trend of the ratio line has been leveling off in recent years.

3.2.2 Influence of Movements in the General Business Cycle

When the questions asked above are appli9ed to a chart, some interesting observations will emerge. In the analysis we used it was shown that unit sales of aluminum and of both major types of semiconductors rose much more rapidly than total economic output. The relative growth of aluminum, however, did not proceed steadily from year to year, and the relative growth of the transistor segment of the semiconductor industry was very volatile during several years of the period. In each recession year, aluminum was more vulnerable than the overall economy.

3.3 Prices

There are two price factors which should be distinguished because they may have different implications for the future. One is the natural secular price decline of growth products; the other is the erratic price movement of industries whose productive capacity periodically spurts far ahead of immediate sales potential.

Think of an industry which has grown rapidly in sales volume for a period of 10 or 20 years, and then think of what has happened to its selling prices relative to the general price level. Almost invariably, the selling price of a growing product has shown a secular downtrend, either in absolute terms or at least relative to other prices. Aluminum and semiconductors both are examples.

Where the basic demand for a product is strong, management tries to tap and expand the market by reducing cost and improving quality. Productivity gains are used, in part, to lower selling prices. On the other hand, in non-growth industries, like steel an d railroad passenger transport, selling prices tend to be raised whenever possible, instead of lowered to broaden markets. When prices do get cut in non-growth industries, it usually takes the form of price warfare rather than secular price reduction. Price warfare refers to intra-industry price cutting in an attempt to capture a larger share of a relatively fixed market. But secular price reduction is designed to enlarge the total effective demand for a product or service.

3.3.1 Price Characteristics of a Stagnant Market

Frequently, however, situations are encountered where an industry exhibits the price characteristics of a stagnant market and yet demand for the industry's product is growing at above-average rate. Typically, the cause of this peculiar behaviour is excess capacity. Although demand for the product is rising, productive capacity may be rising much more rapidly. As a result, the companies in the industry engage in extremely vigorous price competition in order to build up their sales relative to capacity. Then, when a better sales/capacity balance is achieved, they attempt to restore their previous prices.

3.3.2 New Era for the Metal

The unprecedented strength of aluminum prices during a severe economic recession caused many analysts to proclaim that a new era had arrived for the metal, and, indeed, for many other raw materials whose price showed similar strength. Their argument was that the cosdts of building new capacity had risen to such high levels that without high selling prices no new capacity would be built. But while this argument perhaps had long-run merit, the fact was that by late 1985, with production showing markedly lagged response to the recession, price-cutting reappeared in the industry. Although the renewal price weakness may, in retrospect, be viewed as a temporary aberration, the long history of aluminum prices just recited suggests two conclusions regarding the years ahead. First, aluminum prices are more likely than not to decline secularly relative to other prices, in line with industry's expansion of markets. Second, this secular trend is likely to be punctuated by periodic episodes of over-expansion and cyclical price reductions.

4.0 CONCLUSION

This unit dealt with the relative growth of sales in recent years. We noted that any intensive study of the recent history of the industries should include comparison of the dollar sales of the industry with the dollar sales of identifiable competing industries. We further noted that analysts must not concern themselves solely with dollar sales comparisons otherwise they would miss an opportunity to gain real insight into the competitive forces at work.

5.0 SUMMARY

We have examined the historical record of the aluminum and semiconductor industries from a broad life cycle perspective. We emphasized that comparison should be based on the dollar sales of competing industries where we can identify such competitors. Dollar sales are equal to the number of units sold multiplied by the sales price per unit. But as it is well known, the prices of different commodities, such as aluminum, copper and steel, do not change uniformly.

6.0 TUTOR-MARKED ASSIGNMENT

* Why is it necessary to compare the dollar sales of one industry with the dollar sales of competing industries.
* Explain the natural secular price and erratic price movement of industries.

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
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UNIT 4 ANALYSIS OF EARNINGS GROWTH

CONTENTS

1.0 INTRODUCTION

Since stock values ultimately are dependent upon prospective earnings and dividends, the analysis of sales growth is merely the starting point of a broader investigation. To understand adequately the forces shaping business growth, it is helpful to break down the past earnings growth record into several key component parts. It is the objective of this chapter to illustrate the analysis of earnings by component parts. Unless otherwise mentioned in our discussion in this unit, references to net income should be taken to mean “income available to common stockholders” that is after deducting preferred dividends.

2.0 The Sources of earnings growth

Net income per share of common stock is equal to the rate of return on stockholders' equity multiplied by the per share value of stockholders' equity. This can be shown algebraically, as follows:

$$\text{Net Income Per Share} = \frac{\text{Net income}}{\text{Shareholders' equity}} \times \frac{\text{Stockholders' Equity}}{\text{Number of common shares}}$$

Note that stockholders' equity appears in the denominator of one fraction and in the numerator of the other, thus cancelling out each other and leaving Net income/Number of common shares, or net income per share. Stockholders' equity, also referred to as book value, equals the same as total assets minus liabilities and preferred stock.

It follows from this relationship that growth of net income per share can stem from either an increase in stockholders' equity per share, or from an increase in return on stockholders' equity, or from some combination of the two. (Actually a sufficient increase in one can offset a reduction in the other).

3.0 MAIN CONTENT

3.1.1 Sources of Equity Growth

Growth of stockholders' equity per share has two principal sources. First and foremost, is the plowed back of earnings into the business (that is, paying out only a small portion of net income in cash dividends to common stockholders and retaining and reinvesting the balance). The contribution of earnings retention to growth of net income per share can be illustrated by a numerical example. Assume that a company is earning 10% on stockholders' equity, that is, N1 of net income per common share for every N10 of stockholders' equity per share. And assume, further, that the company has a dividend payout ratio of 40% per share, that is, it pays dividends of N0.40 per share for every N1 of available earnings. Its "retention rate" then is 60%. This means that N1.60 is plowed back into the business out of every N1 earned.

Now, if the company continues to earn 10% on the old capital and, in addition, is able to put the new plowed-back funds to work at a 10% return, its earnings per share will grow by 6%. This six per cent may be shown as follows:

Previous stockholders' equity per share (old capital)	10% X N10.00	=	N1.00	Earned per share
Retained earnings per share (new capital)	10% X N 0.60	=	N0.06	Earned per share
New level of earnings		=	N1.06	Earned per share
Growth rate of earnings per share	1.06/1.00	=	6%	

It should be noted that the percentage growth rate is equal to the rate of return on stockholders' equity (10%) multiplied by the retention rate (60%). That is, 60% X 10% = 6%. This algebraic function is of great significance in security analysis.

In the preceding illustration, it was assumed that the growth of stockholders' equity per share came from earnings retention. But stockholders' equity per share also can grow in another way, that is, by the company selling additional shares of common stock at a price per share which is higher than the existing book value per share. For example, if book value is N100 million and 10 million shares are outstanding, book value per share is N10. If one million additional shares are sold at 2 times book value, or N20 per share, total book value rises to N120 million and total shares outstanding to 11 million. Book value per share thus is raised to N120/11, or N10.91 per share. This provides a basis for growth in earnings per share if the rate of return on stockholders' equity can be maintained.

3.1.2 Sale of Common Stock at a Premium over Book Value

Sale of common stock at a "premium over book value" traditionally has been an important source of growth for public utility companies. In addition, mergers often result in a rise in book value per share of the surviving corporation. This comes about when the acquiring corporation exchanges its shares for those of the acquired corporation and the book value of the acquired shares is greater than the book value of the shares given in exchange. However, earnings retention is the major source of growth of stockholder' equity per share.

To summarize, growth of net income per common share can be looked upon as stemming from two sources: Growth of stockholders' equity per share and improvement in the rate of return on stockholders' equity. Since the former source of growth is primarily a reflection of earnings retention, it may be stated as a generalization that the growth rate of earnings per share is a function of the product of the rate of return on stockholders' equity multiplied by the retention rate. This can be expressed algebraically as:

$$\frac{\text{Net income}}{\text{Stockholders' equity}} \times \frac{\text{Net income - Dividends}}{\text{Net income}}$$

It should be noted that in applying this expression, general practice is to use the average of beginning-of-the–year and end-of-the-year stockholders' equity, to allow for the gradual plowback of earnings during the year and for any new common stock financing that may have been done during the year.

3.2 Analysis of Return on Equity

Additional insight into the factors underlying a company's record of earnings growth can be gained by examining the components of its rate of return on common stock equity. By examining the trends in each component, the analyst can isolate the principal causes of a decline or rise in return on equity, which gives him a sounder basis for determining whether past rates of return will persist or change during the years ahead.

Return on common stock equity can be viewed as the product of the "profit margin" on every Naira of sales multiplied by the "equity turnover," or number of Naira of sales per Naira of stockholders' equity. This can be expressed algebraically as follows:

$$\underbrace{\frac{\text{Net income}}{\text{Sales}}}_{\text{(Profit margin)}} \times \underbrace{\frac{\text{Sales}}{\text{Stockholders' equity}}}_{\text{(Equity turnover)}} = \underbrace{\frac{\text{Net income}}{\text{Stockholders' equity}}}_{\text{(Rate of return on equity)}}$$

3.2.1 Net Profit Margin and Equity Turnover

Examination of interaction between net profit margin and equity turnover provides useful insight into the sources of rate of return on equity. But it is too broad brush for a deep understanding and a confident estimate of the future. For example, the net profit margin reflects not only the basic operating efficiency of a firm, but also its non-operating income and expense and its income tax rate. These factors should be examined separately in an intensive analysis. Similarly, equity turnover reflects not only the degree of utilization of the company's assets but also the method of financing those assets (debt versus equity). Since a company's asset utilization and its financial policies are two quite different factors, they should be examined separately.

Following this line of reasoning, it is instructive to approach the interaction of margin and turnover from a somewhat different angle than we have just done. First, we shall focus on the interaction of the operating margin (pretax) and the turnover of operating assets. The product of these two ratios is the return on operating assets (pretax):

$$\frac{\text{Operating income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Operating assets}} = \frac{\text{Operating income}}{\text{Operating assets}}$$

(Operating margin) X (Turnover of operating assets) = (Return on operating assets)

3.2.2 Components of Operating Margin

Let us here examine the components of operating margin. That is to establish the extent to which changes in the margin are attributable to changes in specific cost components (labour, materials, selling and administrative expenses, and depreciation). We shall also examine the main components of turnover of operating assets (turnover of receivables, inventories, and plant).

Following this study of operating margin and turnover of operating assets, we shall consider the influence of non-operating income and expense, of leverage (the relationship of debt to equity), and of tax rate.

3.3 Growth of Equity Per Share

The basic growth potential of earnings per share can be estimated by multiplying the anticipated rate of return on stockholders' equity by the proportion of earnings expected to be retained in the business. Studies of corporate dividend and retention policies suggest that many interacting factors are at work in any given situation. Among these factors, the following may be listed, although not necessarily in order of importance:

(1) An effort to project systematically future financial requirements, rates of return, and costs of alternative sources of funds.
(2) Subjective attitude of the executives towards debt.
(3) A weighing of the desires and tax status of the principal stockholders against the desires and tax status of the typical stockholders.

(4) The policies of competing companies.
(5) A reluctance to set dividends at a rate that may later have to be cut back.

3.3.1 Stability of Dividend Payout Ratio

In general, the result of all there cross currents is a relative stability of dividend payout ratios. While payout ratios vary considerably from company to company, any one corporation's average dividend payout ratio tends to remain cyclically. Therefore, reference must be made to average payout ratios. It may be helpful also to examine the ratio of dividends to cash flow (net available for common plus depreciation, amortization, and depletion), since this figure tends to be more stable from year to year than the more traditional payout ratio.

Of course, security analysts cannot simply assume that the average historical payout and retention rates will be maintained in the future. They must try to determine whether any changes in policies are under way or forthcoming. Evidence of such changes might be present in the payout data themselves. For example, the analyst may observe a gradual increase or reduction in the payout percentage), or in statements made by management in stockholder reports or at annual meetings, or in the analyst's projections of future capital expenditures and capital requirements. Indeed, just as corporations are now required by the SEC to include a statement of sources and application of funds along with their income statements and balance sheets, so too is nit becoming increasingly common for security analysts to make projections of future sources and application of funds along with their projections of future sales and earnings.

3.3.2 Effects of Selling New Stock

While earnings retention is the principal source of growth of equity per share, it it was also noted at the outset of this unit that growth can be achieved by selling new shares at a price higher than the existing equity per share (that is at a premium over book value).

4.0 CONCLUSION

We noted under this unit that stock values are dependent upon prospective earnings and dividends payout of the company. To understand adequately the forces influencing profit growth, it is helpful to break down the past earnings growth record into several key components parts. Generally speaking, the growth of stockholders' equity per share has two principal sources. These sources are; the plowback of earnings into the business and the sale of common stock at a premium over the book value.

5.0 SUMMARY

Under this unit we saw that analysis of sales growth is merely the starting point of a wider investigation of the forces responsible for changes in stock value. Stockholders' equity is subject to growth from time to time. The principal factors responsible for the growth are traceable to earnings plowback and the sale of shares at a premium.

6.0 TUTOR-MARKED ASSIGNMENT

* Mention and discuss the two major sources of growth of stockholders equity.
* Discuss the effect non-payment of dividends could have on a company's stock price.

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
Published by McGraw-Hill Company Inc., 1221 Avenue, New York, U.S.A.

Cohen, J. (1977) Investment Analysis & Portfolio Management (Third Edition)
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MODULE 3

UNIT 1 INVESTMENT RETURN

CONTENTS

1.0 INTRODUCTION

When you go shopping for clothing materials, you will naturally go to the store and inspect and possibly try out the materials. But when you invest in a company, there is nothing to sample or try out physically. It is difficult to find out exactly the risks associated with the stock you have just bought from a company. In this unit we are going to study returns on the investment you make and the risks associated with investments.

2.0 OBJECTIVES

After studying this unit, you should be able to:

* Understand the concept of Return and Risks on Investments
* How to calculate Capital Gains and Capital Losses on your Investments

3.0 MAIN CONTENT

3.1 The Concept of Return

When we mention the word "Return", we mean the level of profit from an investment, that is, the reward for investing. Investors are motivated to invest in a given instrument by its expected return. Suppose you have N1,000 in a savings account paying 5 per cent annual interest, and a business associate asks you to lend him that amount of money. If you lend him that money for one year, at the end of which she pays you back, your return will depend on the amount of interest you charged him. If you gave him the money as an interest-free loan, your return will be zero. If you charged him 5 per cent interest, your return will be N50, that is, (0.05 x N1,000)

Note that some investment instruments guarantee a return without failure, others do not. For example, if you deposit N1,000 in the savings account of a large and strong commercial bank, your return can be viewed as certain since such strong bank is unlikely to go bankrupt over a short period. But if you lend the same amount of money to your business associate, your return might be less certain. Because your business associate might run into financial difficulty and be unable to pay you the interest charge and sometimes even the principal sum.

3.1.1 Components of Return

The return on an investment may come from more than one source. The most common source is periodic payments such as dividends or interest. The other source of return is appreciation in the value of your investment instrument, that, is the gain from selling an investment instrument for more than its original purchase price. We will call these two sources of return "current Income" and "capital Gain" respectively.

3.1.2 Current Income

Current income may take the form of dividends from stocks, interest received on bonds, rent received from real estate, and so on. To be considered to be an income, it must be received in the form of cash or be readily convertible into cash. For our purpose, current income is usually cash or near-cash that is periodically received as a result of owning an investment.

3.1.3 Capital Gains (or Losses)

The second type of return is concerned with the change in the market value of an investment. Investors pay a certain amount for an investment, from which they expect to receive, not only current income but also the return of the invested funds sometime in the future. The amount by which the proceeds from the sale of an investment exceed its original purchase price is called a "capital gain." In the contrary, if an investment is sold for less than its original purchase price, we have what is called "capital loss."

3.2 Why Return is Important

Return is a key variable in the investment decision: It allows us to prepare the actual or expected gains provided by various investments with the levels of return we need to be fairly compensated for the risks involved. For example, you would be satisfied with an investment that earns 12 per cent if your original expectation is that it should earn at least 10 per cent. Conversely, you will not be satisfied with an investment that 15 per cent return if your original anticipation is that it should earn at least 20 per cent return. Return can be measured in a historical sense or it can be used to formulate future expectations.

3.2.1 Historical Performance

Although most people recognize that future performance is not guaranteed by past performance, they would agree that past data often provide meaningful basis for formulating future expectations. A common practice in the investment world is to look closely at the historical performance of a given instrument when formulating expectations about its future. Because interest rates and other measures of financial return are most often cited on an annual basis, evaluation of past investment returns is typically done on the same basis.

3.2.2 Expected Return

In the final analysis, it is the future that matters when we make investment decisions. Expected return is a vital measure of performance. It is what you think the investment will earn in the future (in terms of current income and capital gains) that determines what you should be willing to pay for it.

To project future returns, we need insights into the investment prospects. If the trend in returns as recorded historically over a given range of years (say from 2005 to 2008) continued to rise, an expected future return in the range of 12 per cent to 15 per cent for 2012 to 2016 would be reasonable. On the other hand, if future prospects seem poor, or if the investment is subject to cycles, an expected return of 8 per cent to 10 per cent may be a more reasonable estimate.

3.2.3 Level of Return

The level of return achieved or expected from an investment will depend on a variety of factors. The key factors are internal characteristics and external forces.

Internal Characteristics: Certain characteristics of an investment affect its level of return. Examples include the type of investment instrument, the quality of management, the way the investment if financed and the customer base of the issuer. For example, the common stock of a large and well-managed company would be expected to provide a level of return higher from that of a small and poorly managed firm. Assessing internal factors and their impact on return is one important step in analyzing potential investments.

External Forces: External forces such as Federal Reserve actions, shortages war, price controls, and political events may also affect the level of return. None of these is under the control of the issuer of the investment instrument. Because investment instruments are affected differently by these factors, it is not unusual to find two instruments with similar internal characteristics offering significantly different returns. As a result of the same external force, the expected return from one instrument may increase, whereas that of another decreases. Likewise, the economies of various countries respond to external forces in different ways.

Another external force is the general level of price changes, either upwards caused by "inflation" or downwards caused by "Deflation." Inflation tends to have a positive impact on certain types of investment instruments, such as real estate, and a negative impact on others, such as stocks and fixed income securities. Rising interest rates, which normally accompany increasing rates of inflation, can significantly affect returns

3.3 The Time Value of Money

Imagine that Mr. Andrew who is 25 years of age begins making annual cash deposits of N1,000 Into a savings account that pays 5 per cent annual interest. After 40 years, that is at the age of 65 years, Mr. Andrew would have made deposit totaling N40,000, that is, (40 years x N1,000 per year). Assuming Mr. Andrew made no withdrawals, what do you think Mr. Andrew's account balance would be? Will it be N50,000, N75,000? Or N100,000? The answer is none of the above. Mr. Andrew's N40,000 would have grown to nearly N12,000. Why? Because the time value of money allows the deposits to earn interest that is compounded over the 40 years. Time Value of Money refers to the fact that as long as an opportunity exists to earn interest, the value of money is affected by the point in time when the money is expected to be received. Because opportunities to earn interest on funds are readily available, the sooner you receive a return on a given investment, the better.

3.3.1 Interest: The Basic Return to Savers

A savings around at a bank is one of the most basic forms of investment. Then saver receives interest in exchange for placing idle funds in an account. Interest can be viewed as a "rent" paid by a borrower for the use of the lender's money. The saver will experience neither a

capital gain nor a capital loss, because, the value of the investment (the initial deposit) will increase only by the amount of interest earned.

Simple interest: The income paid on such instruments as Certificates of Deposit (CDs), bonds, and other forms of investment that pay interest is most often calculated using the simple interest method: Interest is paid only on the initial deposit for the amount of time it is held. For example, if you hold a N100 initial deposit in an account paying 6 per cent interest per annum, you will earn N6 interest at the end of the year, that is (1 yr x 0.06 N100).

Using the simple interest method, the stated rate of interest is the true rate of interest (or return), which is, the actual rate of interest earned. In our example, the true rate of interest is 6 per cent. Because the interest rate reflects the rate at which current income is earned regardless of the size of the deposit, it is a useful measure of current income.

3.3.2 Compound Interest

Compound interest is paid not only on the initial deposit but also on any interest accumulated from one period to the next period. This is the method usually used by savings institutions. When interest is compounded annually over a single year, compound interest and simple interest provide similar results. In this case the stated interest rate and the true interest rate are equal. Note that this is only in the first year. In subsequent years, the interest earned in the first year is compounded or added to the principal and both of them earn interest on the stated rate of interest.

4.0 CONCLUSION

In this unit we dealt with returns on investment instruments. We noted that return means the level of profit from an investment, that is, the reward for investing. What motivates an investor to invest in a given instrument is the expected return. We also talked about the current income and capital gains (or losses).

5.0 SUMMARY

This unit clearly demonstrates that it is only one factor that motivates investors to invest in instruments. That single factor is the expected return from the investment. Return on

investment comes from sources such as dividend and interest payment. Return can also be earned from capital gain, that is when we sell an investment instrument for more than its original purchase price.

6.0 TUTOR-MARKED ASSIGNMENT

* Discuss what you understand by "current Income"
* Why is return so important in investment practice?

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
Published by McGraw-Hill Company Inc., 1221 Avenue, New York, U.S.A.

Cohen, J. (1977) Investment Analysis & Portfolio Management (Third Edition)
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UNIT 2 RISK: THE OTHER SIDE OF THE INVESTMENT COIN

CONTENTS

1.0 INTRODUCTION

The investment coin has two sides like any other coil. One side represents the earning of returns and the other side embodies the risks and dangers of not realizing our investment expectations. In essence, we cannot consider return without also looking at risk, the chance that the actual return from an investment may differ from what is expected. In this unit, we shall consider the various types of risks in different investment instruments.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* The relationship between risk and return called the “Risk-Return Trade-off”
* Various risks associated with different investment instruments

3.0 MAIN CONTENT

3.1 The Concept of Risk

As earlier mentioned, we cannot consider return without also looking at risk, the chance that the actual return from our investment may differ from our expectation. The risk associated with a given investment is directly related to its expected return. In general, the broader the range of possible returns associated with a given investment, the greater its risk, and vice versa. Expressed in another way, riskier investments tend to provide higher levels of return or the higher the risk the higher the reward. Otherwise, why would an investor risk his capital?

In general, investors attempt to minimize risk for a given level of return or to maximize return for a given level of risk. This relationship between risk and return is usually referred to as the “risk-return trade-off.”

3.1.1 Sources of Risk

The risk associated with certain investment instrument may result from a combination of a variety of possible sources. A Prudent investor considers how the major sources of risk might affect potential investment instruments. Of course, currency exchange rate should also be considered when investing internationally.

3.1.2 Business Risk

In general, business risk is concerned with the degree of uncertainty associated with the earnings of an investment and the ability of that investment to pay interest, principal, dividends, and any other returns owed investors. For example, a business firm may experience

poor earnings and, as a result fail to pay investors fully. In this case, business owners may receive no return if earnings are not adequate to meet obligations. Debt holders, on the other hand, are likely to receive some, but not necessarily all, of the amount owed them, because of the preferential treatment legally accorded to debt instrument holders.

Much of the business risk associated with a given investment instrument is related to its kind of business. For example, the business risk of a public utility common stock differs from that of a high-fashion clothing manufacturer. Generally, investments in similar kinds of firms have similar risk although differences in management, costs, and location.

3.1.3 Financial Risk

The degree of uncertainty of payment attributable to the mix of debt and equity used to finance a firm or property is financial risk. The larger the proportion of debt used to finance a firm or property, the greater its financial risk. Debt financing obligates the firm to make interest payments as well as to repay the debts, thus increasing the firm's risk. These fixed-payment obligations must be met before the distribution of any earnings to the owners of such firms or properties. Inability to meet obligations associated with the use of debt could result in business failure and in loss for bond-holders as well as for stock-holders.

3.2 Purchasing Power Risk

The chance that changing price levels within the economy (inflation or deflation) will adversely affect investment returns in purchasing power risk. Specifically, this risk is the chance that generally rising prices (inflation) will reduce purchasing power, that is, the amount of a given commodity that can be purchased with Naira. For example, if last year one Naira could buy ten oranges. This year, if orange sellers start selling ten oranges for N2, it means that N1 can buy only five oranges this year. In period of rising price levels, the purchasing power of the Naira decreases and vice versa.

In general, investments whose values move with general price levels have low purchasing power risk and are most profitable during periods of rising prices. Those that provide fixed returns have high purchasing power risk and are most profitable during periods of declining price levels or low inflation. The returns on real and tangible personal property investments, for example, tend to move with the general price level, whereas returns from deposit accounts and bonds do not.

3.2.1 Interest Rate Risk

Securities are especially affected by interest rate risk. This is particularly true for those securities that offer purchasers a fixed periodic return. Interest rate risk is the chance that changes in interest rates will adversely affect the value of a security. The interest rate changes themselves result from changes in the general relationship between the supply of and the demand for money. As interest rates change, the prices of many securities fluctuate. They decrease with increasing interest rates, and increase with decreasing interest rates. . The price of fixed income securities, such as, bonds and preferred stock drop when interest rates rise. They thus provide purchasers with the same rate of return that would be available at prevailing rates. The reverse is the case when interest rates fall.

The other aspect of interest rate risk is related to investing in short-term securities such as Treasury bills, certificates of deposit, commercial paper, and bankers' acceptances.
Some investors include these securities in their portfolios rather than investing in long-term securities. Investors face the risk that when short-term securities mature, their proceeds may have to be invested in lower yielding, new short-term securities. By initially making a long-term investment, you can lock-in a return for a period of years rather than face the risk of declining the returns from a short-term security investment strategy are adversely affected. Most investment instruments are subject to interest rate risk. However, fixed-income securities are most directly affected by interest rate movements followed by other long-term securities such as common stock and property.

3.2.2 Liquidity Risk

Liquidity risk is the risk of not being able to liquidate an investment conveniently and at a reasonable price. The liquidity of a given investment instrument is an important consideration for an investor. In general, investment instruments traded in a thin market, where demand and supply are small, tend to be less liquid than those traded in broad markets.

One can generally sell an investment instrument merely by significantly reducing its price. However, to be liquid, an investment instrument must be easily sold at a reasonable price.

3.2.3 Tax Risk

The chance that the Federal Government will make unfavourable changes in tax laws , driving down the after-tax returns and market values of certain investments. The greater the chance that such changes will drive down the after –tax returns and market values of certain investments, the greater the tax risk. Undesirable changes in tax laws include elimination of tax exemptions, limitation of deductions, and increase in tax rates. Virtually all investments are vulnerable to increases in tax rates, certain investments, such as municipal and other bonds, real estate, and natural resources generally have greater tax risk.

3.3 Market Risk

Market risk is the risk of a decline in investment returns because of market factors independent of the given security or property investment. Examples of market risk include political, economic, and social events as well as changes in investor tastes and preferences. Market risk actually embodies a number of different risks; purchasing power risk, interest rate risk, and tax risk.

The impact of market factors on investment returns is not uniform. Both the degree and the direction of change in turn differ among investment instruments. For example, legislation placing restrictive import quotas on foreign automobiles and electronic goods may result in a significant increase in the value of domestic automobiles and electronics. Essentially, market risk is expressed in the price volatility of a of a security. The more volatile the price of a security, the greater its perceived market risk.

3.3.1 Event Risk

Event risk implies the risk that comes from a largely (or totally) unexpected event that has a significant and usually immediate effect on the underlying value of an investment. This risk occurs when something happens to a company or property that has a sudden and substantial impact on its financial condition. Event risk goes beyond business and financial risk. It does not necessarily mean the company or market is doing poorly. Instead, it involves a largely unexpected event that has a significant and usually immediate effect on the underlying value of an investment. Event risk can take many forms and can affect all types of investment instruments.

3.3.2 Components of Risk

The risk of an investment consists of two components. Diversifiable and Non-diversifiable risks. Diversifiable risk, sometimes called unsystematic risk, results from uncontrollable or random events, such as labour strikes, lawsuits, and regulatory actions. Such risk affects various investment vehicles instruments differently. It represents the portion of an investment's risk that can be eliminated through diversification.

Non-diversifiable risk, also called systematic risk, is attributed to forces such as war, inflation, and political events that affect all investments and therefore are not unique to a given instrument. The sum of non-diversifiable risk and diversifiable risk is called total risk.

4.0 CONCLUSION

Under this unit, we discussed risk, that is the chance that the actual return from an investment may differ from what is expected. We made the point that, the risk associated with a given Investment is directly related to its expected return. We have many types of risk and they include; business risk, financial risk, purchasing risk, interest rate risk, etc.

4.0 SUMMARY

The issue of risk is important to every investor because risk affects the returns on investment. It is sometimes the assumption in investment studies that, the higher the risk in a particular investment instrument, the higher the returns, but that is not always the case. A wise investor thoroughly weighs the risk and returns in each investment move he makes.

6.0 TUTOR-MARKED ASSIGNMENT

* What do you understand by risk and how does it affect return?
* Explain what you understand by "Event Risk"?

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
Published by McGraw-Hill Company Inc., 1221 Avenue, New York, U.S.A.

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UNIT 3 INVESTING IN COMMON STOCK S

CONTENTS

1.0 INTRODUCTION

Investing in common stock is about taking educated risk. It is also about receiving returns, sometimes spectacular ones too. It looks so easy to invest in common stock but it goes with big risk because common stock ownership makes you part owner of the firm and for this reason, you are carrying the most risk. Investors who risk their money in common stock must learn as much as possible about the company in which they are investing and the industry to which it belongs.

2.0 OBJECTIVES

After studying this unit, you will be familiar with

* Common stocks and dividends payable to common stock holders.
* Learn something about the characteristics of common stocks

3.0 MAIN CONTENT

3.1 What Stocks have to Offer

The basic investment attribute of common stocks is that they enable investors o participate in the profits of the firm. Every shareholder is a part owner of the firm and, as such, is entitled to a piece of the firm's profit. This claim on income is not without limitations, however, because common stockholders are really the residual owners of the company. That is, they are entitled to dividend income and a share of the company's earnings only after all other corporate obligations have been met. Equally important as residual owners, holders of common stock have no guarantee that they will ever receive any return on their investment.
The challenge, of course, is to find stocks that will provide the kind of return you are looking for. As anyone who has ever purchased stock can attest, it is not really easy to settle at common stock for there are literally thousands of actively traded stocks to choose from.

3.1.1 The Appeal of Common Stocks

Common stocks are a popular form of investing, used by millions of individual investors. Their popularity stems from the fact that they offer investors an opportunity to tailor their investment programmes to meet individual needs and preferences. Given the size and diversity of the stock market, it is safe to say that no matter what the investment objective, there are common stocks to fit the bill. For retired people and others living on their investment holdings, stocks provide a way of earning a steady stream of current income, common stocks can serve as the basis for long-run accumulation of wealth. With this strategy, stocks are used very much like a savings account. Investors buy stock for the long haul as a way to earn not only dividends but also a steady flow of capital gains. These investors recognize that stocks have a tendency to go up in price over time, and they simply position themselves to take advantage of that fact. Indeed, it is this potential for capital gains that is the real incentive for investment in common stocks. Whereas dividends can provide a steady stream of income, the big returns come from capital gains. And few securities can match common stocks when it comes to capital gains.

3.1.2 Putting Stock Price Behaviour in Perspective

By the special nature of common stock, when the market is strong, investors can generally expect to benefit from steady price appreciation. On the other hand, when the market falters, that is, when the market is weak, stock price will begin to dwindle. The rise and fall characteristic of the stock market dictated by stock market condition gave rise to the concept of "Bull" and "Bear" situation in the stock market.
Bull Market: The stock market is said to be in bull shape when there is general rise in the price of stocks traded on it. There is active buying and selling, and investors are making money.
Bear Market: The stock market is said to be in bear shape when the general stock price is on the decline. There are not lively transactions and investors are losing money.

3.1.3 From Stock Price to Stock Return

So far, we have centred our discussion on stock prices, but what is even more important to investors is stock returns, which take into account, not only price behaviour, but also dividend income and capital gains.

Generally, when a firm is performing well and earning good profits, the chances are that it will declare high figure of dividend to be paid to common stock-holders. The market price of shares of a high-performing firm will always be on the increase. This means too that stockholders can make capital gains when they sell their stock in the stock exchange market.

3.2 The Pros and Coins of Stock Ownership

One reason why common stocks are so attractive to investors is the substantial return opportunities they offer. Stocks generally provide attractive highly competitive returns over the run. Indeed, common stock returns compare favourably to alternative investment outlets such as long-term corporate bonds and treasury bills.

The special advantage of equity securities (common stocks) is that stock holders are entitled to participate fully in the residual profit of the firm. In good times they earn higher dividends greater than the interest payable to bondholders.

3.2.1 Other Benefits of Common Stock

Common stocks offer some other special benefits. They are easy to buy and sell, and the transaction costs are modest. Moreover, price and market information is widely disseminated in the news and financial media. A final advantage of stock ownership is that the unit cost of share of common is usually within the reach of most individual investors. A final advantage of stock ownership is that the unit cost of share of common stock is usually within the reach of most individual investors. Unlike bonds, which carry minimum denomination of at least N100, N150 or N200 a share and any number of shares, no matter how few, can be bought or sold.

3.2.2 Disadvantages of Holding Common Stock

Looking at the other side of the coin, there are some disadvantages, too, associated with holding common stock. The major disadvantage has to do with risk. Common stocks are subject to a number of different types of risk. These risk include business and financial risk, purchasing power risk, market risk, and possibly event risk. All of these can adversely affect a stock's earnings and dividends, its price appreciation, and, of course, the rate of return earned by an investor.

Even the best of stocks possess elements of risk that are difficult to overcome, because company earning are subject to many factors, including government control and regulation, foreign competition and state of the economy. Because such factors affect sales and profits, they also affect the price behaviour of the stock and even dividends. All of these lead to another disadvantage: The earnings and performance of a stock are subject to wide swings so it is difficult to value common stock adequately.

3.3 Basic Characteristics of Common Stocks

Each share of common stock represents equity (ownership) in a company. Indeed, it is this equity position that explains why common stocks are often referred to equity securities or equity capital. Every share entitled the holder to an equal ownership position and participation in the corporation's earnings and dividends, and equal vote, and equal voice in management. Together, the common stockholders own the company, and the more shares an investor owns, the bigger his or her ownership position. Common stock has no maturity date; I remain s in position and in power indefinitely unless the holder decides to sell it to another investor.

3.3.1 Common Stock as a Corporate Security

All business firms (private and public) issue common stock. However, only the common stocks of publicly quoted corporate bodies are traded in the stock market. These are the shares that are readily available to the general public and which are bought and sold in the open market.

Shares of common stock can be issued in several different ways. The most widely used procedure today is the "public offering" of new shares, whereby the corporation, working with an underwriter, offers the investing public a certain number of shares at a certain price. New shares can also be issued using what is known as a "rights offering." In a rights offering, existing shareholders are given the first opportunity to buy the new issues and can purchase new shares in proportion to their current ownership position. For instance, if a stockholder currently owns one per cent of a firm's stock and the firm issues 10,000 additional shares, the rights offering will give that stockholder the opportunity to purchase one percent of 10,000 shares which boils down to 100 shares.

3.3.2 Classified Common Stock

For the most part, all the stockholders in a corporation enjoy the same benefits of ownership. Occasionally, (though not a common feature in the developing countries), a company can issue different classes of common stock, each of which entitles the holder to different privileges and benefits. These issues are known as Classified Common Stock." Hundreds of publicly traded companies, especially in the developed economies, have created such stock classes. Even though issued by the same company, each class of common stock is different in a way.

Classified common stock is customarily used to denote either different voting rights or different dividend obligations. For instance, class A stock could be used to designate non-voting shares, and class B could carry normal voting rights. Ford Motor Company in U.S.A. is known for issuing two classes of common stock (ordinary shares). Class A stock is owned by the investing public, and class B stock is owned by the Ford family . The two classes of stock share equally in the dividends, but class A stock has one vote per share and the voting rights of the class B stock are structured to give the Ford Family a 40 per cent absolute control of the company.

4.0 CONCLUSION

In this unit, we have discussed common stock and what it has to offer investors. We noted that common stock, also referred to as ordinary share or equity share gives the holder ownership right in the firm according to the number of shares each investor holds. An investor in the stock of a firm is interested in the earnings. This earning comes in form of dividend payable to him at the end of every year when the company makes profit. The investor can also benefit from capital through the sale of his shares.

5.0 SUMMARY

Investment in common stock can be said to be the best investment so long as the company is performing profitably. The common stock holder in a well-performing company receives dividend at the end of the year. He can sell his shares to make capital gains, and he has voting right and by voting right, h is indirectly participating in the running of the organization. In good times, the investor makes capital gains out of his shares, and in bad periods he will incur capital losses.

6.O TUTOR-MARKED ASSIGNMENT

* Why is the common stock holder referred to as Residual Owner of the company?
* When can a common stock holder incur capital loss?

7.0 REFERENCE/FURTHER READING

Bodie, Z. et al. (2001) Essentials of Investment (Fourth Edition)
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UNIT 4 BUYING AND SELLING OF COMMON STOCKS

CONTENTS

1.0 INTRODUCTION

In the stock market investors engage in the buying and selling of stocks. The buying and selling of stocks demand that the investor should be familiar with the way stocks are quoted and the costs of executing common stock transactions. This unit will introduce the student to the requirements for successful buying and selling of common stocks.

2.0 OBJECTIVES

After studying this unit, the student should be familiar with :

* Knowledge and wisdom required for successful buying and selling of common stocks
* How to determine the “par value” and “book value” of common stocks

3.0 MAIN CONTENT

3.1 Buying and Selling of Common Stocks

Whether buying or selling stocks, investors should be familiar with the way stocks are quoted and with the costs of executing common stock transactions. Certainly, keeping track of current prices is an essential element in the buying and selling decisions of investors. They are the link in the decision process that lets the investor decide when to buy or sell a stock. They also help investors monitor the market performance of their security holdings. Similarly, transaction costs are important because of the impact they can have on investment returns. Indeed, the costs of executing stock transactions can sometimes consume most (or all) of the profits from an investment. These costs should not be taken lightly.

3.1.1 Reading the Quotes

Investors in the stock market have come to rely on a highly efficient information system that quickly disseminates market prices to the public. The stock quotes that appear daily in the financial press are a vital part of that information system. To see how price quotations work and what they mean, consider the quotes that appear daily in the Financial Times and other Newspapers. These quotes give, not only the most recent price of each stock, but also a great deal of additional information.

3.1.2 Transaction Costs

Common stock can be bought and sold in round or odd lots. A round lot is 100 shares of stock. An odd lot is a transaction involving g less than 100 shares. The sale of 400 shares of stock would be a round lot transaction; the sale of 75 shares would be an odd lot transaction. Trading 250 shares of stock would involve a combination of two round lots and an odd lot.

An investor incurs certain transaction costs when buying or selling stock. In addition to some modest transfer fees and taxes paid by the seller, the major cost is the brokerage fee paid by both the buyer and the seller at the time of the transaction. As a rule, brokerage fees amount to one per cent to five per cent of most transactions, though they can go much higher particularly for very small trades. This is so because the purchase or sale of odd lots requires the assistance of a specialist known as an odd-lot dealer. This usually results in an odd-lot differential of 12.5 to 25 kobo per share.

3.2 Common Stock Value

The worth of a share of common stock can be described in a number of ways. Terms such as par value, book value, market value, and investment value are all found in the financial media. Each designates some accounting, investment, or monetary attribute of the stock in question.

3.2.1 Par Value

The term "par value" refers to the stated, or face value of a stock. It is not really a measure of anything, and except for accounting purposes, it is relatively useless. In many ways, par value is a throwback to the early days of corporate law, when it was used as a basis for assessing the extent of a stockholder's legal liability. Because the term has little or no significance for investors, many stocks today are issued as no-par or low-par stocks, that is, they may have par values of only a penny o two.

3.2.2 Book Value

"Book Value," another accounting measure, represents the amount of stock-holder's equity in the firm. It is commonly used in security analysis and stock valuation. Book value indicates the amount of stockholder funds used to finance the firm. It is calculated by subtracting the firm's liabilities and preferred stock from its assets.

Let us assume that a corporation has N10 million assets, owes N5 million in various forms of short- and long-term debt, and has N1 million worth of preferred stock outstanding. The book value of this firm would be N4 million. This amount can be converted to a per-share basis (book value per share) through dividing it by the number of common shares outstanding. For example, if this firm has 100,000 shares of common stock outstanding, then its book value per share is N40. As a rule, most stocks have market prices that are above their book values.

3.2.3 Market Value

"Market value" of a stock is one of the easiest stock values to determine. It is simply the prevailing market price of an issue. In essence, market value indicates how the market participants as a whole have assessed the worth of a share of stock. By multiplying the market price of the stock by the number of shares outstanding, we can also find the market value of the firm itself, or what is known as the firm's market capitalization. For example, if a firm has N1 million shares outstanding and its stock trades at N50 per share, the company has a market value (or market cap) of N50 million. Because investors are always interested in an issue's market price, the market value of a share of stock is generally of considerable importance to stockholders as they formulate their investment policies and programmes.

3.2.4 Investment Value

Investment value is probably the most important measure for a stockholder. It indicates the worth investors place on the stock, that is to say, what they think the stock should be trading for. Determining a security's investment worth is a complex process based on expectations of the return and risk behaviour of a stock. Every stock has two potential sources of return. The first one is annual dividend payments and the second is possible capital gains that could accrue if the stock is sold after the market price of that stock has appreciated.

In establishing investment value, investors try to determine how much money they will make from these two sources and then use that estimate as the basis for formulating the return potential of the stock. At the same time, they try to assess the amount of risk to which they will be exposed by holding the stock. Such return and risk knowledge helps them place an investment value on the stock. This value represents the maximum price an investor should be willing to pay for the issue.

3.3 The Dividend Decision

By paying out dividends on annual or half-yearly basis, companies share with their stockholders the profits they earn. Actually, the question of how much to pay in dividend is decided by a firm's board of directors. The directors evaluate the firm's operating results and financial condition to determine whether dividends should be paid and, if so, how much. If the directors decide to pay dividends, they also establish several important payment dates.

3.3.1 Corporate Versus Market Factors

When the board of directors assembles for a regular dividend meeting, it weighs a variety of factors in making the dividend decision. First, the board looks at the firm's earnings. Even though a company does not have to show a profit to pay dividends, profits still are considered a vital link in the dividend decision.
With common stocks, the annual earnings of a firm are usually measured and reported in terms of earnings per share (EPS). Basically, EPS translates total corporate profits into profits on a per-share basis and provides a convenient measure of the amount of earnings available to stockholders. Earning per share is found by using the following simple formula:

$$EPS = \frac{\text{Net profit after taxes} - \text{Preferred dividends}}{\text{Number of shares of common stock outstanding}}$$

3.3.2 Components of Risk

Let us assume the directors decide to declare a dividend. They then must indicate the date of payment and other important dates associated with the dividend. Normally, the directors will issue a statement to the press indicating their dividend decision, along with the dividend payment dates. These statements are widely published in the Financial Times and other print media.

Three dates are particularly important to the stockholder: The date of record, ex-dividend date, and payment date. The "date of record" is the date on which the investor must be a registered shareholder of the firm to be entitled to a dividend. These stock holders are usually referred to as "holders of record." When the board specified the date of record, all the investors who are official stock holders of the firm as of the close of business on that date will receive the dividends that have just been declared.

The "Payment date" is also set by the board of directors. Generally, the payment date follows the date of record after one week. The payment date is the actual date on which the firm will mail dividend cheques to holders of record.

Because of the time needed to make book-keeping entries after a stock is traded, the stock will sell on an “ex-dividend” basis for three business days prior to the date of record. That is, the ex-dividend date will dictate whether you were an official shareholder and therefore eligible to receive the declared dividend. If you sell your stock before this date, the new shareholder will receive the recently declared dividend.

4.0 CONCLUSION

In this unit, we studied the process of buying and selling common stocks. We noted that it is advisable for an investor to get familiar with the way stocks are quoted and the costs of executing common stock transactions. We also looked at common stock values and discussed the par value, book value, market value and investment value of common stock.

5.0 SUMMARY

Keeping track of current prices is an essential element in the buying and selling of common stock. Similarly, transaction costs are important because of the impact they can have on investment returns since the ultimate aim of every investor is to earn the highest possible returns. Common stock holders receive dividend on their holdings. They are interested in receiving high figures of dividend hence the way a firm makes investment decision is of interest to them.

6.0 TUTOR-MARKED ASSIGNMEN T

* Explain the meaning of “par value” and “market value” of common stock
* How does a publicly quoted firm make dividend decision?

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MODULE 4

Unit 1 Security Analysis
Unit 2 Investing in Fixed-Income Securities
Unit 3 Bond Valuation and Analysis.
Unit 4 Preferred Stock and Convertible Securities

UNIT 1 SECURITY ANALYSIS

CONTENTS

1.0 INTRODUCTION

Just about everywhere you look, there is a product or service created by a company that issues common stock. Think of Coca Cola Company, Seven Up firm or the Liver Brothers, all of them

have one product or another to sell. Your satisfaction with a product or your attraction to its design may lure you into investing in its stock. But, wait a minute! Do not invest yet. Carry out security analysis to determine the value of the stock, the risks inherent and the potential returns before you stick out your neck to invest.

2.0 OBJECTIVES

After studying this unit, the student should be familiar with the:

* Principles followed in Security Analysis
* Application of Security Analysis in an Efficient Market

3.0 MAIN CONTENT

3.1 Principles of Security Analysis

The obvious motivation for investing in stocks is to watch your money grow. Unfortunately some of the investments we make end up in losses rather than profits. Most of the disasters in our investment can be traced to bad timing, greed, poor planning, or failure to use common sense in making investment decisions. That is why every investor needs to carry out security analysis of stocks before deciding to invest.

Security analysis consists of gathering information, organizing it into a logical framework, and then using the information to determine the inherent or intrinsic value of a common stock. Given a rate of return that is compatible with the amount of risk involved in a proposed transaction, intrinsic value provides a measure of the underlying worth of a share of stock. It provides a standard for helping you judge whether a particular stock is undervalued, fairly priced, or overvalued.

In investment, the question of value centres on returns. In particular, a satisfactory investment candidate is one that offers a level of expected return commensurate with the amount of risk involved. As a result, not only must an investment instrument be profitable, it must be sufficiently profitable, that is, you expect it to generate a return high enough to offset the perceived exposure to risk.

3.1.1 What Security Analysis Particularly Address

If you could have your way, you would probably like to invest in something that offers you a complete preservation of your capital, along with sizeable current income and capital gains. The problem, of course, is in finding such a security. One approach is to buy whatever that strikes your fancy. A more rational approach is to use security analysis to look for promising investment candidates. Security analysis therefore specifically addresses the question of "what to buy" by determining the "worth of a stock." Presumably, an investor will buy a stock only if its prevailing market price does not exceed its worth. The worth of a stock means the intrinsic value put on it as perceived by the investor. However, intrinsic value depends on several factors:

1. Estimates of the stock's future cash flows , that is, the amount of dividends you expect to receive over the holding period and the estimated price of the stock at time of sale.

2. The discount rate used to translate these future cash flows into present value.

3. The amount of risk embedded in achieving the forecasted level of performance.

3.1.2 Focus of Traditional Security Analysis

Traditional security analysis usually takes a "top-down" approach: It begins with economic analysis and the moves to industry analysis and finally to fundamental analysis.
Economic analysis is concerned with assessing the general state of the economy and its potential effects on security returns.
Industry analysis deals with the industry within which a particular company operates, how the company is measuring up with the major competitors in the industry, and the general outlook for that industry.

Fundamental analysis looks in depth at the financial condition and operating results of a specific company and the underlying behaviour of its common stock. In essence, it looks at the "fundamentals of the company," that is, the company's investment decisions, the liquidity of its assets, its use of debt, its profit margins and earnings growth and ultimately, it looks at the future prospects of the company and its stock. Fundamental analysis is closely linked to the notion of intrinsic value because it provides the basis for projecting a stock's future cash flows.

A key part of this analytical process is company analysis, which takes a close look at the actual financial performance of the company. Such analysis is not meant simply to provide interesting information about how the company has performed in the past, rather, it is done to help investors formulate expectations about the future performance of the company and its stock. Make no mistake about it, in the field of investment, it is the future that matters. But in order to understand the future prospects of the firm, an investor should have a good handle on the company's current conditions and its ability to produce earnings.

3.1.3 Who Needs Security Analysis in an Efficient Market?

The concept of security analysis is general and fundamental analysis in particular is based on the assumption that investors are capable of formulating reliable estimates of a stock's future behaviour. Fundamental analysis operates on the broad premise that some securities may be mispriced in the market place at any given point in time. Furthermore, fundamental analysis assumed that, by undertaking a careful analysis of the inherent characteristics of each of the firms in question, it is possible to distinguish those securities that are correctly priced from those that are not.

To many, those two assumptions of fundamental analysis seem reasonable. However, there are others who just do not accept the assumptions of fundamental analysis. These are the so called "Efficient Market" advocates. They believe that the market is so efficient in processing new information that securities trade so close to or exactly at their correct values at all times. Thus, they argue, it is virtually impossible to outperform the market on a consistent basis.
In its strongest form, the efficient market hypothesis asserts that:

(1) Securities are rarely, if ever, substantially misplaced in the market place.
(2) No security analysis, however detailed, is capable of identifying misplaced with a frequency greater than that which might be expected by random chance alone.

Is the efficient market hypothesis correct? Is there a place for fundamental analysis in modern investment theory? Interestingly, most financial theorists and practitioners would answer yes to both of these questions.

3.2 Solution to the Paradox

The solution to this apparent paradox is really quite simple. Basically, fundamental analysis is of value in the selection of alternative investment instruments for two important reasons. First, financial markets are as efficient as they are because a large number of people and powerful financial institutions invest a great deal of time and money in analyzing the fundamentals of most widely held investments. In other words, markets tend to be efficient, and securities tend to trade at or near their intrinsic values, simply because a great many people have done the research necessary to determine what their intrinsic values should be. Second, although the financial markets are generally efficient, they are by no means perfectly efficient. Pricing errors are inevitable, and those individuals who have conducted the most thorough studies of the underlying fundamentals of a given security are the most likely to profit when errors do occur.

3.2.1 Economic Analysis

If we live in a world where economic activity had absolutely no effect on the stock market or no security prices, we could avoid studying the economy altogether. The fact is, of course, that we do not and cannot live in such a world. Stock prices are heavily influenced by the state of the economy and by economic events. As a rule, stock prices tend to move upwards when the economy is strong, and downwards when the economy starts to dwindle.

The reason why the economy is so important to the market is simple: The overall performance of the economy has a significant bearing on the performance and profitability of the companies that issue common stock. As the fortunes of the issuing firms change with the economic conditions, so do the prices of their stocks. Of course, not all stocks are affected in the same way or to the same extent. Some sectors of the economy, like food retailing, may be only mildly affected by the economy, others, like the construction and auto industries, are often hard hit when times get rough.

A general study of the economy should not only give an investor a grasp of the underlying nature of the economic environment but also enable him to assess the current state of the economy and to formulate expectations about its future course. It can go so far as to include a detailed examination of each sector of the economy, or it may be done on a very informal basis. Regardless of how it is performed, however, the purpose (from security analysis perspective) is always the same: To establish a sound foundation for the valuation of common stock.

3.2.2 Economic Analysis and the Business Cycle

Economic analysis sets the tone for security analysis. If the economic future looks bleak, you can probably expect most stock returns to be equally dismal. If the economy is buoyant, stocks prices will be high. The behaviour of the economy is sometimes captured in the business cycle, which reflects changes in total economic activity over time. Two widely followed measures of the business cycle are:

(a) Gross Domestic Product (GDP), which represents the market value of all goods and services produced in a country over the period of a year.

(b) Index of Industrial Production which measures the activity/output in the industrial or productive segment of the economy.

Normally, gross domestic product and the index of industrial production move up and down following the dictates of the business cycle.

3.3 Key Economic Factors

Several parts of the economy are especially important because of the impact they have on total economic activity. These would naturally include:

Government fiscal policy:
Taxes
Government spending
Monetary policy:
Money supply
Interest rates
Other factors:
Consumer spending
Business Investments
Foreign trade and foreign exchange rates

Government physical policy tends to be expansive when it encourages spending, that is, when the government reduces taxes and increases the size of the budget. Similarly, monetary policy is said to be expansive when money is readily available and interest rates are relatively low. An expansive economy also depends on a generous level of spending by consumers and

business concerns. These same variables moving in a reverse direction can have a recessionary impact on the economy, as for example, when taxes and interest rates increase or when spending by consumers and businesses falls off.

The impact of these major forces filters through the system and affects several key dimensions of the economy. The most important of these are industrial production, corporate profits, retail sales, personal income, the unemployment rate, and inflation. For example, a strong economy exists when industrial production, corporate profits, retail sales, and personal income are moving up and unemployment is moving down. Thus, when conducting an economic analysis, an investor should keep an eye on fiscal and monetary policies, consumer and business spending, and foreign trade for the potential impact they have on the economy. At the same time, he must stay abreast of the level of industrial production, corporate profits, Retail sales, personal income, unemployment, and inflation in order to assess the state of the business cycle.

3.3.1 Developing an Economic Outlook

Conducting an economic analysis involves studying fiscal and monetary policies, inflationary expectations, consumer and business spending, and the state of the business cycle. Often investors do this on a fairly informal basis. As they form their economic judgments, many rely on one or more of the popular published sources as well as on periodic reports from major brokerage houses. These sources provide a convenient summary of economic activity and give investors a general feel for the condition of the economy.

Once you have developed a general economic outlook, you can use the information in one of two ways. One approach is to construct an economic outlook and then consider where it leads in terms of possible areas for further analysis. For example, suppose you uncover information that strongly suggests the outlook for business spending is very positive. On the basis of such an analysis, you might want to look more closely at capital goods producers, such as machine tool manufacturers, as investment candidates.

A second way to use information about the economy is to consider specific industries or companies and ask, “How will they be affected by expected developments in the economy?” Take an investor with an interest in gold trinkets stocks. Because of the nature of the business (durable fashion goods), these stocks are susceptible to changing economic conditions.

Especially important here is the level of discretionary consumer spending: Normally spending on such goods tends to accelerate when the economy picks up and slackens when the economy slows down. In this instance, our imaginary investor would first want to assess the current state of the business cycle. Using insight, he would then formulate some expectations about the future of the economy and the potential impact it holds for the stock market in general and a gold trinket stocks in particular.

3.3.2 Industry Analysis

Looking at securities in terms of industry groupings is a popular way of viewing stocks and is widely used by both individual and institutional investors. This is a sensible approach because stock prices are influenced by industry conditions. The level of demand in an industry and other industry forces set the tone for individual companies. Clearly, if the outlook is good for an industry, then the prospects are likely to be strong for the companies that make up that industry.

The first step in industry analysis is to establish the competitive position of a particular industry in relation to others. It is clear that not all industries perform alike.
The next step is to identify companies within the industry that hold particular promise. This sets the stage for a more thorough analysis of individual companies and securities. Analyzing an industry means looking at such things as its makeup and basic characteristics, the key economic and operating variables that drive industry performance, and the outlook for the industry. The investor will also want to keep an eye out for specific companies that appear well suited to take advantage of industry conditions. Companies with strong market conditions should be favoured over those with less secure positions. Such dominance confers the ability to maintain pricing leadership and suggests that the firm will be in a position to enjoy economies of scale and low-cost production. Market dominance also enables a company to support a strong research and development effort, thereby helping it secure its leadership position for the future.

Normally, an investor can gain valuable insight about an industry by seeking answers to the following questions:

(1) What is the nature of the industry? Is it monopolistic, or are there many competitors? Do few set the trend for the rest?

(2) To what extent is the industry regulated? Is it a public utility?
If the industry is regulated, then find out how friendly the regulatory authority is.

(3) What role, if any, does labour play in the industry? How important are labour unions? Are there good labour relations within the industry? When is the next round of contract talks.

(4) How important are technological developments? Are any new developments taking place, and what impact are potential breakthroughs likely to have?

(5) Which economic forces are especially important to the industry?
Is the demand for the industry's goods and services related to key economic variables? If so, what is the outlook for those variables?
How important is foreign competition to the health of the industry?

(6) What are the important financial and operating considerations? Is there an adequate Supply of labour, material, and capital?
What are the capital spending plans and needs of the industry?

4.0 CONCLUSION

In this unit, we studied security analysis which we pointed out is the process of gathering and organizing information and then using it to determine the value of a share of common stock. In essence, security analysis addresses the question of "what to buy" by determining what a stock ought to be, in terms of its value. Determining the intrinsic value of a stock depends on several factors among them is the risk inherent in achieving the forecasted performance.

5.0 SUMMARY

We carry out security analysis in order to determine the value of a common stock.
Security analysis provides a standard for helping us determine whether a particular stock is undervalued, fairly prices or overvalued. In investment practice, the question of value centres on return. In particular, a satisfactory investment instrument is one that offers a level of expected return commensurate with the amount of risk involved.

6.0 TUTOR-MARKED ASSIGNMENT

* What is the main objective of security analysis?
* What are the two assumptions of fundamental analysis of securities?

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MODULE 4

UNIT 2 INVESTING IN FIXED-INCOME SECURITIES

CONTENTS

1.0 INTRODUCTION

Under this unit, we shall be studying investment in fixed-income securities. Some securities such as bonds carry fixed-income payable at maturity. Other investments instruments, such as, common stock has no fixed-income. An investor in common stocks receives dividend and dividend payment is dependent on the earnings power of the issuing firm.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* The process of investing in fixed-income securities
* The advantages and disadvantages in fixed-income investment

3.0 MAIN CONTENT

3.1 Investment in Fixed-Income Securities

The oil industry is one of the world's most capital intensive businesses today. It requires billions of Naira worth of equipment for exploration and production of natural resources. One of the largest oil companies operating in Nigeria is Mobil, which searches for oil and natural gas throughout the world. Much of Mobil's equipment is financed through the issuance of long-term bonds. Because Mobil is such a strong company, investors in its bonds are confident that the debt will be paid. Mobil, of course, must pay investors interest on these bonds, but because it has a strong credit rating, it does not have to pay as high an interest rate as some other less well-established companies.

3.1.1 Why Invest in Bonds?

In the past, investment in bonds was viewed as rather dull investment that produced current income and little else. It is no longer true today, instead bonds are regarded as highly competitive investment instruments that offer the potential for attractive returns.
Bonds are publicly traded long-term debt securities whereby the issuer agrees to pay a fixed amount of interest over a specified period of time and to repay a fixed amount of principal at maturity. Bonds are issued in convenient denominations and by a variety borrowing companies, government corporations, states and local governments. Bonds are referred to as fixed –income securities because the debt-service obligations of the issuer are fixed. That is, the issuing organization agrees to pay a fixed amount of interest periodically and to repay a fixed amount of principal art maturity.

Like any other type of investment instrument, bonds provide investors with two kinds of income:

(1) They provide a generous amount of current income.
(2) They can often be used to generate substantial amounts of capital gains.

The current income is, of course, derived from the interest payments received over the life of the issue. Capital gains, in contrast, are earned whenever market interest rates fall. A basic trading rule in the bond market is that interest rates and bond prices move in opposite directions. When interest rates rise, bond prices fall, and when interest rates drop, bond prices move up. Thus, it is possible to buy bonds at one price and to sell them later at a higher price. Of course, it is also possible to incur a capital loss, should market rates move against you. 3Taken together, the current income and capital gains earned from bonds can lead to attractive investor returns.

3.1.2 Bonds as Versatile Investment Outlet

Bonds are also a versatile investment outlet. They can be used conservatively by those who primarily (or exclusively) seek high current income, or they can be used aggressively by those who go after capital gains. Although, bonds have long been considered attractive investments for those seeking current income, it is only since the advent of volatile interest rates that they have also been recognized as outstanding trading instruments. Investors found that, given the relation of bond prices to interest rates, the number of profitable trading opportunities increased substantially as wider and more frequent swings in interest rates began to occur.

In addition, certain types of bonds can be used for tax shelter. Municipal obligations are perhaps the best known in this regard, but certain federal agency issues also offer some tax advantages. Finally, because of the general high quality of many bond issues, they can also be used for preservation and long-term accumulation of capital. With quality issues, not only do investors have a high degree of assurance that they will get their money back at maturity, but the stream of interest income is also highly dependable.

3.1.3 Putting Bond Market Performance in Perspective

The bond market is driven by interest rates. In fact, the behaviour of interest rates is the single most important force in the bond market. These rates determine not only the amount of current income investors will make but also the amount of capital gains (or losses) bondholders

will incur. It is not surprising, therefore, that bond market participants follow interest rates closely and that bond market performance is generally portrayed in terms of market interest rates.

3.2 Total Returns in the Bond Market

As with stocks, total returns in the bond market are made up of current income and capital gains (or losses). Not surprisingly because rising rates mean falling prices, the drawn-out bear market in bonds mean depressing returns for bondholders. For investors just entering the market, the higher market yields were welcomed, because they meant higher levels interest income. But for those already holding bonds, the implications were much different, as returns fell way below expectations and, in many cases resulted into outright losses.

Some market experts go so far as to question whether bonds should have any place at all in an investment portfolio. They reason that if interest rates have bottomed out, then blonds will not have a lot to offer investors (other than relatively low returns.

3.2.1 Exposure to Risk

Like any other type of investment instrument, fixed-income securities should be viewed in terms of their risk and return. Generally speaking, bonds are exposed to five major types of risks; interest rate risk, purchasing power risk, business/financial risk, liquidity risk, and call risk.

Interest Rate Risk: Interest rate risk is the number one source of risk to fixed-income investors, because it is the major cause of price volatility in the bond market. In the case of bonds, interest rate risk translates into market risk: The behaviour of interest rates, in general affects all bonds and cuts across all sectors of the market including the government treasury bills market.. When market interest rates rise, bond prices fall, and vice versa. And as interest rates become more volatile, so do bond prices.

Purchasing Power Risk: Purchasing power risk accompanies inflation. During periods of mild inflation, bonds do pretty well, because their returns tend to outstrip inflation rates. Purchasing power risk really hits up when inflation takes off. When that happens, bond yields start to lag behind inflation rates. The reason: You have a fixed coupon rate on your bond, so even though market yields are rising with inflation, your return is locked-in during the inflation period.

3.2.2 Other Risks Associated with investment in Bonds

Business/Financial Risk: This is basically the risk that the issuer will default on inter5est and/or principal payments. Business/financial risk has to do with the quality and financial integrity of the issuer; the stronger the issuer, the less business/financial risk there is to worry about. This risk does not even exist in some securities. For example, the government treasury bills do not have business/financial risk.

Liquidity Risk: Liquidity risk is the risk that a bond will be difficult to unload if you want or have to sell it. In certain sectors of the market, this is a far bigger problem than a lot of investors realize. Even though the bond market may be enormous, the market is chiefly over-the-counter in nature, and much of the activity occurs in the primary/new issue market. Therefore, with the exception of the Treasury market and good deal of the agency market, relatively little trading is done in the secondary markets.

Call Risk: Call risk is sometimes referred to as prepayment risk, and this is the risk that a bond will be "recalled," that is, retired long before its scheduled maturity date. Issuers are often given the opportunity to prepay their bonds, and they do so by calling them in for prepayment. When issuers call their bonds, the bondholders end up getting cashed out of their deal and have to find another place for their investment funds, and there lies the problem. Because bonds are nearly always called for prepayment after interest rates have taken big fall, comparable investment instruments will just not be available. Thus the investor will ne forced to replace a high-yielding bond with a much lower-yielding issue.

3.3 Essential Features of a Bond

A bond is a negotiable, long-term debt instrument that carries certain obligations (including the payment of interest and the repayment of principal) on the part of the issuer. Because bondholders, unlike holders of common stock, are only lending money to the issuer, they are not entitled to an ownership position or to any of the rights and privileges open to the common stock holders. But bond holders and well as bond issuers do have a number of well defined rights and privileges that together help to define the essential features of a bond.

Bonds Interest and Principal: In the absence of any trading, a bond investor's return is limited to fixed interest and principal payments. That is because bonds involve fixed claim on the

issuer's income and a fixed claim on the assets of the issuer. As a general rule, bonds pay interest every six months. There are sometimes exceptions. Some issues carry interest payment intervals as short as two months and others as long as one year. The amount of interest due is a function of a "coupon." A coupon is the feature on a bond which defines the amount of annual interest income due to an investor. For example, a N1,000 bond with an 8 per cent coupon pays N80 interest to the investor. Also, the principal amount of a bond, known as an issue's par value, specifies the amount of capital that must be repaid to the investor at maturity.

3.3.1 Maturity Date

Unlike common stock, all debt securities have limited lives and will expire on a given date in the future which is called the issue's "maturity date." Although, a bond carries a series of specific interest payment dates, the principal is repaid only once; on or before maturity. Because the maturity date is fixed (and never changes), it not only defines the life of a new issue but also denotes the amount of time remaining for older, outstanding bonds.

Two types of bonds can be distinguished on the basis of maturity; term and serial issues.
A "term bomb" has a single, fairly lengthy maturity date and is the most common type of issue.
A "serial bond" has a series of different maturity dates, perhaps as many as 15 to 20 within a single issue. For example, a 20-year term bond issued in 1995 has a single maturity date of 2015, but that same issue as a serial bond might have 20 annual maturity dates that extend from 1996 through 2015. At each of these annual maturity dates, a certain portion of the issue would come due and be paid off.

Maturity is also used to distinguish a note from a bond. That is, a debt security that is originally issued with maturity of 2 to 10 years is known as a note, whereas a bond technically has an initial term of maturity of more than 10 years. In practice, notes are often issued with maturities of 5 to 7 years, whereas bonds normally carry maturities of 20 to 30 years or more.

3.3.2 Call Features – Let the Buyer Beware

Consider the following situation: You have just made an investment in a high-yielding, 25-year bond. Now all you have to do is sit back and let the cash flow-in. Well, perhaps that may happen for a few years. However, if market interest rates drop, it is also likely that you will

receive a notice from the issuer that the bond is being called. This means that the issue is being retired before its maturity date. There is really nothing you can do but to turn in the bond and to invest your money elsewhere. The practice is all perfectly legal because every bond is issued with a call feature which stipulates whether and under what conditions a bond can be called-in for retirement prior to maturity. Basically, there are three types of call features:

(1) A bond can be "freely callable" which means that the issuer can prematurely retire the bond at any time.
(2) A bond can be "non-callable" which means that the issuer is prohibited from retiring the bond prior to maturity.
(3) The issue could carry a "deferred call" which means that the issue cannot be called until after a certain length of time has passed from the date of issue. In essence, the issue is non-callable during the deferment period and then becomes freely callable thereafter.

Call features are placed on bonds for the benefit of the issuers. They are used most often to replace one issue with another that carries a lower coupon payment, and the issuer benefits by realizing a reduction in annual interest cost. Thus, when market interest rates undergo a sharp decline, bond issuers retire their high-yielding bonds and replace them with lower-yielding obligations.
The net result is that the investor is left with a much lower rate of return than anticipated.

In an attempt to compensate investors who have lost some earnings as a result of bond call, a "call premium" is tacked onto a bond and paid to investors along with the issue's par value at the time the bond is called. Thus, the sum of the par value plus call premium represents the issue's "call price" which becomes the amount the issuer must pay to retire the bond prematurely.

4.0 CONCLUSION

Under this unit, we noted that most big firms finance their operations through the issuance of long-term debt instrument. The issuance of corporate bonds is one of the most popular debt instruments. Investors in bonds are confident that they will get their money back when investing in well-established company like Mobil oil and others. Investors in bonds are paid fixed interest usually annually and the return of their capital at maturity.

5.0 SUMMARY

No business organization can have enough capital for all its operational needs. What companies do is to borrow money from lenders. What well-established companies do is to issue long-term bond to investors and make money available for their operations. Bonds are publicly traded long-term debt securities. They are issued in convenient denominations to investors. Bonds are exposed to many kinds of risks including interest rate risk, purchasing power risk, business risk, liquidity risk and call risk.

6.0 TUTOR-MARKED ASSIGNMENT

* What benefit does an investor in long-term corporation bond derive?
* Discuss two types of risk to which a bond instrument is exposed

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MODULE 4

UNIT 3 BOND VALUATION AND ANALYSIS

CONTENTS

1.0 INTRODUCTION

It is a common practice for companies to finance their operations by the issuance of bonds to investors. A number of factors determine a bond's price including credit quality and the general level of interest rates. Investors must evaluate these factors when deciding whether the market value of a bond will provide the kind of return they need. We shall examine, in detail, the factors that determine a bond's price under this unit.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* Basic principles guiding the valuation of bonds
* The forces that push up the price of bonds

3.0 MAIN CONTENT

3.1 Bond Valuation and Analysis

Every rational investor tries to earn a return that full compensates them for risk. In the case of bondholders, that required return has three components; the real rate of return, an expected inflation premium, and a risk premium.

The real rate of return and the inflation premium are external economic factors, and together, they equal the risk-free rate. Now, to find the required return, we need to consider the unique features and properties of the bond issue itself. We can do this by adding the bond's risk premium to the risk-free rate. A bond's risk premium will take into account key issue and issuer characteristics, including such variables as the type of bond, maturity, call features, and bond rating. The three components, that is, the real rate of return, the expected inflation premium and the risk premium, work together to determine interest rate levels at a given point in time.

Because interest rates have such a significant bearing on bond prices and yields, they are closely monitored by both conservative and aggressive investors. Interest rates are important to conservative investors because one of their major objectives is to lock in high yields. Aggressive traders also have a stake in interest rates because their investment programmes are often built on the capital gains opportunities that accompany major swings in rates.

3.1.1 Keeping Tabs on Market Interest Rates

Just as there is no single bond market but a series of different market sectors, so too there is no single interest rare that applies to all segments of the market. Rather, each segment has its own, unique level of interest rates. Granted, the various rates tend to drift in the same direction over time and to follow the same general pattern of behaviour, but it is also common for yield spreads (that is interest rate differentials) to exist in the various market sectors. We can summarize the more important market yields and yield spreads as follows:

(1) Local government bonds usually carry the lowest market rates because of the tax-exempt feature of these obligations. As a rule, their market yields are about two-thirds those of corporate organizations. In the taxable sector, treasuries have the lowest yields because they have the least risk, followed by agencies and then corporate bodies, which provide the highest returns.

(2) Issues that normally carry official ratings generally display similar behaviour. That is to say, the lower the rating, the higher the yield.

(3) Bonds that are freely callable generally provide the highest returns, at least at date of issue. These are followed by deferred call obligations and then by non-callable bonds, which yield the least.

(4) As a rule, bonds with long maturities tend to yield more than short issues. However, this rule does not hold all the time; sometimes short-term yields exceed the yield on long-term bonds.

3.1.2 Higher Yielding Segments of the Bond Market

As an investor, you should pay close attention to interest rates and yield spreads, and try to stay abreast, not only of the current state of the market, but also of the future direction in market rates. For example, if you are a conservative (income-oriented) investor and think that rates have just about peaked, that should be a clue to you to try to lock in the prevailing high yields with some form of call protection. In contrast, if you are an aggressive bond trader who thinks rates have peaked (and are about to drop), that should be a signal to buy bonds that offer maximum price appreciation potential (example, low-coupon bonds that still have a long time before they mature). Clearly, in either case, the future direction of interest rates is important.

But how does a bond investor formulate such expectations? Unless you have considerable training in economics, you will probably have to rely on various published sources. Fortunately, a wealth of such information is available. Your broker is an excellent source for such reports, as are investor services. Finally there are widely circulated business and financial publications that regularly address the current state and future direction of market interest rates. Make no mistakes about it. Prediction of future direction of interest rates is not an easy task. The best you can offer is experienced educated guesswork, and guesswork, like you know it, lacks exactitude.

3.2 What Causes Rates to Move

Although, the subject of interest rates is a complex economic issue, we do know that certain forces are especially important in influencing the general behavioour of market rates. Serious bond investors should make it a point to become familiar with the major determinants of interest rates and try to monitor those variables, at least informally.

And in that regard, perhaps no variable is more important than inflation. Changes in the inflation rate (or even expectations about the future course of inflation) have direct and pronounced effect on market interest rates and have been a leading cause of wide swings in interest rates. Clearly, if expectations are for inflation to slow down, then market interest rates should fall as well.

In addition to inflation, there are at least five other important economic variables that can significantly affect the level of interest rates. These are:

1. Changes in the Money Supply. An increase in the money supply pushes rates down (as it makes more funds available for loans), and vice versa. This is true only up to a point, however. If the growth in the money supply becomes excessive, it can lead to inflation, which, of course, means higher interest rates.

2. The Size of the Federal Budget Deficit. When the Federal Government must borrow large amounts to cover the budget deficit, the increased demand for funds exerts an upward pressure on interest rates. That is why bond market participants view the prospect of a balanced federal deficit so favourably. That is, as the federal budget deficit declines/disappears, so will a lot of the pressure on bond interest rates (which usually brings with it the potential for falling market rates).

3. The Level of Economic Activity. Businesses need more capital when the economy expands. This need increases the demand for funds, and rates tend to rise. During a recession, economic activity contracts, and rates typically fall.

4. Policies of the Federal Reserve. Actions of the Federal Reserve to control inflation also have a major effect on market interest rates. For example, when the Federal Government wants to slow real or perceived inflation down, it usually does so by driving up interest rates.

Unfortunately, such action can also have the nasty side effect of slowing down business activities as well.

5. The Level of Interest Rates in Major Foreign Markets. Today, investors look beyond national borders for investment opportunities. If rates in major foreign markets rise, that puts pressure on rates in the country to rise as well. If they fail to rise, local investors may be tempted to withdraw their Naira to buy high-yielding foreign securities in order to make more profits.

3.2.1 The Term Structure of Interest Rates and Yield Curves

Although, many factors affect the behaviour of market interest rates, one of the most popular and widely studied is bond maturity. The relationship between interest rates (yield) and time to maturity for any time of similar-risk securities is called the "term structure of interest rates." This relationship can be depicted graphically by a yield curve which relates a bond's term maturity to its yield to maturity at a given point in time. A particular yield curve exists for only a short period of time; as market conditions change, so do the yield curve's shape and location.

3.2.2 Plotting Your Own curves

Yield curves are constructed by plotting the yields for a group of bonds that are similar in all respects except maturity. Treasury securities (bills, notes, and bonds) are typically used to construct yield curves.

There are several reasons for this: Their yields are easily found in financial publications, they have no risk of default, and they are homogeneous with regard to quality and other issue characteristics. Investors can also construct yield curves for other classes of debt securities, such as A-rated Local Government bonds, A-rated corporate bonds, or even certificates of deposit.

3.3 Explanations of the Term Structure of Interest Rates

As we noted earlier, the shape of the yield curve changes over time. Three commonly cited theories explain the reasons for the general shape of the yield curve. These three theories are: The expectations hypothesis, the liquidity preference theory, and the market segmentation theory.

3.3.1 Expectation Hypothesis

The expectation hypothesis suggests that the yield curve reflects investor expectations about the future behaviour of (short-term) interest rates. The relationship between rates today and rates expected in the future is due primarily to investor expectations regarding inflation. If investors anticipate higher rates of inflation in the future, they will require higher long-term interest rates today, and vice versa.

Generally, under the expectations hypothesis, an increasing inflation expectation results in an upward-sloping yield curve, a decreasing inflation expectation results in a downward-sloping yield curved, and a stable inflation expectation results in a relatively flat yield curve.

3.3.2 Liquidity Preference Theory

More often than not, yield curves have at least a mild upward slope. One explanation for the frequency of upward sloping yield curves is the liquidity preference theory. This theory states that, intuitively, long-term bond rates should be higher than short-term rates because of the added risks involved with the longer maturities. In other words, because of the risk differential (real or perceived) between long-term and short-term
debt securities, rational investors prefer the less risky, short-term obligations unless they can be motivated, via higher interest rates, to invest in the longer bonds.

Actually, there are a number of reasons why rational investors should prefer short-term securities. To begin with, they are more liquid (more easily convertible to cash) and less sensitive to changing market rates, which means there is less risk of loss of principal. For a given change in market rates, the prices of long-term bonds will show considerably more movement than the prices of short-term bonds. Simply put, uncertainty increases over time, and investors therefore require a premium to invest in long maturities. In addition, just as investors tend to require a premium for tying up funds for longer periods, borrowers will also pay a premium in order to obtain long-term funds. Borrowers thus assure themselves that funds will be available and they can avoid having to roll over short-term debt at unknown and possibly unfavourable rates. All of these preferences and market forces explain why higher rates of interest should be associated with longer maturities and why it is perfectly rational to expect upward-sloping yield curves.

3.3.3 Market Segmentation Theory

Another often-cited theory is the "market segmentation theory." This theory suggests that the market for debt is segmented on the basis of maturity preferences of different types of

financial institutions and investors. According to this theory, the yield curve changes as the supply and demand for funds within each maturity segment determines its prevailing interest rate. The equilibrium between the financial institutions that supply the funds for short-term maturities, for example, the banks and the borrowers of those short-term funds, for example, businesses with seasonal loan requirement, established interest rates in the short-term markets. Similarly, he equilibrium between suppliers and demanders in such long-term markets as life insurance and real estate determines the prevailing long-term interest rates.

The shape of the yield curve can be either upward-sloping or downward-sloping, as determined by the general relationship between rates in each market segment. When supply outstrips demand for short-term loans, short-term rates are relatively low. If, at the same time, the demand for long-term loans is higher than the available supply of funds, then long-term rates are high, and the yield curve slopes upward. Simply stated, low rates in the short-term segment and high rates in the long-term segment cause an upward-sloping yield curve, and vice versa.

4.0 CONCLUSION

We know that rational investors try to earn a return on their investment that compensates for then risk. In the case of bondholders, that return has three components which are; the real rate of return, the expected inflation premium and the risk premium. However to obtain the best of returns, an investor should be familiar with the technicalities of bond valuation. It is the knowledge of bond valuation that will arm the bond investor with trends and expected rates which are essential factors that affect his ultimate returns.

5.0 SUMMARY

To the bond investor, it is essential to watch the behaviour of market interest rates because interest rates have such a significant bearing on bond prices and yields. Interest rates are closely monitored by both conservative investors and aggressive investors. Interest rates are important to conservative investors because their major objective is to lock-in high yields. Aggressive investors are also concerned with in interest rates behaviour because their investment programmes are often built around the desire to exploit capital gain opportunities.

6.0 TUTOR-MARKED ASSIGNMENT

* Discuss the three components in the returns on bondholding.
* Discuss the three commonly cited theories that explain the reasons for the general shape of the yield curve.

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MODULE 4

UNIT 4 PREFERRED STOCK AND CONVERTIBLE SECURITIES

CONTENTS

1.0 INTRODUCTION

In turbulent investment periods especially when it is difficult to get enough investors to invest in corporate common stocks, business organizations issue securities with special features to attract attention. Preferred stocks and convertible securities are popular investment instruments issued to investors.

2.0 OBJECTIVES

After studying this unit, the student will be familiar with:

* The nature of preferred stocks and the advantages and disadvantages in them.
* The rights of preferred stockholders

3.0 MAIN CONTENT

3.1 Preferred Stocks

What would you think of a stock that promised to pay you a fixed annual dividend for life, nothing more nothing less? If you are an income-oriented investor, this offer would certainly sound pretty. However, it is not possible to find such an investment in real life. Here we will study the features of two fixed income securities called then "preferred stocks" and "convertible debentures."

Preferred stock is a stock that has a prior claim (ahead of common stockholders) on the income and assets of the issuing firm. Preferred stocks carry fixed dividends that are usually paid quarterly and are expressed either in Naira terms or as a percentage of the stock's par (or stated) value. They are used by companies that need money but do not want to raise debt instruments to get it. In effect, preferred stocks are widely viewed by issuers as an alternative to debt instrument. Companies like to issue preferred stocks because they do not count as common stock and therefore do not affect Earnings Per Share (EPS). However, being a form of equity, they do not count as debt either and therefore do not add to the company's debt load. There are today so many Over the Counter (OTC) and listed preferred stocks issued by public utilities, industrial and financial establishments.

3.1.1 Preferred Stocks as Investment Instruments

Preferred stocks are available in a wide range of quality ratings, from investment-grade issues to highly speculative stocks. Some high-yielding preferred stock can pay investors as high as N20 per share, annual dividend. Less high-yielding preferred stock pay not less than N14 per share annually.

As earlier stated, one interesting thing about preferred stock is that it carries fixed dividend payment. Of course, if a company does not earn any profit in a particular year, it may be unable to pay the dividend of the preferred stockholder. However, in future years, the arrears of all the preferred stockholders must be cleared before the common stockholder can receive any dividend.

3.1.2 Advantages and Disadvantages of Holding Preferred Stocks

Advantages:
Investors are attracted to preferred stocks because of the current income they provide. Moreover, such dividend income is highly predictable, even though it can, under certain circumstances, be temporarily discontinued. Note that there is the tendency for preferred stocks to generate yields that are slightly less than those of high-trade bonds. This is due to the fact that 70 per cent of the preferred dividends received by a corporation are exempt from federal income taxes. Since corporations are big investors in preferred stocks, the net effect of this favourable tax treatment is reduced preferred dividend yields.

Another reason for investing in preferred stocks is the level of safety they offer investors. That is, despite a few well-publicized incidents, high-grade preferred stocks have an excellent record of meeting dividend payments in a prompt and timely manner.

A final advantage of preferred stocks is the low unit cost (N25 to N50 per share) of many of the issues, which gives even small investors the opportunity to actively participate in preferred stocks.

Disadvantages:
A major disadvantage of preferred stocks is their susceptibility to inflation and high interest rates. Like many other fixed-income securities, preferred stocks simply have not proved to be satisfactory long-term hedges against inflation. Another disadvantage is that preferred dividends may be suspended, if the earnings of the corporate issuer drop off. Thus, unlike coupon payments on a bond, dividends on preferred stocks have no legal backing, and failure to pay them does not lead to default.

Still another drawback is that most preferred stocks lack substantial capital gains potential. Although, it is possible to enjoy fairly attractive capital gains from preferred stocks when interest rates decline dramatically, these amounts generally do not match the price performance of common stocks. But perhaps the biggest disadvantage of preferred stocks is the yield give-up they incur relative to bonds. In essence, there is virtually nothing a preferred stock has to offer that cannot be obtained from a comparably rated corporate bond.

3.2 Source of Value for Preferred Stocks

With the exception of convertible preferred stocks, the value of high-grade preferred stocks is a function of the dividend yields they provide. Most specifically, the value (or market price) of a preferred stock is closely related to prevailing market rates: Thus, as the general level of interest rates moves up, so do the yields on preferred stocks, and their prices decline accordingly. When interest rates drift downward, the yield on preferred stocks also declines, but their prices will rise. Just like bond prices, therefore, the price behaviour of a high-grade preferred stock is inversely related to market interest rates. Moreover, its price is directly linked to the issuer's level of income. That is, other things being equal, the higher the dividend payment, the higher the market price of an issue. Thus the price of a preferred stock can be defined as follows:

$$\text{Price of a Preferred Stock} = \frac{\text{Annual Dividend Income}}{\text{Prevailing Market Yield}}$$

3.2.1 Risk Exposure

Preferred stock investors are exposed to both business and interest rate risks. Business risk is important with preferred stocks because these securities are a form of equity ownership and, as such, lack many of the legal protections of bonds. Annual operating costs and corporate financial strength, therefore, are of concern to preferred stockholders. Preferred stock ratings can be used to assess the amount of business risk embedded in an issue; higher-quality/higher-rated issues are believed to possess less business risk. Because of the fixed-income nature of these securities and the way they are valued in the market, interest rate risk is also important to preferred stockholders. That is, when market interest rates move up, the value of these securities (like that of bonds) falls. Indeed, such risk exposure can be very damaging if interest rates move against you in a big way.

3.2.2 Market Transactions

Preferred stocks are subject to the same transaction costs, that is, brokerage fees and transfer taxes, as shares of common stock. In addition, preferred stock investors use the same types of orders (market, limit, and stop-loss) and operate under the same margin requirements.

Quotes for preferred stock are interpreted exactly like those for common stock, except that the price/earnings ratios are not listed. Preferred stocks are also listed right after listing the common stocks of a company.

3.3 Issue Characteristics

Preferred stocks possess features that not only distinguish them from other types of securities but also help differentiate one preferred stock from another. For example, preferred stocks may be issued as convertible or non-convertible, although the majority fall into the non-convertible category.

Convertible feature allows the holder to convert the preferred stock into a specified number of shares of the issuing company's common stock. In addition to convertibility, investors should be aware of several other important features of preferred stocks; they include the rights of preferred stockholders and the special provisions (such as those pertaining to passed dividends or call features) that are built into preferred stock issues.

3.3.1 Rights of Preferred Stockholders

The contractual agreement of a preferred stock specifies the rights and privileges of preferred stockholders. The contractual agreement of a preferred stock usually contain information on; level of annual dividends, the claim on income, voting rights, and the claim on assets. The issuing company agrees that it will pay preferred stockholders a (minimum) fixed level of quarterly dividends and that such payments will take priority over common stock dividends. The only condition is that the firm generates income sufficient to meet the preferred dividend requirements. However, the firm is not legally bound to pay dividends. O course, it cannot pass dividends on preferred stock and then pay dividends on common stock, because that would violate the preferred stocks' prior claim on income.

Although, most preferred stocks are issued with dividend rates that remain fixed for the life of the issue, in the early 1980s, some preferred stocks began to appear with floating dividend rates. Known as "adjustable rate" (or floating rate) preferred stocks. These issues adjust dividends periodically in line with yields on specific Treasury issues, although minimum and maximum dividend rates are usually established as a safeguard for investors.

Even though the preferred stock investors hold an ownership position in the firm, they do not have voting rights. However, if conditions deteriorate to the point where the firm needs to defer or pass one or more consecutive quarterly dividends, preferred stockholders are usually given the right to elect a certain number of corporate directors so that their views can be represented. And if liquidation becomes necessary, the holders of preferred stocks are given a prior claim on assets. These preferred claims, limited to the par or stated value of the stock, must be satisfied before the claims of the common stockholders. Of course, this obligation does not always mean that then full par or stated value of the preferred stock will be recovered, because the claims of senior securities, like bonds, must be met first. That is, all bonds, including convertible bonds, have a higher claim on assets (and income) than preferred stock, whereas preferred stocks have a higher claim than common stock. Thus preferred stockholders have a claim that is somewhere between that of bondholders and common stockholders.

Finally, when a company has more than one issue of preferred stock outstanding, it sometimes issues preference (or prior preferred) stock. Essentially, this stock has seniority over other preferred stock in its right to receive dividends and in its claim on assets in the event of liquidation. Therefore, preference stocks should be viewed as senior preferred stocks.

3.3.2 Preferred Stock Provisions

There are three preferred stock provisions that investors should be well aware of before making an investment in a preferred security. Especially important is the obligation of the issuer in case any dividends are missed. In addition, the investor should determine whether the stock has a call feature and/or a sinking fund provision; Let us start by looking at how passed dividends are handled, which depends on whether the preferred stock is issued on a cumulative or a non-cumulative basis.

Fortunately for investors, most preferred stocks are issued on a cumulative basis. This means that any preferred dividends that have been passed must be made up in full before dividends can be paid to the common stockholders. As long as dividends on preferred stocks remain in arrears, a corporation cannot make any dividend payment to common stockholders.

If preferred stock carries a non-cumulative provision, the issuing company would not be under any obligation to make up any of the past (unpaid) dividends. Of course, the firm could not make dividend payments to common stockholders either, but all it would have to do is to meet the next quarterly dividend payment due to preferred stockholders before it can pay any dividends to the common stockholders.

Other things being equal, a cumulative preferred stock should be more highly valued than an issue without such cumulative provision, that is, the cumulative feature should increase the price (and, in so doing, lower the yield) of these issues.

Since the early 1970s, it has become increasingly popular to issue preferred stocks with call features. Today, a large number of preferred stocks carry this provision, which gives the firm the right to call the preferred stock for retirement. Callable preferred stocks are usually issued on a deferred-call basis, which means that they cannot be retired for a certain number of years after the date of issue. After the deferral period, which often extends for 5 to 7 years, the preferred stocks become freely callable. Of course, such issues are then susceptible to call if the market rate for preferred stocks declines dramatically, which explains why the yields on freely callable preferred stocks should be higher than those on non-callable issues. As with bonds, the call price of a preferred stock is made up of the par value of the issue and a call premium that may amount to as much as one year's dividends.

Another preferred stock feature that has become popular in the past 10 years is the sinking fund provision which denotes how all or a part of an issue will be paid off, amortized, over time. Such sinking fund preferred stocks actually have implied maturity dates. They are used by firms to reduce the cost of financing, because sinking fund issues generally have lower yields than non-singing fund preferred stocks.

4.0 CONCLUSION

Under this unit, we dealt with preferred stocks. We noted that preferred stocks carry fixed dividends and that these dividends are paid quarterly. Preferred stocks are issued by corporate organizations that need money but do not want to raise debt to get the funds. Investors are attracted to preferred stocks because of the current income they provide. One major disadvantage of preferred stocks is their susceptibility to inflation and high interest rates.

5.0 SUMMARY

Preferred stocks carry fixed dividend and they are usually available in a wide range of quality ratings from investment-grade issue s to highly speculative stocks. With the exception of convertible preferred stocks, the value of high-grade preferred stocks is a function of the dividend yields they provide. Preferred stock investors are exposed to both business and interest rate risks. Business risk is important with preferred stocks because these securities are a form of equity ownership and, as such, they lack many of the legal protections of bonds.

6.0 TUTOR-MARKED ASSIGNMENT

* What is the difference between dividend payment on preferred stocks and dividend entitlement to common stockholders.

* Explain what you understand by “cumulative provision” and “non-cumulative provision” in the payment of dividends to preferred stockholders.

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