PORTFOLIO MANAGEMENT STRATEGIES A CASE STUDY OF SELECTED INSTITUTIONAL INVESTORS IN NIGERIA

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DECLARATON

I hereby declare that this research project has been conducted solely by me under the guidance of Mal. Karwai and Mallam Abu-Abdissamad, Head of Department of Business Administration, ABU, Zaria.

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SIGNATURE:

DATE: 16:11:99

CERTIFICATION

This project report entitled portfolio management strategies by MRS. IFEOMA N. K. MADUKA meets the regulations governing the award of the degree of Business Administration (MBA) of A.B.U, and is approved for its contribution to knowledge and literary presentation

Chairman Supervisory Committee	10/2/2000 Date
Member Supervisory Committee	Date
Head of Department	10/2/2000 Date
Dean P. G. School	04/05/02 Date

DEDICATED

TO

My Lord and saviour Jesus Christ who has shown me great favour and mercy.

AND

To my friend, husband and brother Israel Nkemdilim Maduka who has helped me to be both a student and a housewife.

ACKNOWLEDGEMENTS

My first thanks on this study naturally goes to my supervisor S. A. Kawai Abu-Abdissamad who have quickened the supervision for this project to God's only Glory and made this work a genuine success today.

I am greatly indebted to my Senior Elders in the Faith our beloved Rev. and Mrs. Emeka Mogekwu, Revd. Dr and Mrs. Fayomi, Dr. Mrs Eruchalu and Bro. Kehinde. Also of note are Mr. Virginus Ekwem, Mr Akpan, Brethren in Town B (EFAC) and the Children Ministry of Christ Anglican Church Katsina road Kaduna, Sis Blessing Okoli, Bro. Jude Iremi, Bro Kayode Akande, Bro Chuks Moronu and others too numerous to mention. May the Lord God reward your labours of love through encouragement and prayers in Jesus name.

I must also place on record the Assistance of Mr. Simon Amalaha who accommodated me in his vehicle throughout the period of this programme. May the Lord equally bless him and his family in return. Worthy of note are my typists Mr. Stanley Nwangwa and Miss Childinma Jeremiah. The Lord bless them.

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Again I also extend my thanks to my beloved parents Mr. And Mrs Benard Nwobi, my sister Ifunayachika Nwobi who showed much concern and equally assisted as the grace of God was available to them. I cannot end this without remembering my sister Ukamaka Rachel Okoye and my Brothers Chikosolu Nwobi, Justice Nwobi, and Sunday Nwobodo who took care of my children and gave available assistance to make sure that the home was in order throughout this period.

Finally, to the many others who aided this study directly or indirectly and above all to the Lord God Almighty whose name is "Jehovah" whose sustaining grace and favour made this project possible, I say a big Thank You!!!.

ABSTRACT

When a firm has more than one project to consider at any one time, the portfolio theory approach is used to define the risk of one project in terms of its effect on the overall riskiness of the complete portfolio of projects the firm is undertaking. The problem of man has always been the allocation of scarce resources and choosing between alternatives. The main text of this report therefore is divided into four chapters. The first chapter is introductory providing background in formation as to the features of financial Asset investment, portfolio Andysis and its application in finance, and the significance of portfolio management. Chapter two deals with literature review principles and concept of portfolio management evaluation of portfolio performance. This chapter addressed the current major portfolio practices of investors in the Nigeria market and the problems facing them and realised that the portfolio investment flows, have however, been concentrated in private institutions, especially "Blue chip" companies that have a good rating in their own right in the capital markets

Chapter three deals with portfolio management strategies and experience of selected investors. The methodology adopted in this investigation was restricted mainly to questionnaires distributed. In the course of the research, a question was put to the innovators to-ascertain what in their opinion was responsible for poor development in security investment in the country, some of the answers were quite interesting. 35% of the respondents, laid the blame at the door steps of the stock exchange, some said there were insufficient number of trading floor, a theoretical rather than pragmatic pricing policy. It was also found that among the traders that only few has little or no knowledge of stock-exchange not to talk of investment in securities.

The concluding chapter deals with observations and conclusion. It was observed that Government need to create to investors in Nigeria and the researcher come to the conclusion that.

(i) Optional management of investment portfolios is not practised in Nigeria

(ii) The Nigerian investor depends more on hunches than on scientific collation, analysis
and study of factual information and data for security investment.

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CHAPTER ONE

1.1 INTRODUCTION

Collins Gen Business Dictionary, defines finance as the field of study that deals with the raising and regulation of the money activities of a business. Put in another way, finance is the management of money and money resources. The area of corporate finance and portfolio management has grown over the years to include all and more of the study of procurement of business funds, the management of assets the Allocation of capital and the valuation of the firm. The functions of finance broadly classified are these: the financing decision, the dividend decision, and the investment decision. The three major decisions a firm must make[1]

The financing decision deals with the determination of the best financing mix or capital structure for the firm. It measures the real costs of alternative methods of financing, and explores the implications of variations in capital structure on the valuation of the firm. The dividend – Pay out ratio that will balance investor satisfaction against the internal financing needs of the firm. The investment decision deals with the allocation (and reallocation) of capital to investment proposals whose future benefit are not known with certainty. It covers capital budgeting, the abandonment decision, and the maximum utilisation of the firms's assets. Of the perhaps the investment decision.

Investment is the commitment of funds in any real property or financial asset with the basic objective of obtaining an income over-time.

Investment is always considered with a failure – end date in mind, the length of time between the date when the investment is sold determines the investment Horizon.

1. James C. Van Horne, "Financial Management and Policy" 8th Ed.

FACTORS INFLUENCING INVESTMENT DECISIONS

Whether we like it or not, the following two factors influence our investment decisions:

(1) Temperature

(2) Environment

An investor will have in mind, the small but certain interest his money can command. His savings enable banks to keep the industry growing. However, the daring but less patient man will seek a higher return on his money. He searches for superior opportunities in the hope of greater gains. Almost all men oscillate between speculation investing, and often, the act of choosing is an unconscious one.

Briefly, therefore, we may be tempted to define an investment as "a purchase of an asset with a holding period in excess of one year.

HORIZON: The longer the horizon continuum, the nearer to investment, and the further from speculation. Thus an investment might be defined as purchase of an asset with a holding period in excess of one year. However, there are two perspectives to definition of investment viz:
Economist perspective
Financial analyst perspective.

THE ECONOMISTS see investment as "The replacement of, and not addition to fixed capital stock by business and non profit institutions". According to this definition. Fixed investment consists of non residential fixed investment and residential structures. The fixed investment includes now and replacement of buildings, stores, warehouses,

producers durable equipment, including machinery, office equipment and motor vehicles. Residential structures include new family houses, apartments and even diameters.

There are various types of investment

(a) Fixed capital investment:- The income – varies like Deposit in the Bank

(b) Fixed income investment:- The income is fixed such as preference share Debentures.

(c) Variable income and investment – The prices varies as well as income. Examples are ordinary shares and other risk capital investment.

Your choice of investments could be based on security, liquidity, return from investments, spreading of risks or invariably growth prospects.

A normal portfolio is a customized index, or benchmark, used to represent an investment manager's style. It should be viewed as an index of his or her style that could be purchased passively.

In other words, its pattern of returns should be reproducible through a process of passive replication, optimizations or other sampling methodology.

In the USA investment styles for instance, they are often classified into distinct groupings. Among the descriptions of style groups used by pension consultants in the USA are: Value, yield – oriented, cyclical, contrarian growth, quality growth, momentum, large cap, small cap, medium cap, core, tactical allocator, thematic, sector specific and concentrator. These style classification schemes vary from consultant to consultant, but they all have a value group, a growth group and make some differentiation across the size dimension. Value and growth are this seen to be well – defined and distinct styles.

A more careful analysis, however shows that these styles are not really so easily defined, nor so clearly differentiated. First, there are different ways of measuring these style concepts. Value can be measured in terms of high earnings to price, book to price, yield and so on. Growth can be measured in terms of low payment, high growth in earnings, low earnings to price, and so on. Size, on the other hand, is a much less ambiguous dimension of style; it is usually measured by market capitalization. But even this fails occasionally; some companies with considerable assets have very little float available for investors.

Secondly, managers for whom, these styles seem appropriate differ along other style dimensions. Growth managers differ according to momentum, for example, some growth managers tend to buy and hold stocks with strong price momentum while others do not. Similarly, some managers will avoid leveraged stocks while others tend towards them. Some will like steady growth and others variability in growth, and so on.

Several style indices are available in the USA to proxy for manager styles. These are primarily of three kinds: Value, growth and size. Managers often use these indices as style representations or normal portfolios. In USA some are called Russell Earnings Growth, ... And Barra small value.

Though these indices are designed to represent similar styles; they are defined quite differently and can have very different performance characteristics.

Another problem with using these indices to represent manager styles is that they are all market capitalization weighted. In contrast, most managers tend to equal – dollar weight their portfolios. As a result, manager tend to hold a greater proportion of their portfolios in smaller stocks, relative to the index, and thus appear to have a bias towards smallness.

A multi – factor risk model characterizing manager styles allows style to be both unique and multi – dimensional. For example, the Barra US equity model has a momentum characteristic called success. While all growth managers will have a position exposure to the Growth factor, the momentum mangers will also have a positive exposure to success. Those who are not momentum – managers will not.

Although we use the dimensions of our multi – factor model to characterize a manager's style, we actually build a portfolio to serve as the managers normal. We evaluate the manager's character along with the manager, the key elements of his or her style.

We then use a screening methodology to call out a universe of assets appropriate for the managers. We weight this universe in a manner consistent with the manager's size, or capitalization policy, to give us a normal portfolio that uniquely proxies for the manager's style characteristics.

Yield is also an additional, independent dimension and that there is an additional group of "Core" managers who tend to keep their features in line with the market.

Nevertheless some managers are capable of operating within a variety of style dimensions.

Many at times the question is asked whether normal portfolios are useful. A manager should find that a normal portfolio which clearly expresses his style is very useful when communication with his or her clients. Normals are an explicit, succinct and convenient way to establish investment objectives with a client.

Often we see the client take responsibility for developing the manager's normal. This is clearly not in the manager's best interest; only the manager can accurately define his own style this is especially important where the normal is being used to determine performance fees for example, a manager who tends to equal – weight his portfolio –

should not want to be measured and compensated relative to a capitalization – weighted benchmark as the choice of benchmark weight ting can significantly effect investment performance.

The manager should also control the development of the normal to insure that a long – term bet is not reflected in the normal as a style bias.
The manager might very well have a bet on growth, value or size that lasts several years. In America (USA) investors earned an extra ordinary return from a value bias for most of the decade of the 1980s.

The astute manager who held such an active bet over this time – period would only be credited fort if it were not reflected in the normal. Otherwise the performance of the normal would be credited for it.

Despite its usefulness, there is a danger in taking the normal too seriously. While the normal reflects the manger's area of specialization, it should ordinarily not influence his investment decisions. The manager should behave the same regardless of the benchmark used to evaluate his performance.

The manager may have a problem if performance varies due to benchmark used. Clients and their consultants do not like to see disparity in investment results across a manager's accounts.

An obvious exception is the manger who can operate with a variety of normals. In this case, the client might actually come to the manager with a normal in hand and the manager will then adapt his process to reflect this normal.
Typically, however, the manger's style is determined by fundamental elements of his approach to investing which are, in a sense, immutable.

A manager's investment – philosophy is the expression of his beliefs about investment – opportunity, while the investment process is the set of methods used to implement the philosophy.

Investment processes are adaptable – philosophies generally are not.

A value manger will fundamentally feel that the best investment opportunities are found in companies where some accounting or economic feature of the firm is under – priced. A growth manager will look for opportunity where growth rates are not being properly evaluated and priced.

Investment process influences style.

Philosophy is the foundation upon which it rests. A manager's normal is a direct out growth of his investment philosophy. It should be viewed as a reflection of his philosophy and not as influence on it.

The manager may adapt his process due to the normal. But this should be done with great care.

INVESTMENT ENVIRONMENT IN NIGERIA

New financial institution such as rural banking, peoples bank, development fund, and indeed it, was in the 1980s that the issue of current A/c to own interest was introduced. The close "nexus" is the link Between financial growth and economic development is now recognised universally in the financial institution and more importantly, the on-going financial. Crises in our economy further support the fact the importance of diversified vibrant institutions and efficient financial system can hardly be over-emphasized in a country like Nigeria. Infact, the process of industrial growth requires as one of its accompanied structures, change within the economy. The development of

capital market capable of meeting the requirement of finance and credit to private entrepreneurs. To play an intermediation role, the number of commercial bank has increased over the last decade, at a rate faster than geometric, but may be of recent barely at arithmetic progression rate.

Their sizes varies from cubicle to mansions of high dimensions. The growth of the banks has added to the turbulence of the economy of Nigeria investment environment, but more importantly, the high rate of inflation has led to anti-inflationary actions such as consequential relief packages which in turn triggers off crises.

Government actions to assist inflation through mometary restrain seem also to have increase the volatility of market interest rate with sharper actions during our 3rd political conjuncture. The private sector continue to be crowded out by government borrowing, and disintermediation comes in. There is a rise in loss of confidence in the economy, and determination in the credit quality. The drift towards financial crises can be recognised by the trend towards a more obvious language.

During the last decade, this language include "Upfront" P.R., back-up-back, swap sweetener and so on. It is often argued that pains inflicted by financial crises is supposed to encourage a thing to prudence in the making of financial and economic decisions.

It is that we have to determine the efficacy of the prudential guide lines of the 1990. The final product of the financial crises landed all into debt. The most perilous consequence of all these, is whether or not evident by the creation of a negotiable financial instrument. When we speak of securities market, we normally have distinct types of market in mind:- Money market and capital market, money market:- are market for short term debt instrument while capital market are market for long term funds. Securities markets are constituted in two forms. The organised exchange or OTC (over the counter).

1.2 PORTFOLIO ANALYSIS AND ITS APPLICATIONS TO FINANCE

A portfolio describes a collection of various different investment that make up an investor total of investments.

It is the planned spread of investments. This investment refers to either investment in securities or in capital project. Portfolio theory on the other hand is concerned with establishing guide – times for building up a portfolio of investment project.

In portfolio strategies; risky investment cannot be evaluated in terms of risk and return alone. But rather there is a third characteristics that is the relationship with other project which must be introduced into the analysis.

This relationship between investment is called correlation coefficent. Correlation coefficient can either be positive, Neutral or Negative. It is positive when the return on two investments moves in the same direction such as return to umbrella producing company and Raincoat producing company. It is Neutral when there is no relationship between the two investment. It is negative when the return to the two investment moves in opposite direction like Return to Rainboot company and return to Iceream producing company. Thus; "A project which shows perfect positive correlation would definitely add to the business risk 1/2

2. RAPID RESULTS ICAN REVISION KIT, S. O ANEKWE, LAGOS, JUNE 1995.

CAPITAL ASSET PRICING MODEL (CAPM):-

This is an attentive method used to calculate cost of equity capital. The model assumes that cost of capital should be related to the level of risk. Total risk is make of two parts – Unsystematic risk and systematic risk are market risks. The former is caused by internal factors such as quality of management, research and development and so on; while the latter is caused by factors external to the company such as level of taxation, employment, exchange rate and so on

INVESTMENT BANKING:-

Investment banking is essentially a mechanism through which funds flow from savers to investors. It is also a channel for information intended to improve the quality and effectiveness of the investment decisions for both firms and individuals. An investment banker is a firm that uses it own equity capital or borrowed capital to establish positions and to trade in securities. It is primarily involved in the new issues ie to say primary issues distribution which is a sense refers to issues sold to the public for the first time, but it also involves secondary issues which implies the redistribution of shares already issued to the public. Investment bankers are financial firms who buy new issues of securities from business firms at a guaranteed agreed upon price, and who seek immediately to sell the securities to other investors. In contrasts to brokers investment bankers are those who purchase from their own accounts, from sellers, and ultimately make resale to other buyers. Investment bankers deals with fund in the new issue market, while brokers and dealers are engaged in issue already engaged. Because of this distinction some people believe that the term investment banker is misleading (ie they do not invest their own fund permanently nor are they depositories for individual funds as are commercial banks or savings banks.

* New issue Investment banking
* Old issue Brokers and dealers

One who only link buyers and sells = broker getting commission.

The Creation of debt ridden economy where the entire entrepreneur class, the government and the bulk of the consumer find themselves.

1.2 MEDIA FOR FINANCIAL ASSET INVESTMENT.

The term investment media refers to the various types of property or instruments in which capital may be invested rationally for gain, whether enhancement of principle or current income, or both, rather than just conservation of principal. The media for financial asset investment usually take the form of any of three instrument types fixed income securities, equity securities, and hybrid securities. They differ as regards the rights of holders, the risk borne by holders, and the nature of returns expected by holders.

Fixed income securities, as the name implies, entitle the hold to fixed returns at intervals and the principal at maturity, but precludes him from participation in ownership and control of the enterprise. They are credit instruments, commonly called bonds and debentures. They also include short-term credit instruments like Treasury Bills and Certificates. Equity securities are ownership securities, giving the holder a legal interest in the ownership power and control of the corporation. Variously called ordinary shares, common stock or simply equities, they represent both the certificate of residual ownership and the risk capital of the corporation (bearing the main burden of risk). Hybrid securities are compromise securities in which an investor relinquishes something of his rights as an unrestricted participant in the corporate profits, and acquires a prior right t a limited but seemingly assured part in these profits. These hybrid stock, are specifically designed for the benefit of the investor who wants priority. Together, these three instrument types, define the media for financial asset investment.

Investment in financial assets are influenced by a great diversity of factors. A brief survey of the main determinant if itemised below:

(a) Financial asset investment is made possible by the fact that there are investments with surplus funds, and willing to make these fund available to others who requires them. So then, the level of savings, particularly those in the hands of individuals and institutions not directly involved in production activities, help to determine the extent of financial asset investment.

(b) Demand for investment funds, especially when it comes from the business sector, is for the financing of real asset needs in corporations. Consequently, changes in the level of real asset investment.

(c) A third determinant is the level and variation in rates of interest. The level of interest rates affects the market for both bonds and equity securities.

(d) Yet another factor is the existence of a properly organised and efficient capital market. The capital and money markets proved the environment where financial assets are traded, and the more capital for corporations.

(e) The level of financial intermediation is another determinant. Where numerous investment mutual funds and banks exits, pooling of funds from scattered individuals all over the country is facilitated, and these funds find outlets in financial asset investment.

(f) The availability of investment media also influences the level of financial asset investment. There is a need for a wide spectrum, both of classes of security, and individual items within each class – providing that fineness and creativity in the design of securities with distinctive features aimed at generating wide variety of interests.

(g) Finally, trends and perceived shifts in the economy influence financial asset investment. Inflationary spirals increase the attractiveness of equities while depression give a competitive advantage to fixed income securities.
Nevertheless, Nigerians love running to blue-chip companies. Blue chip companies are firms which have an assured place in the economy, a record of good dividend and increasing yields, great financial strength, and security markets for well established products.

1.3 STATEMENT OF THE PROBLEM

The basic problem of economics has always been the allocation of scarce resource among competing and unlimited ends. Thus, the ending challenge for all ages is how to carry out this allocation most efficiently, to minimise wastes and maximise benefits. Individuals frequently must, or can choose among alternatives that differ among other things, in the degree of risk to which the individual will be subjected. Individuals are always choosing uncertainty in preference to certainty. Choices among riskless alternatives are explained in terms of maximization of utility. Choices among alternatives involving different degrees of risk. The idea that choices among alternatives involving risk can be explained by the maximisation of expected utility is ancient, dating back least to D'Bernoullis celebrated analysis of the St Peters bury paradox.[3]

In every area of our national life today, we face the continuing challenge of efficiency. As much forth politician – states men as for the economist the nations portfolio of human and material resources must be so ordered as to foster progress and development.

Portfolio theory is both a theory of diversification and a theory of efficiency. As a theory of diversification, it is concerned with combining a number of assets into a portfolio, to achieve some degree of income stabilization, without impairing

expected return. As a theory of efficiency, it seeks to select for an investor, a portfolio that offers the highest return for a given level of risk, or the honest level of risk for a given return.

Portfolio management, therefore is concerned with the achievement of efficiency in an investor's risk – return position, through a carefully planned policy of diversification

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3. Daniel Beroumlli Vol. V, 1730 – 1731 (Published in 1938)

1.4 RESEARCH HYPOTHESIS

The major hypothesis of this study are:-

(i) Optional investment portfolio management is not practiced in Nigeria.

(ii) The Nigeria investor depends more on hunches than analysis and study of factual information and data for security investment

1.5 OBJECTIVE OF THE STUDY

The main aim of this study, is to ascertain the current portfolio management practices of selected institutional investors in Nigeria, against the background of the theoretical principles of portfolio management. This study is restricted to the financial asset investment portfolio of some banks, investment companies, automobile and tyres investors, insurance corporations in Nigeria as well as comparative study with the investment practices of some individual investors.

1.6 SIGNIFICANCE THE STUDY

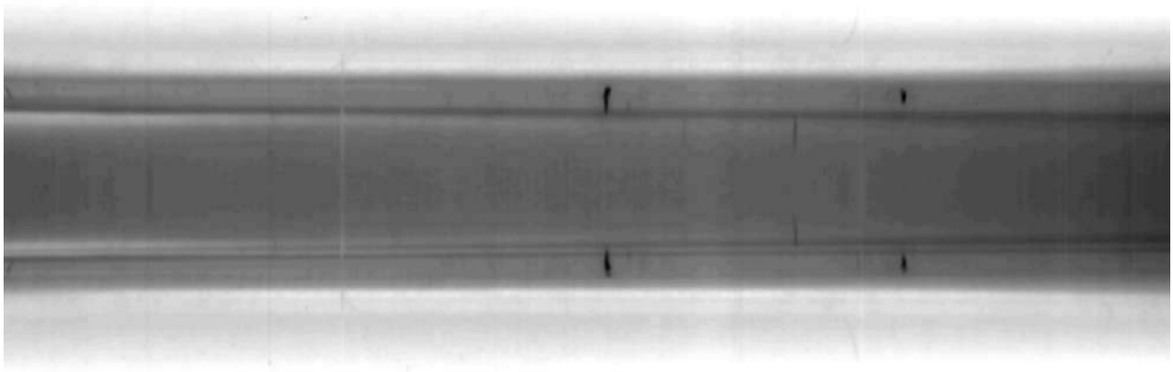
In order to be successful, a fund manager needs to understand why different assets have different returns, more than 30 years of academic research works have shown that risk is by far the most important determinant of return. In recent years, a good deal of progress has been made both in redefining the concept of risk and in developing the tools necessary to control it. Here the purpose is to summarise the most advanced theory in this area, arbitrage pricing theory (APT) and to illustrate it with an application from the field of portfolio management. The understanding of this theory will help many investors.

1.7 LIMITATIONS OF THE STUDY

The interview sessions were quite distracting to the respondents working schedules. This was more in the case where the respondent was not informed earlier before the arrival of the interviewer. The problem became apparent when

the respondent began to refer the researcher to the date given to the stock exchange by the repondent's organisation.

Much as there was limited time to have informed the respondent organisaiton about the proposed study, financial constraint limited the duration of the researcher travelling to Abuja and other places to collect viable data.



CHAPTER TWO

2.0 LITREATURE REVIEW

Various writers have written on portfolio and investment analysis over the years. Professional investment management is a very recent phenomenon in the Nigeria Capital market. It became so imminent in the 90's. Whereas a few companies, like the universities pensions management company and other insurance companies, have existed in the market for quite sometime now, "professonal investment management of large and diversified portfolio of corporate and government securities in accordance with the principles of modern portfolio theory is a very new phenomenon". [4]

For some years now the number, variety and volume of corporate and government securities on the Nigeria capital market have increased immensely in recent times.

prospective investors are consumers shopping. They are influenced by advertising, by the company's image, and predominantly, by price. Investor usually do not fill their shopping bags with only one investment opportunity, and they try to be sophisticated shoppers when they select a portfolio of securities.

There are three main categories of investments: (a) fixed capital investment: Here the investor deposits a sum of money, normally for a period of time, on which he receives interest, and the rate of interest may vary according to market conditions. An example of fixed capital investments for institutional investor would be a direct loan to a company or a bank deposit lending might be at a fixed or variable rate of

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4. Understanding the Nigerian Stock Market Dennis O. Odife Pg 61

interest. (b) fixed income investments. Although these will normally have a par value which will be the amount payable on redemption, their market value will vary with current interest rates. the income payable to investors is a fixed percentage of the par value. Examples include Federal Government securities (gilts) and so on. (c) Variable income and capital investments: This is the most important as it deals with ordinary shares. They are sometimes reffered to as risk capital as there is no guarantee that either any income will be recovered or capital repaid.

In portfolio management therefore "Big investors will invest, not just in one or handful of securities, but on a wide portfolio of securities. The is because by diversifying into many different securities, the investor will be reducing the risk by the actual returns from his investments which will be lower (or higher) that 10% would have been greater" [5]

When an investor has a portfolio of securities, he will expect the portfolio to provide a certain return on his investment. The expected return from the portfolio will be a weighted average of the expected returns on each investment in the portfolio and the proportion of total funds invested in each. Thus if 70% of the portfolio related to a securities which is expected to yield 10% and 30% to a security expected to yield 12%, the portfolio's expected return is (70% x 15% + (30% x 12%) = 10.6%.
The risk of a portfolio according to the writer above can be measure by the standard deviation of expected returns,given estimated probabilities about what actual return also might be. We also agrees with the author that portfolio theory states that individual investment cannot be viewed simply in terms of their risk and return the relationship between the return from one investment and the return from other investments is just as important. Diversification enables us to reduce risk.

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5. Mayo Bpp ICAN Study Text PE II Financial Management, PG 363

The issue of reduction of risk in portfolio analysis is very important. the capital asset pricing model is an approach used. CAPM is used in computing the risk premium appreciate for a particular company or individual capital project. It is based on models of the ways in which portfolios of securities behaved. They were originally developed by markowitz and are often refered to by his name.

The capital asset pricing model starts from the premise that we may reduce risk that is, eliminate the unsystematic risk by diversifying but considers the effect of risk remaining. The effect of investing in the stock market as a whole is that on occasion the return will be higher than from government stocks and on occasion lower.

An investor can create a portfolio with any degree of risk he desires and for one more risky than the market as a whole he would expect great fluctuations and for one less risky, lesser fluctuations. The capital asset pricing model uses the return from government securities as risk - free rates of return and the lowest return an investor would expect to earn. If we know the riskiness of our portfolio relative to the market, as a whole, that is the beta factor, then the required return from investment would be

$$Rs = Rf + B (Rm - Rf)$$

Where Rs = The expected return of the investment

Rf = The expected return of a risk free investment

B = A measure of the riskiness of the security

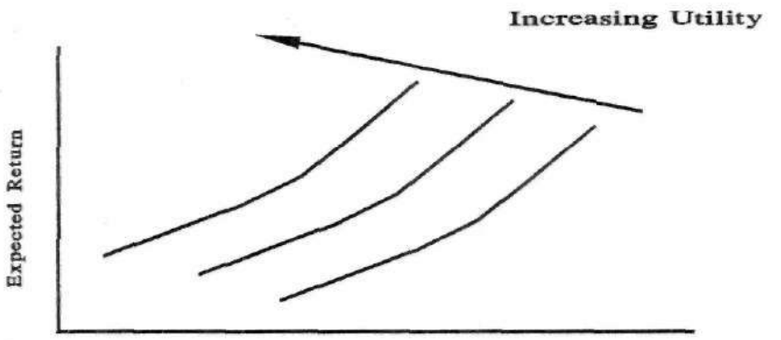
Rm = The expected return of the market

A portfolio with a B greater than I would be more risky than the market and a portfolio with a B less than I would be less risky than the market and we would expect lesser fluctuations.

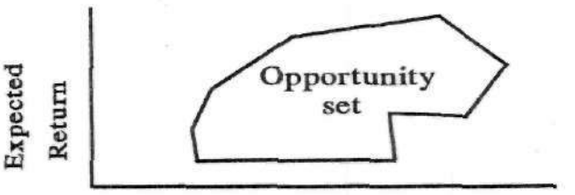
Risk comprises of systematic and unsystematic risk. Systematic risk is the part of total

risk which cannot be arrived by adopting a policy of diversification. Its size depends on how the performance of the security relative to the market as a whole behaves. If there is a high correlation the systematic risk will be a large proportion of the security's total risk proportion of systematic risk is termed the security's Beta coefficient. Unsystematic risk is that part of a security's risk which is lost through diversification and should not, therefore, be incorporated with a security's required rate of return.

The best combination of expected value of return and standard deviation depends on the investor's utility function [6]. If you are a risk - averse investor who associates risk with divergence form expected value of return, your utility function might be depicted as follows FIG 3 - 2



As an investor, you want to hold that portfolio of securities that places you on the highest indifference curve so you choose it form the opportunity set of available portfolio FIG 3 - 3



6. Eugene F. Fama and Merton H. Millier. The Theory of Finance (New York Ing 1973)

A review of recent portfolio analysis and management based on two companies Autotex Automobiles and tyre reveals thus:

Gathering historical data on a firm's expected return, standard deviation and co-variance is a good place to begin security analysis. Therefore taking two firms with in an industry and assuming equal probability and proportion, we can now compute the expected returns of a portfolio with equal investment in each firm, as well as the variance.

$$\therefore \quad 1_x = \frac{P\,t}{\text{divisor}}$$

$$1v = \frac{mvs}{mvs_{95-98} \times 10}$$

Where Mvs = Market Value of share of the firms in the industry.

These rule of portfolio managment has been applied only to a firm rather than a portfolio [7]

J. R. Hicks, Value and Capital (New York, N. Y. Oxford University Press, 1939)

TITLE: INDUSTRY:

AUTOMOBILE AND TYRES

FIRMS SELECTED FOR THIS STUDY/ANALYSIS ARE QUOTED ON THE STOCK EXCHANGE

1. INTRA MOTORS NIG. PLC (AUTOX[1])

2. R.T. BRISCOE NIG. PLC (AUTOX[2])

AUTOMOBILE AND TYRE INDUSTRIES FIRMS UNDER ANALYSIS

AUTOX[1] = INTRA MOTORS NIG. PLC, AUTOX[2] = R.T. BRISOCE NIG. PLC

EXPECTED RETURNS AND VARIANCE COMPUTATION FOR AUTOX[1] (1995 - 98)

INTRA MOTORS PLC

YEAR t	TOTAL ASSET (₦'000)	EARNING AFTER TAX (₦'000)	ROA $\frac{\text{IIt}}{\text{ASSET}} = Rt$	PROB Pt	EXPECTED RETURNS Rt x Pt	VARIATION $[Rt - E(R_{x2})]$	VARIANCE $[Rt - E R_{x1}]^2 X Pt$
1995 (DEC)	69911	1519	0.022	0.025	0.0055	0.043	0.00046225
1996 (DEC)	100507	8881	0.088	0.025	0.022	0.023	0.00013225
1997 (DEC)	639517	2406	0.038	0.025	0.0095	0.027	0.00018225
1998 (DEC)	72311	8078	0.112	0.025	0.028	0.047	0.00055225
				1.0	R = 0.065		6^2= 0.0001329 6 = 0.036455

AUTOMOBILE AND TYRE INDUSTRIES FIRMS UNDER ANALYSIS

AUTOX[1] = INTRA MOTORS NIG. PLC, AUTOX[2] = R.T. BRISOCE NIG. PLC

EXPECTED RETURNS AND VARIANCE COMPUTATION FOR AUTOX[1] (1995 - 98)

R.T BRISCOE NIG PLC

YEAR t	TOTAL ASSET (₦'000)	EARNING AFTER TAX (₦'000)	ROA $\frac{II_t}{ASSET} = R_t$	PROB P_t	EXPECTED RETURNS $R_t \times P_t$	VARIATION $[R_t - E(R_{x2})]$	VARIANCE $[R_t - E R_{x1}]^2 \times P_t$
1996 (DEC)	303833	22786	0.075	0.025	0.01875	0.0045	0.000005063
1996 (DEC)	321886	27953	0.075	0.025	0.02175	0.0165	0.00006806
1997 (DEC)	616030	109384	0.078	0.025	0.0445	0.1075	0.00288906
1998 (DEC)	628470	(36560)	0.058	0.025	0.0145	0.1285	0.00412806
				1.0	R = 0.075		6^2=0.0007090243 6 = 0.0842036

TWO INDUSTRIES CONSIDERED ARE: AUTOMOBILE AND COMPUTER

i.e (1) AUTOX[1] = INTRA MOTORS NIG. PLC

i.e (2) COEX[1] = GGG PLC

Expected Return and Standard Deviation Computation for AUTO1

INTRA MOTORS NIG.PLC

YEAR t	TOTAL ASSET (₦'000)	EARNING AFTER TAX (₦'000)	ROA $\frac{I_t}{\text{ASSET}} = R_t$	PROB Pt	EXPECTED RETURNS Rt x Pt	VARIATION $[R_t - E(R_{x1})]$	VARIANCE $[R_t - E R_{x1}]^2 X P_t$
1995 (DEC)	69911	1517	0.022	0.025	0.0055	0.0043	0.00046225
1996 (DEC)	100507	8881	0.088	0.025	0.022	0.023	0.00013225
1997 (DEC)	63951	2406	0.038	0.025	0.0095	0.027	0.00018225
1998 (DEC)	72311	8078	0.112	0.025	0.028	0.047	0.00055225
				1.0	R = 0.065		$6^2 = 0.001329$ $6 = 0.036455$

TWO INDUSTRIES CONSIDERED ARE: AUTOMOBILE AND COMPUTER

Expected Return and Standard Deviation Computation for AUTO1

GGG PLC

YEAR T	TOTAL ASSET (₦'000)	EARNING AFTER TAX (₦'000)	ROA $\frac{\text{IIt}}{\text{ASSET}} = Rt$	PROB Pt	EXPECTED RETURNS Rt x Pt	VARIATION $[Rt - E(R_{xt})]$	VARIANCE $[Rt - E R_{xt}]^2 X$ Pt
1995	138045	18646	0.135	0.25	0.034	0.0675	0.00113906
1996	249006	31132	0.125	0.25	0.031	-0.0775	0.00150156
1997	277118	7253	0.026	0.25	0.0065	-0.1765	0.00778806
1998	305640	16038	0.525	0.25	0.131	0.3225	0.0260015
				1.0	R = 0.2025		6^2=0.03644368 6 = 0.190902

2 (a)

Equal Investment W_1, W_2 in firms Auto X_1 and Auto X_2

$W^1, = W^2$ and $W^1, + W^2 = 1$

(i) Expected Return of Portfolio = E (Rp)

E (Rp) $= W^1, \times E(Rx^1) + W^2 \times E(Rx^2)$
$= 0.5 \times 0.065 + 0.5 \times 0.0705$
$= 0.0325 + 0.03525$
$= \underline{0.06775}$

(ii) Variance of the Portfolio = O_2p

$O^2p = W^2_1 \times O_1^2 + W^2_2 \times O^2_2 + K2 \times W_1 \times W_2 \, Ok_1 \times Ok_2$

Where Ok1 x 2 = Covariance of Auto X_1 and Auto X_2

Using tables 1 and 2 above.

Cov. (Auto X_1 Auto X_2) $Ok_1 K_2$

$= (0.25)[(-0.043)(0.0045) + (0.023)(0.0165) + (0.1075) + (0.047)(-0.1285)] = -0.002189$
Therefore, Var. (X1 X2) = (0.5)2 (0.007) + (0.5)2 (0.001) + (0.25) (0.25) (0.05) (0.05) (0.002189)

$O^2p = \underline{0.002137}$

REQUIRED (2b) (1)

To Compute 1x = Pit/Pit^{-1}

Intra Motors Nig. Plc.

Auto X_1

YEAR	Pit	Pit/Pit^{-1}
1995	52	-
1996	54	1.03845
1997	70	1.2963
1998	60	0.85714
		$1_x = \frac{D\ P.t}{P.t^{-1}} = 3.1919$

YEAR	Pit	Pit/Pit^{-1}
1995	277	-
1996	318	1.148
1997	334	1.05
1998	6270	0.808
		$1_x = \frac{D\ P.t}{P.t^{-1}} = 3.006$

1995				
FIRMA	**PRICES**	**QUANTITY**	**MSV**	
Bewac	50	600	30,000	
Dunlop	1380	21765	300,357,00	$I_v = \frac{18200}{30366150} = 0.006$
Incar Motors	43	500	21,500	
Intra Motors	52	3,500	18,200,0	
R. T. Briscoe	277	350	96,950	
			30366150	

1996				
FIRMA	**PRICES**	**QUANTITY**	**MSV**	
Bewac	50	200	1000	
Dunlop	800	10000	8000000	$I_v = \frac{21546}{8694546} = 0.0025$
Incar Motors	78	2500	195000	
Intra Motors	54	399	21546	
R. T. Briscoe	318	1500	477000	
			8694546	

473748

1997				
FIRMA	**PRICES**	**QUANTITY**	**MSV**	
Bewac	51	103	10609	
Dunlop	7550	263308	198,797,540	$I_v = \frac{27,930}{199076319} = 0.00014$
Incar Motors	75	400	30,000	
Intra Motors	70	399	27930	
R. T. Briscoe	334	360	120204	
Rietcot	90	1000	90000	
			199076319	

1998				
FIRMA	**PRICES**	**QUANTITY**	**MSV**	
Bewac	51	516	26316	
Dunlop	530	64750	34317500	$I_v = \frac{21546}{860,31316} = 0.014$
Incar Motors	73	27000	51410000	
Intra Motors	60	2000	120000	
R. T. Briscoe	270	250	67500	
Rietzcot	90	1000	90000	
			86031316	

FINANCIAL DATE FOR THE COMPUTATION OF RATIOS

INTRA MOTORS NIG. PLC	1995	1996	1997	1998
NET PROFIT AFTER TAX	1,519	8,881	2,406	8,078
NET SALES	73,387	85,869	86,869	45,719
NET WORTH	21,172	29,608	33,303	39,883
FIXED ASSETS	8,621	7,377	12,273	24,268
TOTAL ASSETS	69,911	100,507	63,951	72,311
GROSS MARGIN	754	1,316	135	2,117
NET WORKING CAPITAL	7,401	16,721	15,880	10,465
TANGIBLE ASSETS	64,761	95,357	58,801	67,161
CURRENT ASSETS	56,140	87,620	46,528	42,893
CURRENT LIABILITIES	48,739	70,899	30,648	32,428
INVENTORY	22,197	14,524	3,016	6,306
TOTAL DEBT	48,739	70,899	30,648	32,428
EBIT	2,504	11,281	3,226	10,178
INTEREST CHARGES	729	335	581	386

CALCULATION OF RATIONS (1995 - 1998)

PROFITABILITY MEASURE

NET PROFIT AFTER TAXES/NETS	0.020696	0.103425	0.02769688	0.176688029
RETURN ON EQUITY	0.071746	0.2999527	0.07224574	0.202542437
RETURN ON FIXED ASSETS	0.176198	1.2038769	0.19604009	0.332866326
RETURN ON TOTAL ASSETS	0.021728	0.088362	0.03762255	0.111711911
GROSS PROFIT MARFIN	0.010273	0.0153257	0.00155406	0.0463046
ACTIVITY AND TURNOVER MEASURES				
SALES/NETWORTH	3.466701	2.9001959	2.60844368	1.146328009
RETURN ON EQUITY	9.917173	5.1353986	5.47034005	4.368752986
RETURN ON FIXED ASSETS	1.133352	0.9005002	1.47733882	0.680737333
LIQUIDITY MEASURES				
CURRENT RATIO	1.151851	1.2358425	1.51814148	1.322714938
RETURN ON EQUITY	0.696424	1.0309877	1.41973375	1.128253361
RETURN ON FIXED ASSETS	2.999189	0.8686083	0.18992443	0.602588829
INDEBTEDNESS MEASURES				

FIXED ASSETS/NETWORTH	0.407189	0.2491556	0.36852536	0.608479803
CURRENT DEBT/NETWORTH	2.30205	2.3945893	0.92027745	0.813078254
TOTAL DEBT/NETWORTH	2.30205	2.3945893	0.92027745	0.813078254
INTEREST COVERAGE	3.434842	33.674627	5.5524957	26.36787565

FINANCIAL DATE FOT THE COMPUTATION OF RATIOS

R.T. BRISCOE NIG. PLC.	1995	1996	1997	1998
NET PROFIT AFTER TAX	22,786	27,953	108,384	36,560
NET SALES	828,771	912,581	2,372,149	3,565,831
NET WORTH	290,947	303,833	527,884	411,157
FIXED ASSETS	68,173	165,466	284,306	375,733
TOTAL ASSETS	303,833	321,886	616,030	628,470
GROSS MARGIN	297,671	321,283	578,060	468,382
NET WORKING CAPITAL	162,619	292,859	211,636	134,121
TANGIBLE ASSETS	1,155,454	674,534	2,447,241	2,049,842
CURRENT ASSETS	989,988	606,361	1,575,987	1,161,069
CURRENT LIABILITIES	9,900	9,900	42,857	39,282
INVENTORY	310,269	1,408,597	1,408,597	1,093,971
TOTAL DEBT	9,900	9,900	42,857	39,282
EBIT	26,562	32,022	136,471	-1,768
INTEREST CHARGES	87,886	51,619	220,432	277,927

CALCULATION OF RATIONS (1995 - 1998)

PROFITABILITY MEASURE

NET PROFIT AFTER TAXES/NETS	0.027494	0.0306397	0.03611177	-0.0102587
RETURN ON EQUITY	0.078317	0.0920012	0.20721219	-0.08891804
RETURN ON FIXED ASSETS	0.334238	0.168935	0.38474039	-0.097303138
RETURN ON TOTAL ASSETS	0.074995	0.0868413	0.17756278	-0.058173023
GROSS PROFIT MARFIN	0.359172	0.3520597	0.24368621	0.131352832

ACTIVITY AND TURNOVER MEASURES				
SALES/NETWORTH	2.848527	3.0035612	4.49369698	1.146328009
RETURN ON EQUITY	5.096397	3.1161105	11.2086271	4.368752986
RETURN ON FIXED ASSETS	0.717269	1.3529059	0.96931565	1.73956383
LIQUIDITY MEASURES				
CURRENT RATIO	99.99879	61.248586	36.7731526	29.55727814
ACID TEST RATIO	68.65848	-81.03394	3.90577969	1.708110585
INVENTORY/NET WORKING CAPIT	1.907959	4.8098129	6.65575327	8.156597401
INDEBTEDNESS MEASURES				
FIXED ASSETS/NETWORTH	0.234314	0.2491556	0.36852536	0.608479803
CURRENT DEBT/NETWORTH	0.034027	0.0325837	0.92027745	0.095540146
TOTAL DEBT/NETWORTH	0.034027	0.0325837	0.92027745	0.095540146
INTEREST COVERAGE	0.302232	0.6199655	0.61910703	-0.006361383

INDUSTRY: AUTOMOBILE TYRE

FIRMS ON THE NIGERIAN STOCK EXCHANGE SELECTED FOR THIS ANALYSIS ARE

(a) INTRA MOTORS NIG. PLC, (AUTOX[1])
(b) R. T. BRISCOE NIG. PLC (AUTOX[2])

INTRA MOTORS PLC	SIZE OF CAPITAL	LABOUR FORCE
1995	₦ 69,911,000.00	179 Employees
1996	₦100,507,000.00	169 "
1997	₦ 63,915,000.00	202 "
1998	₦ 72,311,000.00	174 "

INTRA MOTORS PLC	SIZE OF CAPITAL	LABOUR FORCE
1995	₦303,833,000.00	575 Employees
1996	₦321,886,000.00	449 "
1997	₦616,030,000.00	440 "
1998	₦628,470,000.00	441 "

(i) *Assume the Expected return of the portfolio to be W1 = 40% and W2 =60%*

Them E (Rp) =

= 0.4 x E (Rp Auto X1) + 0.6 x E (Rp COEX1)

= 0.4 x 0.065 + 0.6 x 0.2025

= 0.1475 or 14.75%

(ii) Standard Deviation of Portfolio Returns

$W_1 = 0.4,\ W_2 = 0.6$

$$\sqrt{W_1^2 X \sigma^2 \text{ Auto } X_1 + W_2^2 X \sigma^2 \text{COEX} + 2.W_1 . W_2 \sigma^2 \text{Auto } X_1 \text{ COEX}}$$

Where (Auto X_1) (COEX)=

(0.25) [(-0.43) (0.0675) + (-0.023)(-0.0775) + (-0.027) (-0.1765) + (0.047) (0.3225)]

= 0.00526075

$$\sigma P = \sqrt{(0.4)^2 (0.001329)^2 +)0.6) (0.03644368) + (2) (0.4) (0.6) (0.00526075)}$$

$$= \sqrt{0.01592666437}$$

= 0.12592666437

or 12.59%

Suppose W1 = 0.6 and W2 = 0.4

E (RP) = 0.6 x 0.065 + 0.4 x 0.2025

$= \quad 0.012 \quad 0r \quad 12\%$

$$\sigma P = \sqrt{(0.6)^2\,(0.001329)^2 + (0.4)\,(0.03644368) + (2)\,(0.69)\,(0.4)\,(0.00526075)}$$

$$= \sqrt{0.0088345888}$$

$$= 0.09399249331$$

or $\underline{\underline{9.4\%}}$

REQUIRED 3B

Firms in Automobile and Tyre industry on the Nigerian Stock Change Official list (4/9/99) Auto X $_1$ = Untra Moors Nig. Plc;

Auto X_2 = RT Briscoe Nig. Plc; Auto X_3 = Incar Motors Nig. Plc. X_4 = Dunlop Nig. Plc; Auto X_5 = Bewac Nig. Plc; Auto X_6 = Reitcot Nig. Co. Plc.

$$E\ (Rp) = \sum_{i=1}^{6} WiE\ (rxi) = \sum_{i=1}^{6} Wi \left(\sum_{i=1}^{6} Pit\ rit \right)$$

if W_1, W_2, W_3, W_4, W_5, W_6 are respective proporion of portfolio for Each of these firms: Auto X_1, Auto X_2, Auto X_3, Auto X_4auto X_5, and Auto X_6

$$E\ (Rp) = W_1\ E\ (rx1) + W_2 E\ (rx2) + W_3\ E\ (rx3) + W_4 E\ (rx4) + W_5 E\ (rx5) + W_6 E\ (rx6)$$

Standard Deviation of the Portfolio:

$$\sigma P = \sqrt{\sum_{i=1}^{6} Wi2\ \sigma i2 + \sum_{i}^{6} \sum_{i}^{6} Wi\ Wi\ \sigma ij \quad for\ i \neq j}$$

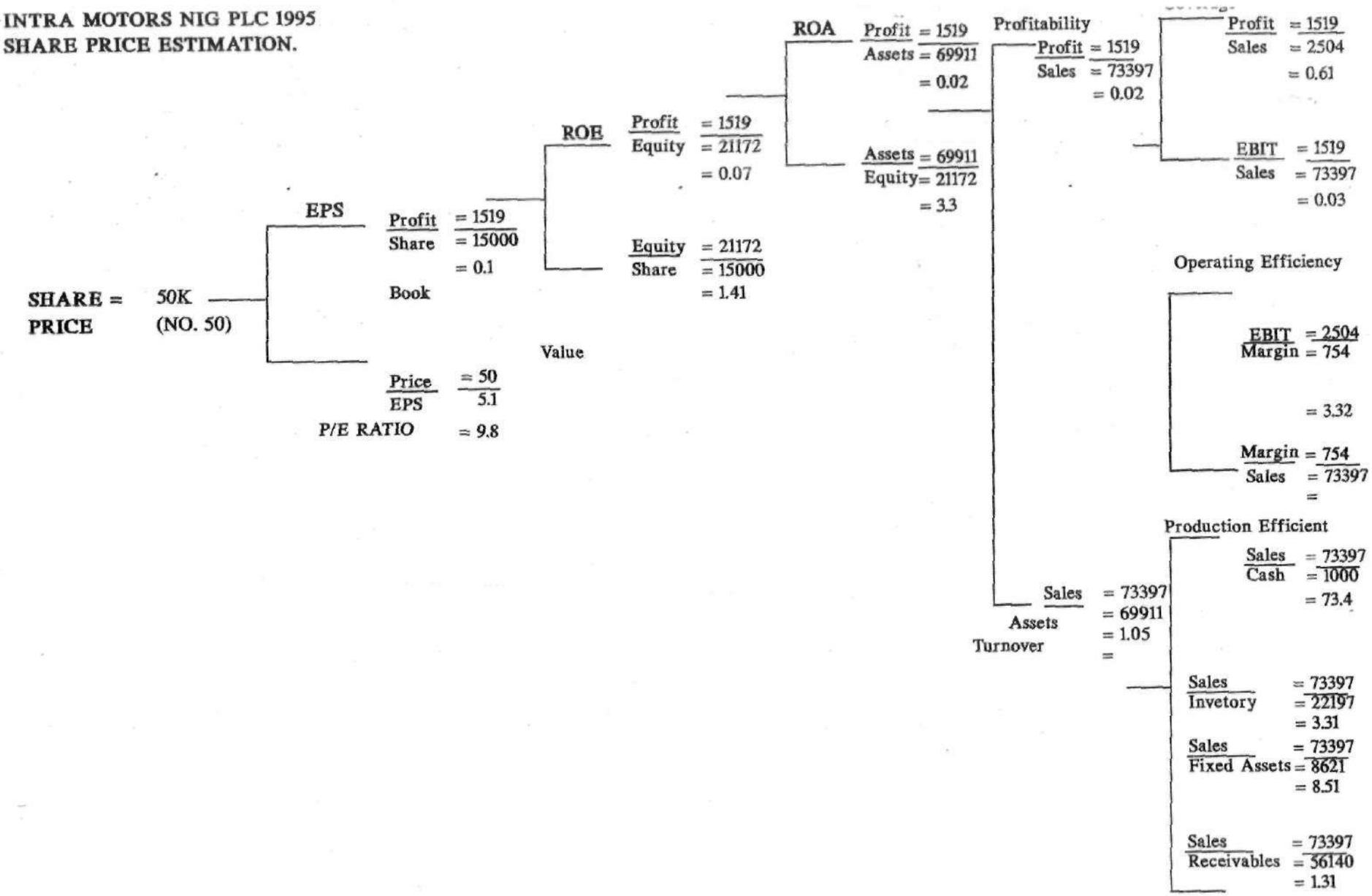
$$\sigma P = \sqrt{\sum_{i=1}^{6} \sum_{i=1}^{6} Wi\ Wi\ \sigma ij}$$

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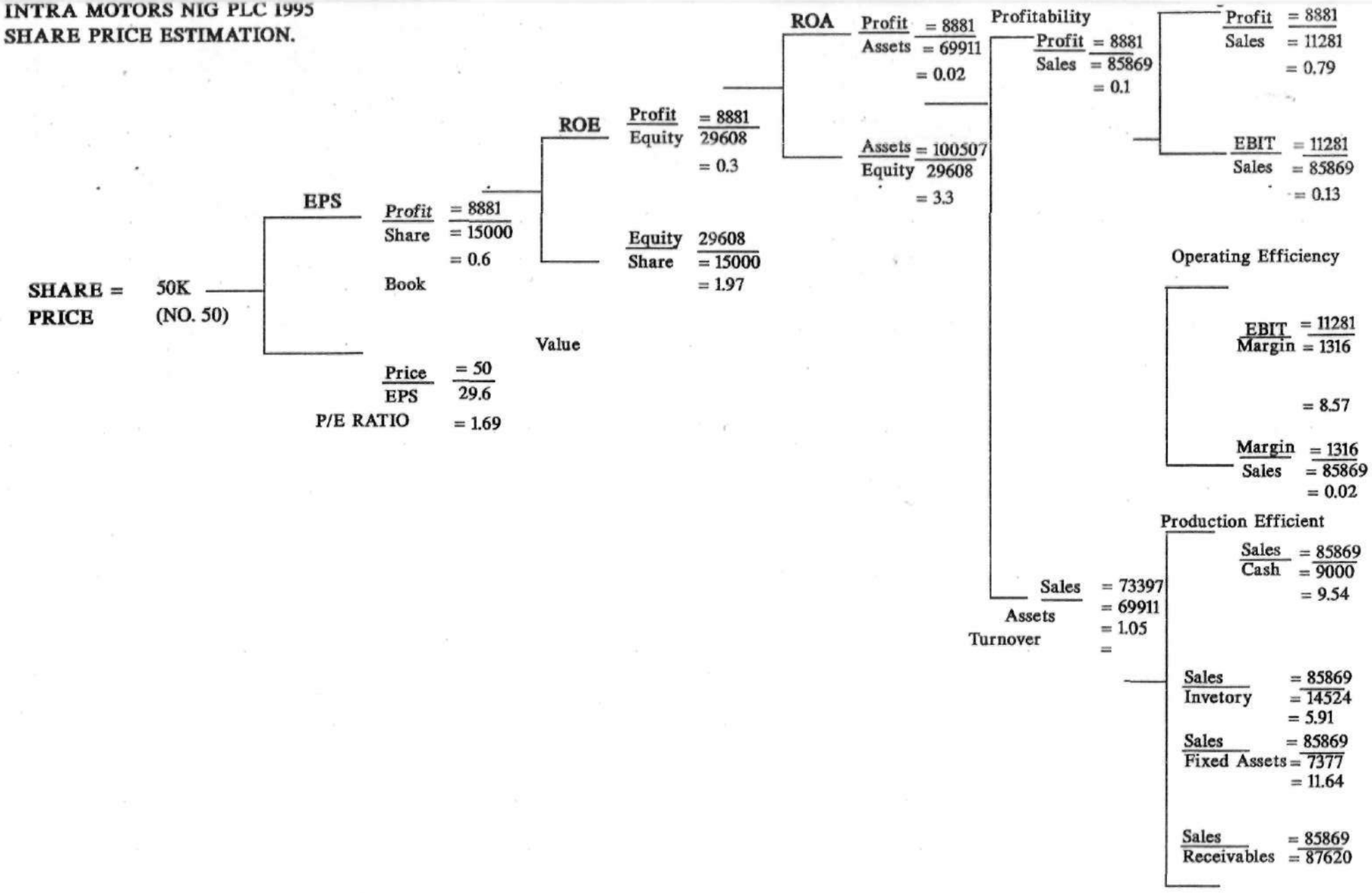
DATA FOR SHARE PRICES CALCULATION FOR EACH YEAR'S OPERATION (1995-98)

	INTRA MOTORS NIG. PLC.						R. T. BRISCOE NIG. PLC			
ITEM	1995 DEC (₦'000)	1996 DEC (₦'000)	1997 DEC (₦'000)	1998 DEC (₦'000)			1996 MAR (₦'000)	1996 NOV (₦'000)	1997 DEC (₦'000)	1998 DEC (₦'000)
EBIT	2504	11281	3226	10178			26562	32002	136471	(1768)
SALES	73397	85869	86869	45719			828771	912581	2372149	3565831
PROFIT	1519	8881	2406	8078			22789	27953	109384	(36560)
CASH	1000	9000	9000	14000			273833	291068	356253	280411
CURRENT LIABILITIES	48739	70899	30648	32428			9900	9900	42857	39282
INVENTORY	22197	14524	3016	6306			310269	1408597	1408597	1093971
FIXED ASSETS	8621	7377	12273	24268			68173	165466	284306	375733
ASSETS	69911	100507	63951	72311			303833	321886	616030	628470
EQUITY	21172	29608	33303	39883			303833	321886	547848	472006
SHARES	15000	15000	15000	15000			30000	30000	60000	60000
PRICE (₦)	0.50	0.50	0.59	0.50			0.50	0.50	0.50	0.50
EPS (K)	5.1	29.6	8.0	26.9			18.99	31.05	73.44	-
DIVIDENDS (K)	7.5	8.0	9.0	5.0			8.25	11.00	10.00	-
CAPITAL	15000	15000	15000	15000			30000	30000	60000	60000

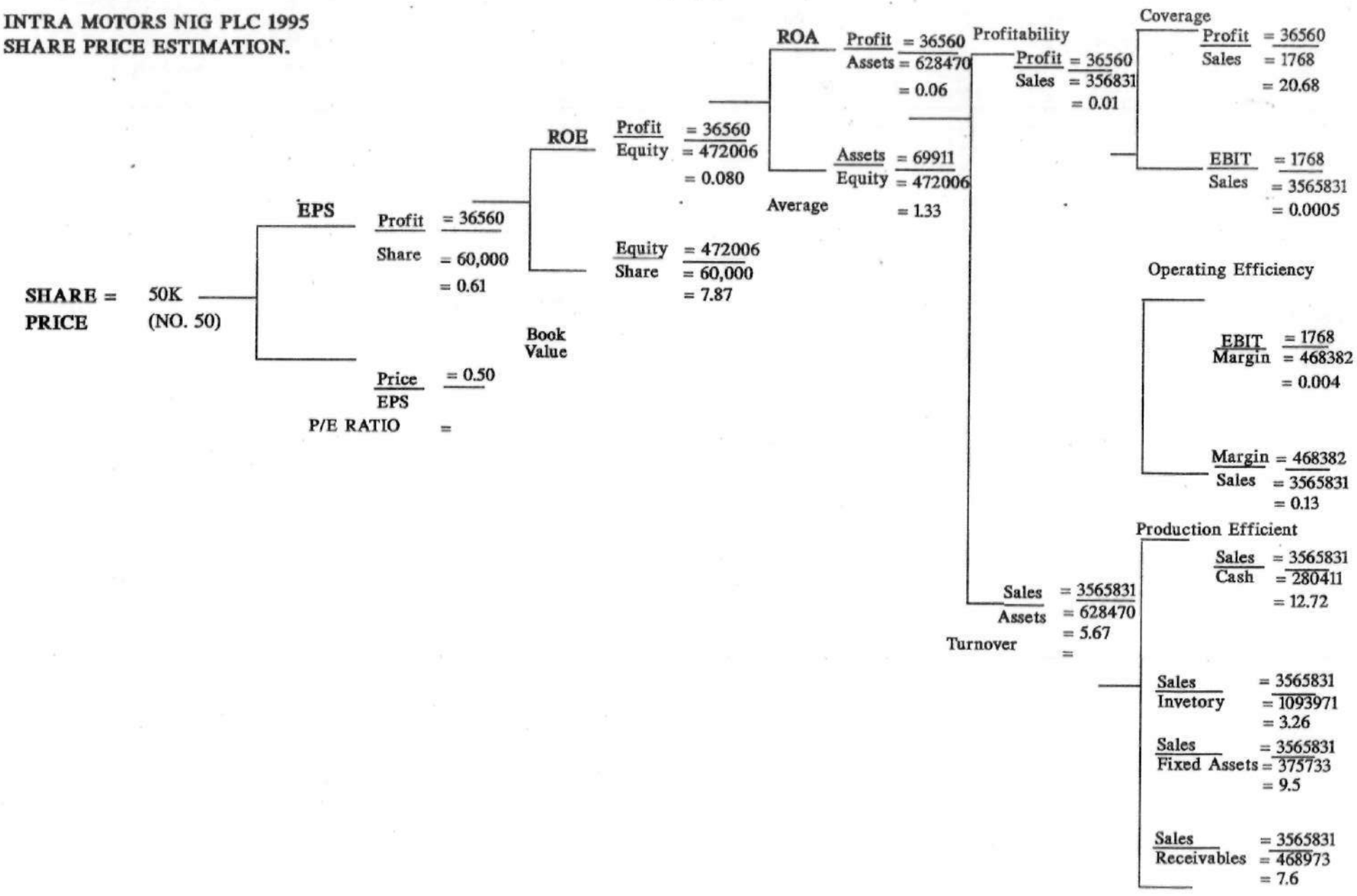
INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



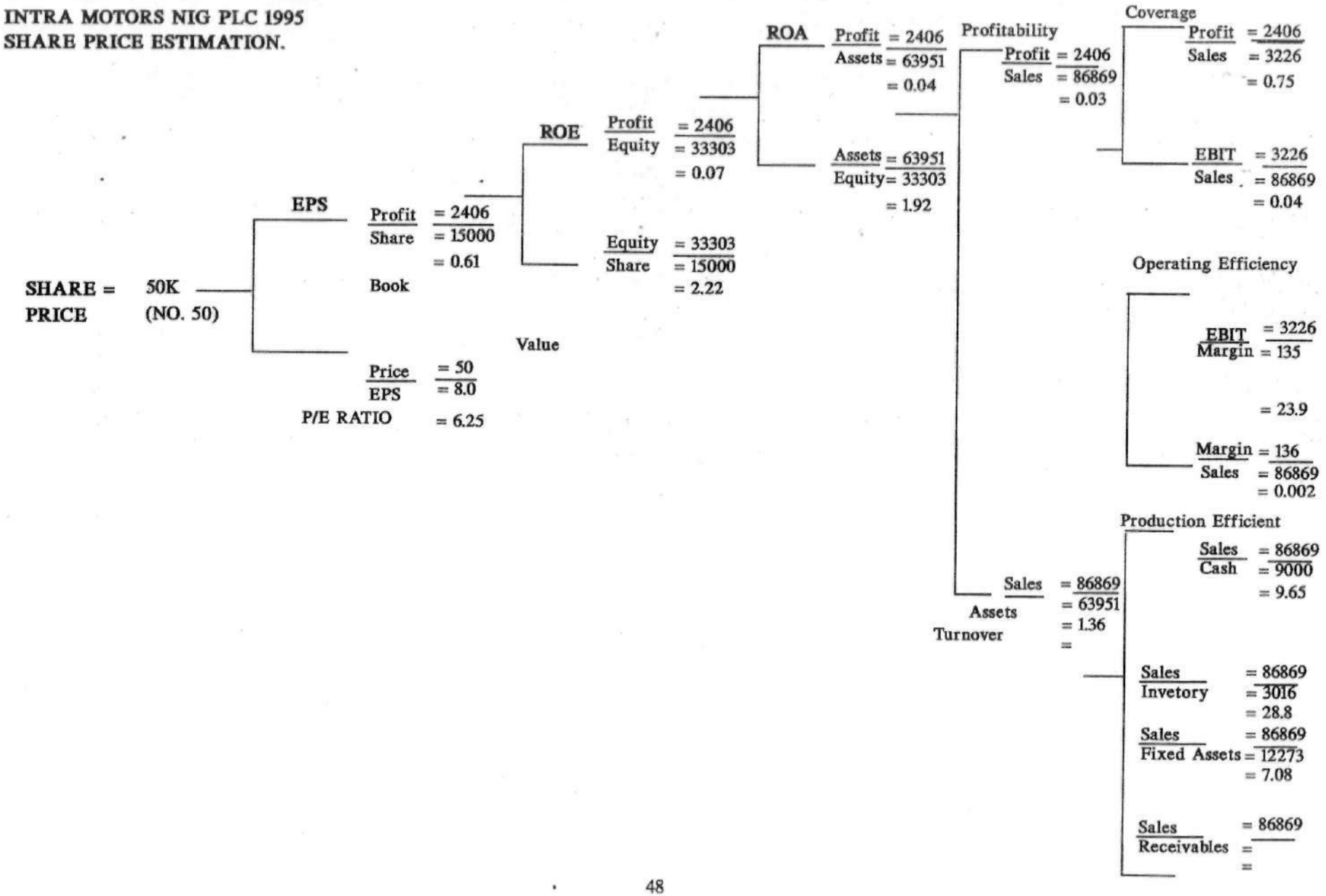
INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



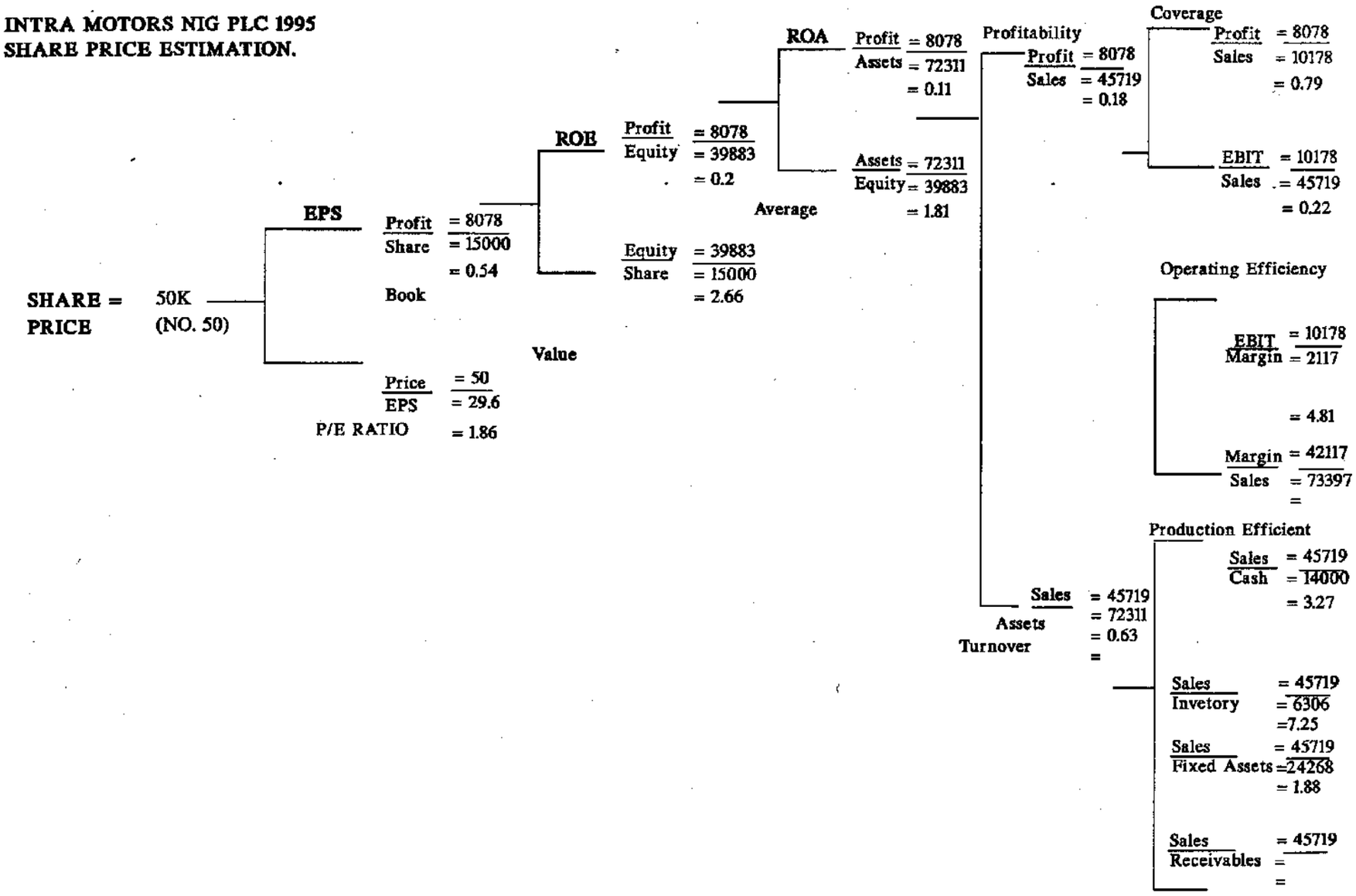
INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



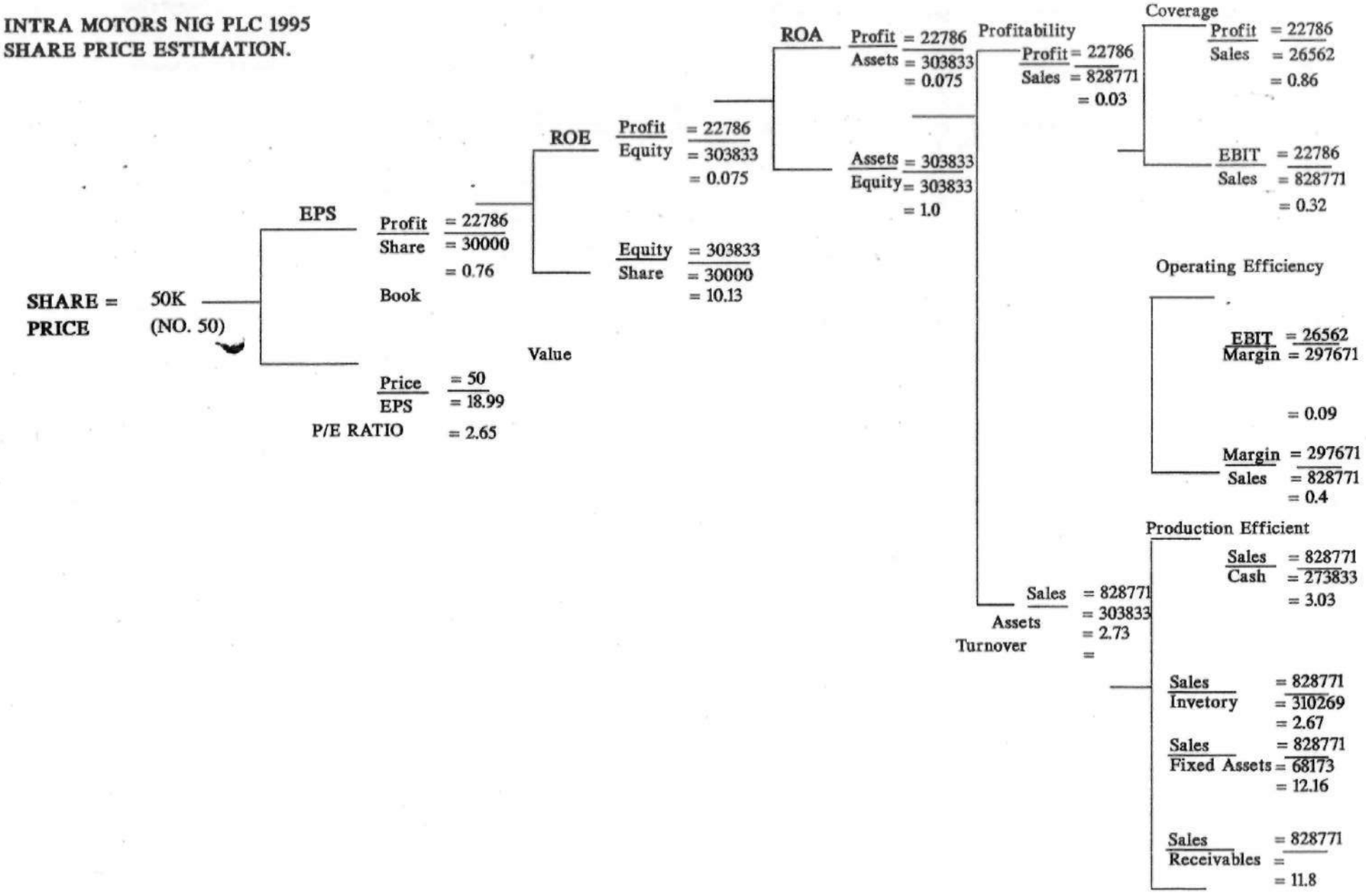
INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



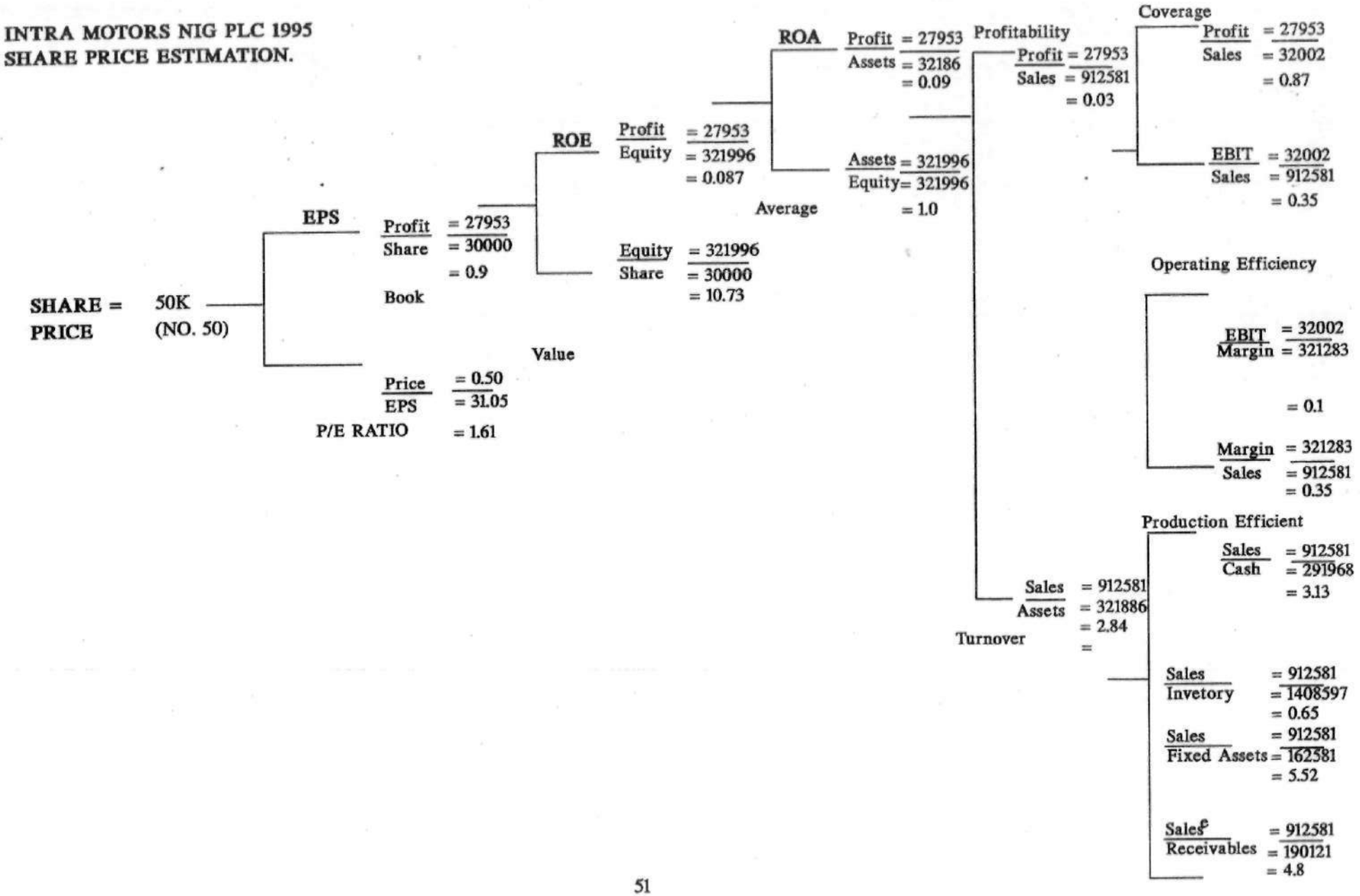
INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



INTRA MOTORS NIG PLC 1995
SHARE PRICE ESTIMATION.



MARKET INDEX IN NIGERIA:- PROBLEMS

Index is used basically as indicator of the performances over various periods. It relates each period perforemance with the other using the first period as the base.

In the Nigeria Stock Exchange Market like any other stock exchange market worldwide, the all share index has been very sueful.

The best way to approach risk in the stock exchange market is to find out the stock selling at cheap price to invest on, But this can be supported by the volume of stock traded as well as the percentage MSV od such firm within its industry. Shares with price to earing raton, that is, appreciably high but cheap enough becomes attractive to mumerous buyers and easy to sell in the market.

Therefore the index is very essential in uderstanding the place to position in the cheapness of the share and high price in case of selling off.

An index is therefore defined as an average for a particular stock exchange market sector. For example, the Nigeria Stock Exchange All - Share Index is in a capital weighted average of the shares listed for the period under consideration. As a weighted it is an index where some important items are given more value then ones that are not as important such weighting depends on the market capitalisation of the shares.

The Dow Jones index is the index for the New York stock exchange while the financial times index is the index for the London Stock Exchange. But it is good to appreciate the fact that Dow Jones as well as some others are still not weighted. But calculated by just taking the average of the share price movements of the share in the index. Soon the Nigeria Stock Exchange will release it's sectoral indices report containing all setors, market capitalisation and sectoral index. Such document will enable investors in share have access to sectoral performances of listed companies.

LIKELY PROBLEMS

The unstable economy of the nation, Nigeria, affects the rahability on the index as prediction of preformance over time. Unstable liquidity in the economy result in inflection/deflation, which created unstability for use of index for prediction over period. Nation policies that are never stable effects the economic performance, which also reflect on the firm/industrial performance and the stock market. Such policies include - the monetary policies, foregin exchange policies, incentive poicy regimes, etc. many other non-economic enviromental issue and up having much impact on the nations economy and the stock market position. These include poor infrastructure e.g transports facilities, energy sources (NEPA), telecommunications, trained manpower etc. Other include poor legal corpus to regulate certain social and economic enviroment for normal business performance e.g laws on taxed, custom duties; exchange control, technology acquisition and indigenisation.

Generally the capital market development is governed by how liberal or restrictive these regulations are applied. The Socio-political environment affects capital develoment also.

These factors affect the supply of equity capital to companies either directly or indirectly. They reflect on the dividend policy, company earinings leverage, stock prices, industrial prospects and timing of the issues.

These reflections or problem aspect occur because of our implicit and/or explicit assumption based on generalised no-capital additions in the capital market that

1. All securities are trade in purely competitive market
2. All purchase and sales of securities by investors are motivated solely by consideration of personal gain
3. Stock prices are equal to the present worth of anticipated future returns.
4. There is no uncertainty.

The resultant business failure from the above are reflected on these financial ratios - such as liquidity, Profitability, Leverage, Activity and returns and market ratios.

2.1 PRINCIPLES OF INVESTMENT PORTFOLIO MANAGEMENT

CONCEPT OF PORTFOLIO MANAGEMENT:

Stated simply, a portfolio is a combination of assets. These assets could be real assets or financial assets. It is in this context that Hayes and Bauman[8] defined portfolio as a package of two or more investment assets half for the benefit of an individual or institutional investor. For purposes of this treatise, a more restrictive definition will be appropriate, to reflect the bias for financial assets which form the focus of this essay. Philippatos defined portfolio as "the composite set of ownership rights to financial assets in which the investor wishes to invest his funds". It is a collection of marketable stocks and bonds held by an investor.

Following from the task of combining or packaging two or more individual securities into a portfolio, which task entails a process of integrating separate though closely related elements intended to lead to the constructing of an optional portfolio for an investor. The problem of portfolio management is one of choosing a combination of securities that taken together, has desirable characteristics with respect to risk and expected return. This, portfolio investment rules are designed to build and sustain a portfolio that maximises portfolio returns while minimising portfolio risk.
Briefly stated, the tasks of portfolio management include:

(i) A background examination of the dynamic behaviour of the security market and subsets of the market over a considerable period of time, to determine the attractiveness of the market for current investment.

(ii) Establishment of investment objectives and strategies within the constraints of a given investor, relative to desire investment returns and the level of risk such an investor is prepared to assume.

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8. Hayes D. A., and Bauman, W.S., Investments: Analysis and Management, 3rd Ed; New York Macmillan. 1976

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(iii) Selection of particular securities, based on elaborate and careful security analysis of these securities, within already stated constraints. The selection will reflect the investor's desired breadth and depth of portfolio diversification.

(iv) Evaluation of portfolio performance, involving an ex-poste portfolio review, to determine to what extent the objectives have been met.

This chapter discusses in greater details, the above functions of portfolio management. But first, a resume of the underlying assumptions of portfolio theory. Portfolio theory has as its building blocks, certain axioms or principles. These axioms are to be regarded as provisional assumptions whose ultimate justification comes, not from their own taught or plausibility, but from the predictive and descriptive power of the conclusions to which they lead. These assumptions are:

(a) There are no securities and each security has its own return, Ri, where i = 1,2,....., n. The investor is assumed to assign probabilities to the returns on the securities, and that the probabilities are normally distributed with a mean X, and a standard deviation, S.

(b) Investors invest in such a way as to maximise utility or satisfaction from their resources, where utility is defined as returns from investment. The relationship between utility and investment return is positive since the investor derives greater satisfaction From a larger rather Than a smaller rate of return.

(c) Investors have an aversion to risk. Other things being equal, they prefer less risky investments to more risky ones.

(d) The money and capital markets are efficient. A market is efficient when many intelligent, rational investors observe, interpret, and rapidly respond in the market place to new information as it becomes available. Consequently, current market prices of securities are good approximations of true investment

values. To appreciate the models of portfolio theory to be discussed, we shall now explain some terms.

PART I: CONCEPT OF PORTFOLIOS AND FUNCTIONS OF PORTFOLIO MANAGEMENT.

Concept of Portfolios:

Most of us here today are already quite familiar with the concept of investments and portfolio management but it might be useful to restate the key elements. In a purely financial sense, investment means the placing of money in the hands of others for their use, in return for securities which promise fixed income payments or offer participation in expected profits. In the real world, it is not often that an investor in financial assets, holds a single security as overall investment. Usually, a given investor at a given point holds a package or combination of securities in time. This combination of securities is called portfolio.

A portfolio has been defined as a package of two or more investment assets held for the benefits of an individual or institutional invest. it as the composite set of ownership rights to financial assets in which the investor wishes to invest his portfolios. Basically a portfolio is a collection of marketing stocks and bonds held by an investor. Portfolio theory is based on the following assumptions:

(i) Every investment portfolio has two important characteristics, namely expected return and risk.

(ii) Rational investors will choose to hold efficient portfolio which are those that maximise expected returns for a given degree of risk, or alternatively minimise risk for a given level of expected return

(iii) It is theoretically possible to identify efficient portfolios by the proper analysis of information For each security on its expected return, and the relationships between the returns for each Security and that for every other Security.

Consequently, the investor analyses all Securities in the market, purely on the basis of their risk-return characteristics. In his selection of securities for inclusion in his portfolio, the investor prepares, for a given expected return, the alternative with the minimum risk, and for a given risk level, the alternative with maximum expected return.

A collection of these securities - securities offering superior risk-return option - leads to the packaging of efficient portfolios. Given a collection of efficient portfolios, the optimal portfolio is the one For which:

(i) There exists no other portfolio with higher expected return at the same standard deviation of return (that is Risk);

(ii) There exists no other portfolio with a lower standard deviation of return at the same level of expected return.

Functions of Portfolio Management

In its simplest form, portfolio management is the task of combining or packaging two or more individual securities into a portfolio, which task entails a process of integrating separate through closely related elements intended to lead to the construction of an optimal portfolio for an investor.

The problem of portfolio management is one of choosing a collection/combination of securities, that taken together, has desirable characteristics with respect to risk and expected returns. Thus, portfolio investment rules are designed to build and sustain portfolio returns (whether from income or capital gains sources) while minimising portfolio risk.

Portfolio theory is both a theory of diversification and a theory of efficiency. As a theory of diversification of efficiency it is concerned with combing a number of assets into a portfolio to achieve some degree of income stabilisation, without impairing expected return. As a theory of efficiency, it seeks to select for an investor a

portfolio that offers the highest return for a given level of risk, or the lowest level for a given return. Portfolio management therefore, is concerned with the ***achievement of efficiency*** in an investor's risk-return position, through a carefully planned policy of diversification.

The task of portfolio management can be summarised as:

The functions of portfolio management include the following.

(a) **Market Analysis**

The first task of a portfolio manager is to assess the attractiveness of the market and make estimates regarding the future rewards and risk in the stock market. The current attractiveness of the market, relative to other time periods, may be measured by Sharpe's reward/risk ratio:

$$\frac{E_m - R_f}{S_m}$$

Where

E_m represents expected annual return from the stock market,

S_m represents stock market risk measured by the standard deviation, and R_f is risk - free rate usually derived from the prevailing rate on government.

The numerator measures the risk premium, which is the additional return offered in the market as compensation for assuming risks in the Stock market. The denominator is a measure for risk in the market. The ratio shows how many percentages points of return are offered by the stock market for each percentage points of risk. Obviously, the higher the Ratio, the more attractive the market is for current investment. Since a higher ratio signifies that the market offers a higher will likely seek to invest at such a time.

(b) **Investment Objectives, Strategies and Types of Management**

(i) **Objectives**

The Managers of a Portfolio normally will establish an investment policy, which will

be in consonance with existing legislation and the provisions of the objectives of the portfolio. The basic factors that will determine the investment policy of the portfolio are its income and liquidity needs as well as the manager's willingness to accept risk. Thus a statement of policy may include the following:

(a) The make-up of the portfolio with a view to making it as productive as possible within acceptable limits of risk.

(b) The manner in which maturities are to be structured.

(c) The quality requirements of the individual securities that constitute the portfolios assets.

(d) Designation of persons responsible for handling the investment programmes and means of monitoring performance.

Three objectives for portfolio investment are common among investors and portfolio managers. These are:

(i) To derive a steady source of income over time while ensuring safety of invested capital.

(ii) To maximise immediate gains as a result of changes in stock prices.

(iii) To benefit from long-time capital appreciation - that is, growth in the value of securities investments.

The investor needs to make some trade-offs and compromises between conflicting goals, and must also determine the degree of risk he is willing to assume in the hope of realising given goals.

(ii) **Strategies**

Based on his definition of objectives, the investor has three basic strategies that he can choose from:

(1) **A defensive strategy**

A defensive strategy may call for an investment in:

(a) A portfolio of high quality bonds, with staggered maturities;

(b) A diversified group of stocks of 'blue chip' companies;

(c) A preference for preferred stocks with their well-known superiority in events of needs for return of capital.

(d) A defensive switching from speculative to fairly stable securities.

(2) **An aggressive strategy**

An aggressive strategy may call for an investment in speculative securities - those expected to gain sharply in price over a short period. The investor may also seek an aggressive bond strategy involving repetitive decisions, based on observed movements in yields and yield patterns.

(3) **A buy and hold strategy**

Where the investor favours a buy-and-hold strategy, this calls for purchase of stocks growth companies, or stocks whose long-term value appears to be above the current price. Growth companies are defined as those Whose sales and per share earning demonstrate the probability of future growth at a significantly more rapid rate than corporations in general.

(iii) **Types of management**

Two types of portfolio management styles are currently in vogue:

(a) **Passive management**

This accepts the assumption that the market is also efficient that it is nearly impossible to construct a portfolio superior to the market portfolio. Therefore it is believed that an investor can do better than to hold to the market portfolio either in its entirety or some traction of it depending on the

resources available.

Therefore, the passive task of the primary portfolio manager should be to hold, to buy and hold out the securities including or loaned up by mixing with riskless assets. Only when there is a change in either the individual risk - return composition of the market portfolio should the passive portfolio manager be induced to recognise the individual portfolio. No security analysis is required. Although this strategy will nerve enable the passive portfolio manager to beat the market. It will ensure that the performance of his portfolio will approximately equal the market and also reduce both transaction and research cost.

The role of the passive portfolio manager can be summarised as follows:

(a) Determining an appropriate level of risk for the portfolio under management.

(b) Achieving the desired level of risk by constructing a portfolio of well-diversified securities.

(c) Periodically reviewing the appropriateness of the level of risk.

(d) Maintaining the desired level of risk through portfolio reorganisation.

(e) Managing the additions to and substraction from the portfolio in order to minimize taxes and provide for either necessary additional investment or reduction of investment in order to make disbursement.

(f) Minimizing transaction costs.

A typical example is the management of index funds which are merely portfolios that duplicate broad stock market such as the Nigerian Stock

Exchange Index, FT100, Nikkei Average, S&P500.

(b) **Active Management**

Contrary to passive management strategies, active portfolio managers reject the idea that the market portfolio is the most desirable bur instate believe that by applying superior technical and analytical skills it is possible to construct a portfolio which, if properly managed, will consistently outperform the market. In constructing an efficient portfolio, active portfolio mangers make use of various investment philosophies and procedures. Some emphasize certain industrial sectors, which they consider attractive while others confine their efforts to individual stock selection techniques. Still other concenrate on securities of a specific investment grade such as growth company or income stocks. The task of the portfolio manager is to construct a portfolio by including in it an approximate mix of undervalued securities which will put the portfolio in the desired risk category and have the potential or outperforming the market. In most cases, portfolio managers command huge resources and hence deal in large volumes hence they are concerned with influencing the market prices of given securities when these high volume transactions are effected. In view of this, there is a tendency for portfolio managers of large institutions, insurance companies and pension funds to primarily choose securities of large companies in their portfolio. However, before securities are included in the portfolio, the portfolio manager must undertake an in-depth analysis of every security to be included. this will involve the determination of the present value of every security including a critical analysis of the financial statements, a projection of earnings and dividends and a determination of the appropriate discount rate.

The asset mix is normally modified periodically through asset switching as the occasion warrants is a useful device for increasing the amount of current income, the yield to maturity or both in order to enhance the performance of the portfolio such switching (or) operations may involve.

(i) quality switch - replacing alow quality asset with a higher quality one. This may result in a loss of yield.

(ii) Yield improvement switch - which involves replacing one asset with a similar quality asset with higher yield (current yield or redemption yield).

(iii) Sector Switch - replacing an asset in one sector with one in another sector. This may involve total liquidation of assets in one sector or reduction in percentage holding of assets in one sector and correspondingly increasing holding in another sector.

(iv) Volatility Switch - involves the replacement of an asset with high volatility with one with low volatility (volatility is measured by the percentage price movement for a 1 percent change in redemption yield).

(c) **Portfolio Selection**

Selection of particular securities, based on elaborate and carefully planed security analysis, while keeping in full view, the investor's goal policies, strategies and constraints. The selection process should reflect the investor's desired breadth and depth of portfolio diversification. Once the investor has established his objectives, and has judged the stock market attractive for investment, his next task is to put together the portfolio. Establishment of investment objectives and strategies, in the light of the investment constraints of a given investor - that he is willing and able to assume. The assets composing the portfolio are usually determined by several considerations depending on the objective of the portfolio and statutory requirements.

Constructing the Initial Portfolio

The initial assets of the portfolio may be constituted by the surrender of existing securities held by the mangers or investors to form the initial portfolio. This may be supplemented by additional purchases from the primary or secondary market. Thereafter additional securities would be added

to the portfolio as sales of units are made and vice versa. The structure can be arranged in accordance to various criteria such as maturity, nature of asset, sector, type of return with the aim of satisfying the three objectives of safety, liquidity and return. An important requirement in the selection of securities for the portfolio is the quality rating of securities. Establishing quality standards enable the managers to determine which securities should be included in the portfolio and which should be avoided or disposed off if need be. Unfortunately, the absence of securities rating in Nigeria at present makes it difficulty for portfolio managers to select new assets or review the quality of existing ones.

(d) Evaluating Portfolio Performance

To maintain optimality, portfolio should regularly be reviewed and holdings changed in the light of new conditions. Thus, the central problem of rational portfolio management is making repeated choices among portfolios. [9] The crucial questions are:

i. How has this portfolio performed, in relation to other portfolio in the market?

ii. Has the portfolio met the investors previously stated investment objectives?

iii. How do the risk-return characteristics of this portfolio measure in comparison with the market indices?

iv. What accounts for the satisfactory or unsatisfactory performance of the portfolio?

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9. Being Text of paper delivered at a National Seminar Organised by the NSE.. Pensions on 22 - 22 April, 1999) Nickowuoha Okoro

PART II: IMPACT OF PORTFOLIO INVESTMENT ON PRODUCTIVITY AND WEALTH CREATION

Portfolio investment, as distinct from direct investment comprises financial instruments that can be acquired by portfolio investors either through initial public issues, private placement, or through direct purchases from the stock market. These instruments can be classified in two groups: equity and debt instruments. Unit Trusts until recent became an important avenue for portfolio investments, partly because of the paucity of securities. Their importance has however declined recently as the volume of securities available in the market increased significantly and many investors have reverted to the usual practice of picking individual stocks rather than investing in managed funds.

These institutional investors, which include pension funds and insurance companies, are motivated primarily by the portfolio diversification benefits that accrue from investing in a small part of their large overall holdings in several assets. They generally have a longer-term growth prospects in the entities in which they invest.

Portfolio investors, therefore, lower their portfolio risk by diversifying their portfolios into many securities and markets. The portfolio managers buy and sell high-yield instruments for the purposes of achieving a portfolio yield that is better than some benchmark such as the Nigerian Stock Exchange index (or Standard & Poor's 500 index in the U.S.).

Major portfolio investors in the Nigerian market include:

- Managed investment Funds.
- Banks
- Stockbroking Firms
- Insurance Companies
- Pension Funds.

The portfolio investment flows have, however, been concentrated in private institutions, especially "Blue Chip" companies that have a good credit rating in their own right in the capital markets.

Evidence show that portfolio investment activity is clustered in such sectors as food and beverages, pharmaceutical, banking, conglomerates where returns and the management of such companies have been traditionally stable. While recipient companies of portfolio investments and issuing houses have generally welcomed the important role of portfolio investment, they have also come to recognize that these investments pose significant issues of both ownership and control of the firms and the stability of the market. At the corporate level, the main concern is how to deal with the effects of sudden dilution of the holdings of existing investors especially during the initial offering as a result of the large investment made by portfolio investors and the possibility of equally sudden withdrawal of the portfolio investor by way of liquidation of his holdings. A few years ago, the authorities of the Stock Market were concerned with limiting the proportion of the capital of firms owned by portfolio investors for two primary reasons:

a. Given the buy-and-hold attitude of Nigerian investors especially institutional investors, very small number of shares were usually available for trading hence the very low turnover in the stock market.

b. There was the need to encourage widespread ownership of shares by ensuring applicants for smaller units of shares were allotted their subscriptions in full especially during privatisation issues.

The impact of portfolio investment on productivity and wealth creation may be summarised as follows:

1. Portfolio investment flows have recently been the most important source of funds or corporate organisations in Nigeria and have been largely responsible for the remarkably high subscription rates witnessed in recent public issues.

2. By their activities portfolio investors help to make needed funds available to users and also help to reduce the cost of capital for companies.

3. Portfolio investment influences aggregate employment and earning mainly through enhanced productive efficiency.

In the process, they are contributing immensely in raising productivity standards, creating employment and generally raising the living standards of the nation.

4. Another benefit is how these investments enhance the acquisition of new technology to boost productivity and restore the vigor of erstwhile non-performing businesses. Unimpeded movement of capital, is desirable because it promotes efficient allocation of resources.

5. In the longer run, portfolio investment in companies can even influence the structure of productive activities in the country, as portfolio investors reward economic activities that produce better returns with increased investment flows.

CONCLUSION

In order to enhance the positive impact of portfolio investment on productivity and wealth creation in Nigeria, certain measures will have to be implemented. These include:

1. Privatisation and listing as many parastatals and public enterprises an possible on the stock market.

2. Strengthening supervisory and regulatory policies:

3. Encouraging corporate entities to conform to generally accepted accounting and disclosure standards;

4. Ensuring investor protection and

5. Improving the efficiency of settlement and clearing procedures.

The increased involvement of large institutional investors, who typically have longer-term investment objectives will definitely have positive impact on our strive toward greater capital formation and economic growth and development. The way to achieve this lies in a

sustained and demonstrated commitment to sound economic management and financial sector regulation at the national level.

2.2 PORTFOLIO THEORY AND SELECTION

The problem which portfolio theory seeks to solve is simply expressed: how should the individual allocate his wealth among various assets, such as shares, debentures, land and antiques? Here, the issue will be deliberately limited to its allocation among long and medium-term securities. This follows the line taken by the pioneer in this field, H.M Markowitz whose work first appeared in 1952, and was consolidated and extended in a book published in 1959. This theory can also be applied to the internal asset holding policy of a company as explained by Ball and Brown (1969).

The common factors in portfolio selection are these: The risk and return. To an investor, a security's value may be expressed either as its current market price, or as its future money return or as its ratio of return to price. Thus, if the future money return to price. Thus, if the future money return is given, an increase in price will reduce the ratio, and conversely, a decrease in price will increase the ratio. There is an inverse relationship between the rate or return and price, given money return. This may simply be expressed as the equation VO= O/K where dividends (D) are constant and perpetual, VO is the current value, and K is the rate of return. Assuming no change in D, an increase in K will reduce VO, and an increase in VO must, in these circumstances, K and VO are very closely related.

The existence of risk and uncertainty introduces the possibility that the return may differ widely. These range of possible outcomes can be expressed in terms of a weighted average or "expressed - value". [10] In essence the potential return in the range is assigned a subjective probability, the total being unity, hence indicating that

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10. The Management of Business Finance John Freear, Pg. 242

all possible returns have been taken into account. Each return is multiplied by its associated probability and the products are added to give the expected value. This expected value can also be used to give a measure of the range or dispersion of returns, known as the variance or its square-root, the standard deviation.

The investor, in choosing a security, will be concerned about its expressed return and about the degree of risk associated with that return. The usually accepted assumption is that he will be averse to risk, but will seek to maximise his return. In consequence, a security that he rates highly because of its high expected return, he may nevertheless avoid because it also has on high - risk. Indeed, it is reasonable to suppose that the holder of a high - risk security will only retain that holding if the expected return is high enough to overcome his aversion to risk.

These notions can only be applied to the selection of portfolios or "packages" of securiting. One portfolio may have risk and return characteristics which differ from another portfolio, the important factor is that the investor hopes to have reduced the risk he carries without too much of an adverse effect on the return. Indeed, portfolios are created to diversify holdings of wealth high return. It requires that the returns to each constituent security are weighted according to the value of the holding in relation to the portfolios value.

Markoiritz has suggested that the process of portfolio selection be approached by (1) making probablistic estimates of the future performances of securities, (2) analysing those estimates to determine an efficient set of portfolios (3) selecting from that set the portfolios best suited to the investors preferences (1,2,3,). [11]

The portfolio analysis problem is as follows. Given such a set of predictions, determine the set of efficient portfolios, a portfolio is efficient if none other gives either (a) a higher expected return and the same variance of return or (b) a lower variance of return and the same expected return.

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11. Vol. (January, 1963), PP 977 - 993 Milliam J. Sharpe

Let X1 represent the proportion of a portfolio invested in security then the expected return (E) and the variance of return (V) of any portfolio can be expressed on terms of (a) the basic data (E - values and (E values) and (b) the amount invested in various securities:

E =

V =

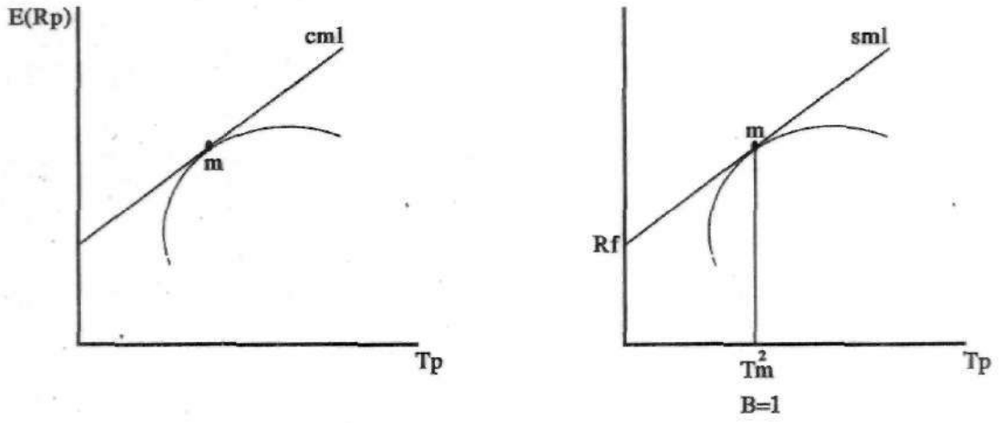
The process of selecting a portfolio may be divided into two stages. The first stage starts with observation and experience and ends with beliefs about the future performances of available securities. The second stage starts with the relevant beliefs about future performances and ends with the choice portfolio. [12]

12. Harry Markowitz Reprinted from the Journal of Finance Vol. VII, No. 1 (March, 1952) PP. 77 - 91

CAPM

The CAPM Theory according to Professor Ross not only explain asset prices, but it does so by providing an analytical basis for a brilliant if not entirely reliable intuition.

Asset risk premium depend not on the total assets but rather on the relationship of the asset to overall mkt.



The locus of all the ruts that relate define the SML

In equilibrium, an asset expected return is a fine linear function of its convariance of return with the market. (ie Risk is a linear function of return from market) . The expected return from the security is an increasing function of its systematic risks as measured by its covariance. ie the higher that risk is, the higher the return. Since systematic risks is a portion of a security total risk, that hinders rather than help diversification these relationship is intuitively appealing. So, the more risk a security has that cannot be eliminated by diversification, the more return investors will require to induce them to hold that security in their portfolio. In equilibrium, every individual security's expected return and risk observation will lie on SML but off the CML. Off the CML, but again in equilibrium portfolio E(Rp) and Tp will lie on CML and on the SML. Thus Even under idealistic

assumption and a static equilibrium, the CML will not include all points if portfolios and individual securities are plotted together on one graph. However, all asset should lie on the SML in equilibrium. Both portfolio's and individual security's returns are determined by systematic risks.

DEFENSIVE V. AGGRESSIVE SECURITIES

Going back by E(G) = Rf + {E(Rm) - Rf) Tm it should be noted that the rate of return on the security is no longer wholly. determine by its total risk Ti but by the correlation Pi T; which is the samething of that security's rate of return with the market rate of return which is the numerator of the function is what we Call the marginal Risk of i, ie the extra risk which security i add to the portfolio if incorporated in it

Defensive	Aggressive
Security	Securities

DEFENSIVE

These are the one that offers the opportunity to reduce portfolio risk by including them in a portfolio that is corrected with the market (ie m), as nearly all portfolios will be. A Note of Caution:- This definition of defensive is similar, but not identical to the term "Defensive Security" as used by security salesmen, financial analysts and others. Traditionally, when speaking of defensive securities, financial analysts gave example of firms that are unlikely to Experience shrinkage in earning power. This is because hitherto, risk has been ambiguously defined.

AGGRESSIVE SECURITIES:-

These are securities that offer opportunities for speculation. They are dividend and price reactions to changes in market conditions are more dramatic than the reactions of defensive securities.

THE 3RD AND 4TH MKT

OVER THE COUNTER (OTC) MARKET: The term "Over the Counter" may be misleading, but the OTC market is more a way to do business, but the OTC market is more a way to do business than it is a place. What is it therefore? It is a way of trading securities other than in a stock exchange market.

What is a 3rd Tier Market?: The 3rd tier is part of the OTC Market. In it, security listed on the exchange are termed OTC (ie outside the stock exchange mkt) It consist of security broker dealers, each making mkt. The main customers of the 3rd tier market are institutional investors which include Mutual Funds, Pension Funds, Bank Trust. The idea behind this is the belief that they can reduce the cost of transaction, better prices and hasten the transaction.

OTC Organisational Security
Market OSM

4th MARKET

This refers to institutions and wealthy individuals who directly buy and sell securities among one another completely by person brokerage service. They don't need to register with any government. The 4th Mkt is essentially communications network among bloc traders. This simply means that the 4th Mkt maker may collect a small commission, or a flat annual retainer for helping to arrange these transactions.

2.3 DEFINITION OF TERMS:

1. Market portfolio is that portfolio which consists of all assets in the market, each entering the portfolio with weight equal to the ratio of its total market value to the total market value of all assets. The market portfolio is optimally diversified. Its return is the market return and its risk is the market risk.

2. Expected portfolio return is estimated as the sum of the expected value of returns on individual assets in the portfolio, weighted by the proportional

investment in Each asset, that is,

$$E(Rp) = a_1E(R_1) + a_2E(R_2) + ... + a_nE(R_n).$$

Where E(Rp) = Expected portfolio return.

a_i = Proportional investment in assets i.

$E(R_i)$ = Expected value of return on asset i.

3. Covariance is a measure of the degree of interrelationship between two Random variables and is given as the expected value of the product of the deviations around the mean for each variable. Thus for two assets X and Y, in a portfolio,

$$\text{Covariance } (X,Y) = E\left[(X-E(X)\ )\ (Y-E(Y)\ )\right]$$

Where E is the joint probability for X and Y.

4. The efficient market: The efficient market hypothesis describes an efficient market as one where security prices fully and speedily (strictly, instantaneously) reflect available information. [13] If the covariance is positive, the variables move in the same direction. if it is negative, they move in opposite directions. It is an extremely important concept because it is the appropriate measure of the contribution of a single asset to portfolio risk.

5. The riskiness of a portfolio is measured by the variance (or the standard deviation, which is the square root of the variance) which is the Expected value of the squared deviations around the mean. This is a measure of likely variability of returns on the portfolio. For a portfolio of assets Z and X, portfolio variance is given by the formula.

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13. ICAN Study Kit Mayo Bpp. pg. 25

$$S2 = \text{Var}(Rp) = a^2\text{Var}\ X + b^2\text{Var}\ Y + 2ab\ \text{Cov}(X,Y),$$

Where a and b represent the probabilities of X and Y. The standard deviation, S, is a square root of the variance

6. Correlation coefficient, P, is yet another measure of the Relationship between two variables, and takes on values between +1. For a two-assets portfolio, X and Y,

$$\underset{x,y}{\frac{\text{Cov}\ (X,Y)}{Sx,\ Sy}}$$

7. MVS means market value of shares.

2.4 TASKS OF PORTFOLIO MANAGEMENT.

The task of portfolio management is the construction of optional portfolios. An optional portfolio is one that offers the highest return at its risk level, or the lowest level of risk at a given rate of return. Portfolio management is a four-stage process That involves security market analysis, identification of objectives and strategies portfolio selection, and portfolio evaluation.

Security Market Analysis.

This first step in the construction of an optional portfolio, assesses the future attractiveness of the market, and provides an analysis to be used in estimating expectations regarding future rewards and risk in the stock market.

Estimates are made of expected annual returns from the stock market, Em. The risk-free rate, RF, is derived From the prevailing rate on government stock. From these parameters, we can tentatively conclude how attractive the stock market or market portfolio is for current investment. The current attractiveness of the market portfolio

relative to other time periods may Be measured by Sharpe's Reward/Risk ration [14]

$$\frac{E_m - R_f}{S_n}$$

The numerator measures the risk premium, which is the additional Return offered in the market as compensation for assuming the risks in the stock market. The denominator S_m is a measure for risk in the stock market. The ratio shows how many percentage points of return are offered by the stock market for each percentage point of risk.

Obviously, the higher the ratio, the more attractive the market portfolio is relative to other comparatively risk-free assets. Other things being equal, the investor will want to increase the proportion of his portfolio in stocks when the reward/risk ratio appears high and to increase the proportion in risk-free securities when the ratio appears low.

Identification of Investment Objectives and Strategies.

Investment objectives define the end towards which the portfolio management activities are directed. They specify the results expected, indicate the end points of what is to be done, where the primary emphasis is to be placed, and what is to be accomplished by the network of policies, strategies, procedures and rules.

Three broad investment objectives are prevalent:

(i) To derive a steady source of income over time (either as interests or dividends) while ensuring safety of invested capital.

(ii) To maximise immediate gains as a result of changes in stock prices.

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14. Harry M. Markowitz Portfolio Selection: Efficient Diversification of Investments (New York: John Wiley, 1959)

(iii) To benefit from long-term capital appreciation, that is, growth in value of security investments.

In the determination of investment objectives, the investor must realise that Trade-offs and compromises between conflicting goals must be attained. For example high current income and high capital appreciation are customarily at The two extremes of the investment spectrum. The investor must also determine the degree of risk he is willing to assume in the hope of larger-than-average income or price appreciation.

Based on his definition of objectives, the investor then determines his investment strategy and policy. A strategy denotes a general programme of action implying commitment of emphasis and resources to attain broad objectives. It concerns the direction in which human and material resources will be applied in order to be certain as possible of achieving a selected objective. Thus, a programme of investment strategies, must be tied to the defined objectives of the investor.

Where the objective is stability of income and principal, a proper strategy may include:

(i) A defensive bond strategy consisting of a portfolio of high quality bonds with staggered maturities. The staggered maturity strategy is defensive in the sense that it offers some hedge against both the market risk and the risk of fluctuating annual income.

(ii) Purchase of a diversified group of stocks of "blue chip" companies. Investment in a broad spectrum of companies minimises the risk of loss.

(iii) Defensive switching from speculative to fairly stable securities. This strategy calls for investment in a portfolio of risk-free securities.

(iv) A preference for preffered stock with their well known superiority in event of need for return of capital. Where the objective is to maximise current income, this would call for:

(i) Aggressive bond strategies based on dynamic movements in yields and yield patterns. This strategy involves repetitive decisions concerning which issues seem attractive at the moment, and then adjusting the portfolio in response to these changes.

(ii) Timing purchases and sales of stocks based on major fluctuations in stock prices, and carrying out short-term trading operations to obtain market profits.

(iii) Investing in speculative securities - those expected to Gain sharply in price over a short period. Where the objective is capital appreciation, the investor should:

(i) Purchase stocks of growth companies. The growth companies are those whose sales and per share earnings demonstrate the probability of future growth at a significantly more rapid rate than corporations in general.

(ii) Identify and purchase stocks whose long-term value appears to be above the current price. These may not be growth situations but undervalued issues.

(iii) Adopt a buy and hold strategy.

In analysis of these investment objectives and strategies, the investor's financial circumstance, needs and aversion to risk, must also be kept in full view. These are the investment constraints of the investor, and a portfolio of securities needs to be designed to produce a probable performance that satisfies

the requirements or preferences of each investor.

Selection of Efficient Portfolios.

After the establishment of investment objectives and strategies, the next task is the putting together of the portfolio, and it involves all and more of security analysis, generation of opportunity set, identification of efficient portfolios, and selection of preferred portfolios. It must also reflect the investor's desired breadth and depth of portfolio diversification.

Diversification is the principle of "allocating investment funds among several eligible securities" with a view to minimising variability of portfolio returns without jeopardising expected returns. Harry Markozwitz defined risk as the expected deviation of actual returns from the average Return. Conceptually, the total risk or total variation in return for a given security can be separated into broad risks and specific risks.

According to Markozwitz mean - variance maxim an investor should seek a portfolio of securities that lies in an efficient frontier. [15] A portfolio with a higher expected value of return and a lower standard deviation. The specific risk also called nonsystematic risks, refer to the exposure to deviations or variations in return associated with a single security determined independently from that of any other Security. The broad or systematic risk refers to that risk positively and concurrently associated with two or more given securities.

Generally, diversification is beneficial where the assets in a portfolio are negatively correlated, that is, where events affecting one investment in a desirable fashion, affect the second in an undesirable fashion. Where the correlation is positive, the returns from the investment have a risk - intensifying dependency. Usually, correlation between securities is less than unity but greater than zero. In that case, the lower the correlation between the returns of the securities in the portfolio, the more beneficial diversification is.

15.. James C. Van Horwe, Financial Management and Policy: Eight Edition Pg. 59.

Recent developments in the area of portfolio theory, bear the distinct mark of the pioneering work done by Harry Markowitz and elucidations of later contributors[16] as summarised below:

(i) The two relevant characteristics of a portfolio are its expected return and its riskiness.

(ii) Rational investors will choose to hold efficient portfolios which are those that maximise expected returns for a given degree of risk, or alternatively minimise risk for a given expected return.

(iii) It is theoretically possible to identify efficient portfolios by the proper analysis of information for each security on its expected return, the variation in that return, and the relationships between the return for each security and that for every other security.

Having calculated the expected return and expected risk on each security, it would be possible to locate each security graphically on a risk-return space. For a set of n securities, the investor's opportunity set would be a maximum of $n+C_n$ portfolios and C_n is the maximum number of portfolios to be constructed from all possible combinations among them. The opportunity set represents the feasible range of portfolios available to on investor. Plotted on a risk-return space, the opportunity set shows the different asset combinations, as illustrated in Fig. 2.1

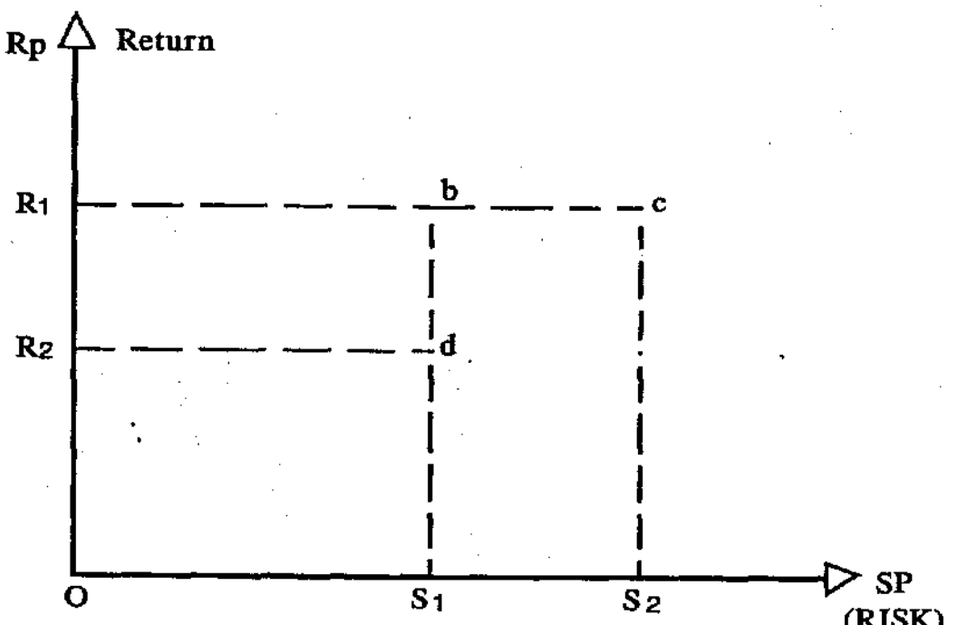
For our rational investor, portfolio b (in Fig. 2.1), with this risk - return characteristics, is decidedly more attractive than portfolio d since b offers a higher return for the same level of risk. Similarly, b is more attractive than c, since it offers the same level of return for a lower level of risk. Thus, in his selection of assets for inclusion in his portfolio, the investor prefers, for

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16. Nayo Associates Bpp, ICAN STudy Text PE II, Financial Management

Fig 2.1

An Investor's Risk - Return Space

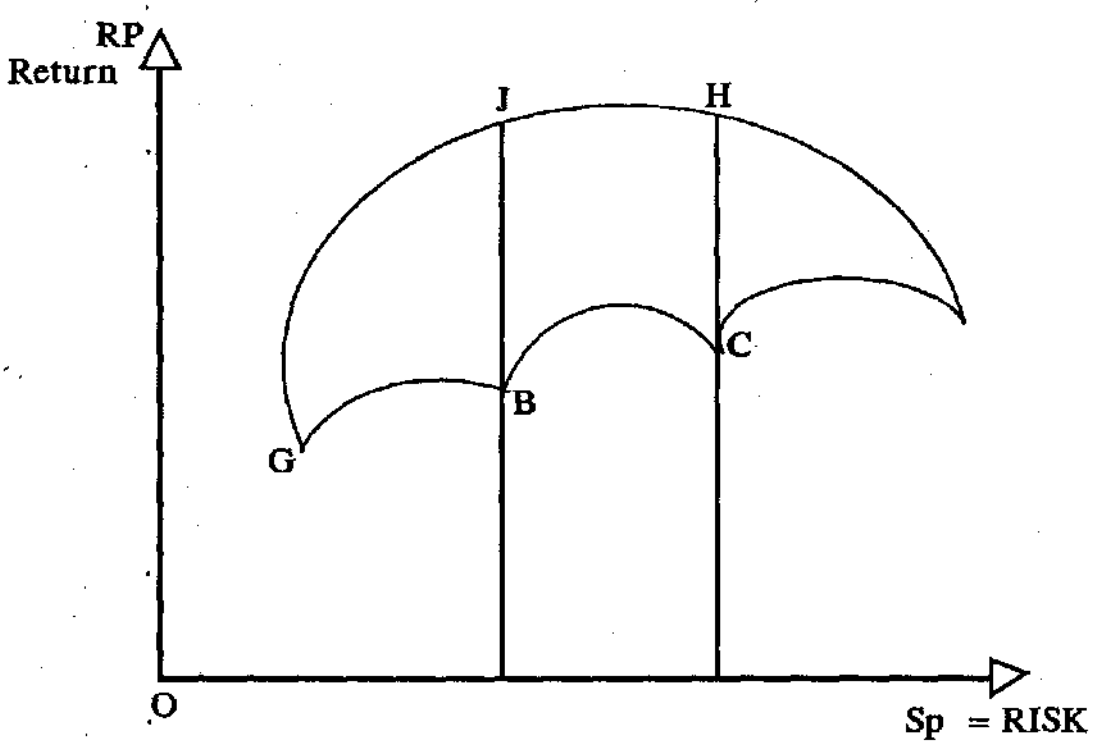


a given expected return, the alternative with the minimum risk, and for a given risk level, the alternative with the maximum expected return. From this opportunity set of feasible portfolios, the investor then builds an efficient frontier (illustrated by Fig. 2.2)

From Fig. 2.2, portfolios lying on the segment GH, are termed efficient because they are superior to any others, and only portfolio along this boundary, are of interest to risk-averse investors. Decidedly, portfolio J is superior to B, offering higher returns for the same level of risk. The segment GH is concave shaped because for any two portfolios, G and H, any portfolio J which is a weighted combination of the two, will have the concave shape GH.

Fig. 2.2

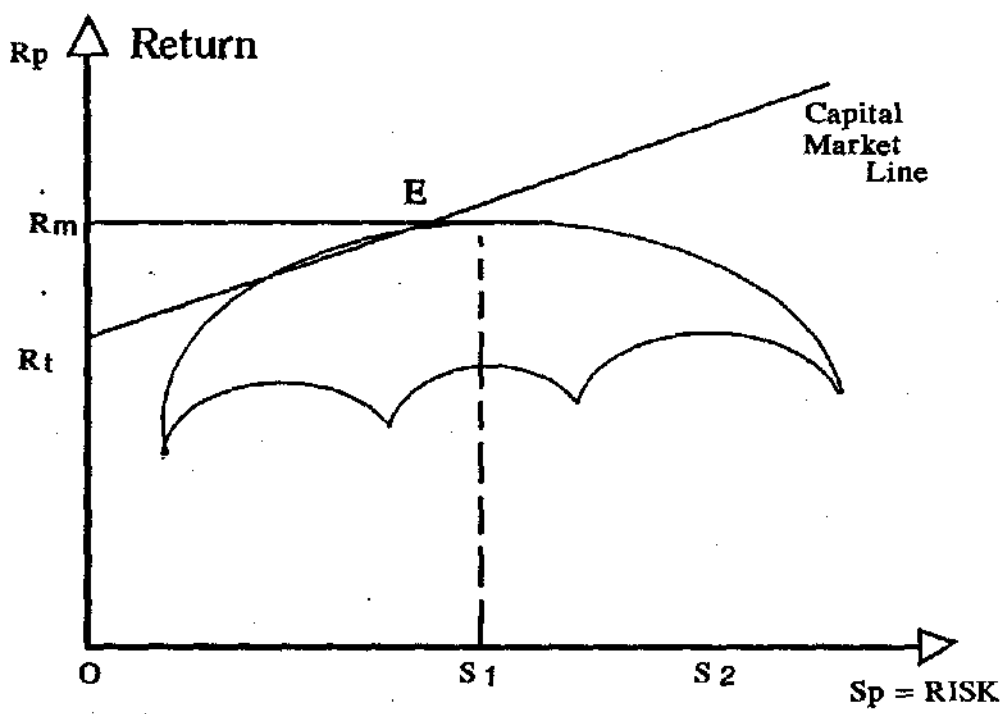
Efficient Frontier



Having thus generated the investor's set of efficient portfolios, the next task in the selection process is the introduction of the capital market line, showing the marginal rate of substitution between returns and risk in the market. The capital market line (CML) is a linear efficient frontier with regard to which all portfolios in the market must be located. Whereas the investor's feasible set of efficient portfolios represents what the economist calls his Demand curve, the capital market line represents a supply curve - the best portfolios currently available in the market place in terms of amounts of risks and levels of expected return.

Fig. 2.3

Investor's Optional Portfolio.



From Fig. 2.3 the investor's optional portfolio is located at the point of tangency of his opportunity set of efficient portfolios, and the Capital market line. This is the point E. Thus, E represents our investor's optional portfolio.

4. **Evaluating Portfolio Performance**

The height and the slope of the Capital market line by reference to which our optimal portfolio was determined change overtime with fluctuations in stock prices and interest rates, and with changes in corporate performance. To maintain optimality therefore, a portfolio should be regularly reviewed and holdings should be changed in the light of new conditions. Thus, the central problem of rational portfolio management is making repeated choices among portfolios.

different portfolio performance evaluation models have been adopted by different

KASHIM

writers and authorities on the subject, but whatever model adopted, it must suit the particular needs of a given investor, and contribute towards the realisation of already defined investment objectives. A suitable model should:

(i) Not only be able to measure the short-term overall performance of a static net work portfolio, but also enable longer-run performance evaluation, compounding portfolio values over time.

(ii) Be Capable of assessing the strengths and weaknesses of the portfolio and the investor. Did the investor buy and sell when he should have? Did he invest in companies that outperformed others? Did he neglect to revise the safe/risky assets balance when he should have? Was his allocation policy optimal?

(iii) Provide for injections into and withdrawals from the portfolio to be built into the model.

(iv) Be tailor-made to fit the particular portfolio. Portfolio performance can Be measured on a risk - adjusted basis, either against the market performance or other portfolio performance, using Sharpe's reward/risk ratio.

First, the reward/risk ratio is determined for the stock market or market portfolio:

$$Pn = \frac{R_m - R_f}{S_m}$$

Where P_m = Market portfolio
R_m = Market Return
R_f = Risk-free rate
S_m = Market risk.

This can be used to evaluate the reward/risk ratio of any other portfolio:

$$P_j = \frac{R_j - R_f}{S_j}$$

A higher ratio is indicative of a superior return for every unit of risk.

Alternatively, the investor can compare his portfolio return performance with the performance of an appropriate market index. The investor can compute the holding - period return (HPR) for his portfolio by dividing portfolio value at the beginning of the period into the portfolio value at the end of the period, that is, your objective is to choose the best portfolio from those that lie on the efficient frontier as already mentioned. In addition to the risky securities that all in the opportunity set, you will be able to invest in a risk free security that yields a certain future return. Suppose that you not only can lend at the risk-free rate but borrow at it as well. To determine the optimal portfolio under these conditions, we first draw a line from the risk free rate i, on the expected return axis through its point of tangency with the opportunity set of portfolio returns.

Fig. 3 -4

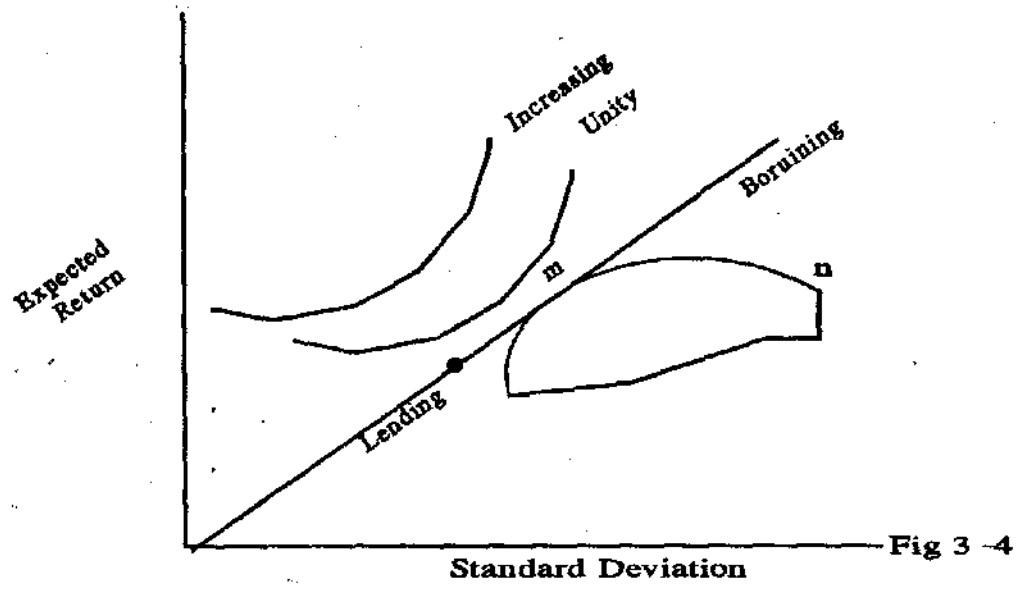


Fig 3 -4

The optimal investment policy is determined by the point of tangency between the straight line in Fig. 3 - 4 and the highest indifference curve[17]

473748

17. Fama and Miller, the Theory of Finance PP. 223 - 26 and 243 - 50

SEPARATION THEOREM - We cannot talk about principles of portfolio management without this theory. The attitude of individual investors towards bearing risk effects only the amount that is loaned or borrowed. It does not affect the optimal portfolio of risky assets. When a risk - free security exists, and borrowing and lending are possible at the rate, the market portfolio dominates all others. As long as they can freely borrow and lend at the risk - free rate, two investors with very different preferences will both choose portfolio M. Thus, the individual's utility preferences are independent or separate from the optimal portfolio of risky assets. This condition is known as the separation theorem [18]

Assuming the following state(s) distributed probabilities returns and market data, To find out whether the 1st asset is riskier than the market portfolio

Where	S	P(s)	Ri	Rm - E (Rm)
	1	.1	.20	-.10
	2	.4	.40	.10
	3	.3	.10	.05
	4	.2	-.30	-.20

Assuming the risk free rate at 5% the expected market return is 11% so and market variance .026

Hence to determine the Beta you need to calculate the expected returns and covariances as follows

S	Pi (S)	Ri	Px Ri	(Ri-Ri)		(Rm-Rm)	
	(1)		(2)	(3)	(4)	(5)	(6)
1	.1		.20	0.02	0.05	-0.10	= -0.005
2	.4		.40	0.16	0.25	-0.20	= -0.05

18. This Theorem was Originally Stated by J. Tobin, "Liquidity Preference as Behaviour Towards Risk" Review of Economic Studies, 25 (February 1958), 65 - 86.

3	.3	.10	0.03	0.05	-0.05	= -0.0025
4	:2	.30	0.06	0.45	-0.20	= -0.09
			Ri-0.15			Av(Rm+Rm)
						(7)
						-0.005
						0.02
						-0.00075
						0.016
						av (Ri - Rm)
						= 0.03475

Calculating the market parameters as follows

S	Pi (s)	Rm - E(Rm) Rm	$E(Rm)^2$	Pi $(Rm - Rm)^2$
	(1)	(2)	(3)	(4)
1	.1	0.10	0.01	0.001
2	.4	0.20	0.04	0.016
3	.3	0.05	0.0025	0.00075
4	.2	0.20	0.04	0.008

Var (Rm) = 0.02575

Calculation of variance thus

S	P(S) Ri	PRi	(Ri-Ri)		$(Ri-Ri)^2$	$P(Ri-R)^2$
	(1)	(2)	(3)	(4)	(5)	(6)
1	.1	.20	0.02	0.05	-0.0025	0.00025
2	.4	.40	0.16	0.25	-0.0625	0.025
3	.3	.10	0.03	-0.05	-0.0025	0.00075
4	.2	-0.30	-0.06	-0.45	0.2025	0.0405

Var (Ri) = 0.0665

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TRi = 0.0665

This means the 1st Asset is riskier

According to CAPM,

$$E(Ri) \approx Rf + [CE(Rm - Rf]B$$

$$E(Ri) = 0.15$$

$$= 0.15 = 0.05 + (0.11 - 0.05)B$$

$$0.10 = 0.06B$$

$$\therefore B = \frac{0.10}{0.06} = 1.67$$

Beta is simply the slope of the securities market line. It depicts the sensitivity of the security's excess return to that of the market portfolio.

These are some of the theories inherent in portfolio management.

The above is a synposis of the tasks of investment portfolio management. It remains to be seen, the extent to which these principles find application in the Nigerian situation.

CHAPTER THREE

PORTFOLIO MANAGEMENT STRATEGIES: EXPERIENCE OF SELECTED INVESTORS.

For an optimal management of investment portfolios, the investor must address himself to two basic issues:

(i) The selection of the right portfolio based on a careful programme of portfolio analysis. In this context, the right portfolio is optimal, designed to meet the risk-return preferences of the investor.

(ii) The periodic review of that portfolio after a proper evaluation of portfolio performance.

These basic issues conform roughly with William Sharpe's three-fold challenge of portfolio analysis, portfolio revision and portfolio performance measurement.[19] An appraisal of the level and extent of investor practiced in portfolio management, must hinge on this three=part analysis. In the course of this research, this writer here attempted to find out the portfolio management strategies applied by Nigerian institutional investors. For completeness of analysis, a comparative study has been made with the security investment practices of some individual investors.

Questionnaires and schedules of interview have been administered on some insurance companies, property corporations, Banks, and finance houses, to ascertain the portfolio management strategies employed by these institutions in their security market transactions. Out of a total of 27 institutional investors to whom questionnaires were dispatched, only 11 of them responded, giving a failure rate of approximately 60%. Some of these 11 institutions have country-wide areas of operation, while others have localised areas of operation in Five, at least states of the Federation of Nigeria.

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19. Shape, Investments, Op. Cit. P. 586.

This writer also received returns from some individual investors. These returns formed the basis of the comparative study incorporated into this chapter. Seven individuals, some engineers, medical doctors, teachers, and accountants, have furnished returns for this study.

An analysis of the findings of this research, is made here an vital conclusions are drawn therefrom. Furthermore, attempts have also been made to identify the causes of the observed trends. The rest of this chapter therefore discusses the portfolio management strategies of Nigerian investors against the background of the theoretical framework earlier discussed.

Portfolio Analysis

Portfolio analysis concerns itself with issues regarding the investor's investment objectives, his risk-return preferences, and the fitting of the right portfolio to the individual. It involves the determination of the portfolio's risk and expected return, and its suitability for the investor in question.

In the course of this research, respondents were asked to state Their central objective insecurity investment. The following results were obtained:

Table 3.1

Investment Objective.

INVESTORS' SUGGESTED OBJECTIVE

		GAINS	CAPITAL APPRECIATION
Institutional	36%	18%	46%
Individual	50%	0%	50%
Simple Average	43%	9%	48%

Thus, the conclusion to be drawn from the above is that the average Nigerian investor buys securities for two main reasons:

(i) To derive a steady flow of income over time in the form of dividends and interests

(ii) To benefit from long-term capital appreciation., that is, growth in value of security investment.

There was not a single individual investor desirous of investing to take advantage of shifts in stock prices. This implies a complete absence of speculative investment so evident in developed markets.

This lack of speculation in the Nigerian market is accounted for by the fact that the market is thin and non-resilient. Several factors are responsible for the thinness of the market.

However the NSE has come a long way since it started in 1960 as the Lagos Stock Exchange, and right now we have also the Abuja stock Exchange. The Lagos stock Exchange which started with only 19 securities worth N80m in 1961 now – has 265 securities made up of 24 Federal Government Development Stocks. 3 State Government

Bonds, 1 municipal Bond, 55 Corporate/industrial loans and preference stocks and 183 equities, all with a total market capitalisation of approximately N330 billions. On the second-tier securities market (SSM) many of the companies on the main list are affiliates or subsidiaries of multinationals and they include Dunlop, UAC, NCR, SCOA, Nestle, 7-UP, Cadbury, Mobil, Texaco, total, Agip, Evans and Smithkline Beecham, to mention a few[20]

The problem posed by lack of securities has also affected another area of investment practice. Nigerian investors are severely restricted in their definition of strategies for portfolio investment. As earlier shown, two objectives dominate investor behaviour in Nigeria steady income over time, and capital appreciation. The objective of steady income calls for an efficient security analysis to enable the investor isolate high quality bonds and blue chip stocks which promise stability of returns and capital. The objective of capital appreciation would be consistent with a strategy of investment in stocks of growth companies and a buy and hold strategy. However, a breakdown of stocks held by the investors interviewed by this writer, did not shown that there was a direct link between a definition of objectives and the adoption of strategies. Table 3.3 well illustrates this point.

Table 3.3

Spread of Security Investments.

INVESTORS	ORDINARY SHARES	CORPORATE LOAN STOCK	GOVT. LOAN STOCK
Institutional	69%	18%	13%
Individual	52%	31%	17%
Simple Average	60.5%	24.5%	15%

Here, one is faced with a situation where 43% of average investors desire steady income over time, and yet only 24.5% of investments are made in corporate loan stocks and 15% in government loan stocks.

20. The Stock Exchange and Capital Formation in Nigeria, A. 1 Alile.

Once again, the problem associated with definition of investment strategies is partly traceable to a thin our investors whose unsophisticated and unscientific investment practices admit of inconsistencies. As we shall show later, the strategy for the average Nigerian investors is the buy and hold strategy. There is very little trace of aggressive and defensive strategies in the observed investment patters. While the market has placed some limitations on the investor's field of choice, the lack of awareness in the investor himself, has contributed to his posture in the market.

Another question put to the respondents, was to determine the factors influencing their purchase and sale of securities. Table 3.4 shows the responses:

INVESTORS	RETURNS	STOCK PRICES	RISK	ECONOMIC TRENDS	OTHERSS
Institutional	38%	5%	24%	9%	13%
Individual	50%	20%	0%	0%	30%
Simple Average	44%	15.5%	12%	4.5	15%

Notes:[a] The item Others' is made up of such factors as availability of securities, financial position of the investor, and the desire to accumulate assets for one's children.

The 44% average for investors who are influenced estimated estimated returns to invest, agrees somewhat with the earlier observation that 43% of Nigerian investors desire a steady flow of income over time. But it is difficult to understand why 4% of Nigerian investors desire to benefit from long term capital appreciation, yet only an average of 15.5% of them are influenced by stock prices in their security transactions. There is an obvious contradiction here. For an investor desirous of long-term capital appreciation, he needs to watch out for underpriced securities and growth stocks for investment, with a view to benefitting as the

values rise over time.

Once again, we come face to face with evidence of lack of sophistication on the part of our investors. The table above also shows that although 46% of institutional investors desire capital appreciation, only 12.5% of them sell or buy stocks as a result of price movements.

The above figures also show that individual investors take no account of risks and economic trends in security investment. This is no surprise as in answer to the question concerning method of risk estimation, no single individual investor had an objective criteria for assigning risks to securities. On the other hand, only 19% of the institutional investors had verifiable and scientific methods for estimating risk. These institutional investors used variability of earnings per share, and assigned probabilities in their risk calculation. On the estimation of returns, 31% of the respondents (both institutional and individual) used earnings per share, while 19% used declared dividends as a criterion. Another 19% did some form of trends analysis, while 13% made no estimate of returns whatsoever before embarking on security investment.

From the foregoing, a few conclusions Can be made:

(i) There is no proper correlation among investors in Nigeria, between defined investment objectives. and the strategies adopted to meet those objectives.

(ii) The determination of risks as part of rational portfolio analysis is virtually nonexistent in Nigerian investor practices.

(iii) The estimation of portfolio returns as practiced by Nigerian investors, is inadequate and not thorough enough.

(iv) Given the slip-shod manner in which risk-return analysis of securities is carried out, portfolios cannot be said to conform to the expressed risk-return preferences of the investors, and are not optionally managed.

(v) Individual investmors in Nigeria prefer real estate investment and ordinary trading activities outside the stock Exchange.

Performance Measurement and Portfolio Review

The central problem of rational portfolio management is making reapted choices among portfolios. Rather than make an irrevocable decision to hold a particular group of stock and bonds indefinitely, the investor considers readjusting his portfolio from one investment period to another. This definitely makes portfolio turnover, a part of dynamic and active portfolio management.

It is the research finding of this writer, that Nigerian investor behaviour is typically that of acquiring securities without selling. Investors employ a buy and hold strategy, building up assets for their children, rather than letting go these securities as market trends dictate. Of all individual investors interviewed, not a single one of them had sold any security within the past year. Among the institutional investors, some 40% had made some sales within the past year, but only those investors who left the management of their portfolio in the hands of professional brokers. So among those who made direct management of their portfolios themselves, the turnover rate is zero per cent.

The low rate of portfolio turnover in Nigeria ia traceable again, to a number of factors[21] made a distinction between passive an active management of investment portfolios. The passive managers hold securities for relatively long periods with small and infrequent changes inportfolio size, and act as if the security markets were efficient. The active managers believe that from time to time, there are mispriced securities or group of securities, and so they do not act as if they believe that security markets were efficient. The Nigerian situation is a cross between the two passive manages operating in a thoroughly inefficient market. One is then minded to agree with Aliko Mohammed, that the Nigerian investors tend to be 'sentimental investors' and not truly rational ones. Unless and until the Nigerian investor becomes sufficiently aware of security investment processes to become a purposeful initiator, not a passive participant, the security market here will remain thin and non - resilient.

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21. Sharpe Williams Investments 2nd Ed.

Security turnover in the Nigerian market is also affected by factors which include the internal workings of the nation's Stock Exchange. Presently, the Stock Exchange operates only the call-over system. This is a system whereby, at a specified time of each working day brokers met on the floor of the Exchange, and as the name of each security is Called, brokers indicate their buying or selling interest. There is therefore, no continuous dealing in securities, as is the case with other more advanced Exchanges around the world. The hindrance to successful portfolio management is obvious - the investor faces artificial restrictions in his portfolio packaging transactions.

The processes of share transfer is also delayed by the current requirement that all transfer is also delayed by the current requirement that all transfers be authenticated by the Stock Exchange before lodgement. though this is intended to forestall the creation of secondary markets for securities outside the Exchange, it has led to frustrating delays because of inadequate personnel at the Exchange. Part of the delay is also traceable to the operation of Registrars. It takes usually about two months for share certificates to be out and until they are dispatched, dealing cannot resume or commence in such securities on the stock market. this obviously affects the aggregate supply of securities to the market at any given point in time, and also on the volume of business done.

Yet another crucial factor in the investor's portfolio management function, is the evaluation of his portfolio's performance. The vital issues are:

(a) The portfolio's performance in relation to other portfolios.
(b) The extent to which the portfolio has not the investor's previously stated investment objectives.
(c) The return-risk characteristics of this portfolio measured with relation to the relevant market indices.
(d) The reasons for the satisfactory or unsatisfactory performance of the portfolio.

Perhaps, in no other area, as much as this, is the Nigerian investor lacking in a scientific application of the principles of optional portfolio management. Without exception, none of the investors interviewed had a comparative basis for evaluating portfolio performance.

All, by different yardsticks, judged their portfolios in absolute terms, without making a comparison against other or market portfolios.

Part of investor failing in the area of portfolio performance measurement, can be accounted for by the absence of market indices, and information and data, against which the portfolio's performance will be grouped. Security markets thrive on information - both as it affects individual securities and The overall market prospects. Similarly, the portfolio manager also thrives on information. his well thought out actions are responses to factual information and analysis thereof. A market with poor information flow is thus, a strong disincentive to optimal portfolio management. The situation in the Nigerian capital market is one of inadequate information, disseminated too late, to too few investors. In the words of one top executive in one of the stockbroking firms:

> A part from the weekly stock market report on the national radio and in one or two papers, there is scarcely any information of substance on the financial market produced by either the Stock brokers or the Stock Exchange itself. One of the stock brokers produces a monthly stock market report which is often months behind schedule and circulated only to a few of their clients... The Daily Official List by the Exchange.. gives the latest information about the prices of quoted securities but without any commentary or analysis of the stock market.

For an intelligent management of investment portfolio, the investor must be well informed, and promptly too, of changes in:

(i) Size and competitive position of company invested in.
(ii) Earnings and dividends record of the company on an ongoing bais.
(iii) The company's management efficiency in production, marketing and cost control.
(iv) Returns and risks in the Stock market.

Not only is this not true of the Nigerian situation but there is also an ere of stock market indices that would come in very useful in both the security market analysis, and the portfolio evaluation process. At the very heart of the investment management process is the task of

estimating the rate of return expected from individual investments and the level of risks of such investments. In the dearth of information that typifies the Nigerian situation, this exercise is rendered impracticable, and leaves the investor with little or nothing to manage.

The conclusions from the above are obvious:

(a) There is a shocking inadequacy in the quality and quantity of data in the Nigerian market on which optimal portfolio management could be based.

(b) The average Nigerian investor buys securities and hold till death.

(c) There is little understanding on the part of Nigerian investors, of the need for, and the workings of, a portfolio performance evaluation model.

Other Research Findings:

In the course of this research study, a question was put to the investors to ascertain what in their opinion was responsible for poor development in security investment in the country. The answers were quite revealing. Some 35% of the respondents, laid the blame at the door-steps of the Stock Exchange. They faulted the Exchange for maintaining an insufficient number of trading floors, a theoretical rather than pragmatic pricing policy, non availability of securities, and the undeveloped state of the stock market. yet another 35% traced the major impediment to poor communication with respect to remittance of dividends, delays in postal transactions, and the lack of sufficient data on operation of quoted companies. Other reasons adduced for the poor level of Stock Exchange transactions, include lack of awareness on the part of investors, excessive government and bureaucratic control, and lack of brokers through whom to channel purchase and sell orders.

In another question, the investors were asked whether in their own opinion, they considered themselves quite well informed, fairly well informed, or not well informed about the processes of security investment. It is quite interesting to note that 44% of the respondents thought themselves quit well informed, while some 37% thought they were fairly well informed.. Only 19% of the respondents felt they were not well informed about security

investment. This, notwithstanding the fact that 12% of the respondents felt that lack o awareness on the part of investors is a major impediment to stock market transactions in thi country.

SUMMARY

The obvious conclusion we can draw from the Above research findings and th commentaries thereon, is that the hypotheses of this study have been proved, namely:

(i) Optimal management of investment portfolios is not practiced in Nigeria.

(ii) The Nigerian investor depends more on hunches than on a scientific collation analysis and study of factual information and data for security investment. Th factors responsible for this sorry state of affairs include:

(a) The thinness and non-resilience of our capital market.
(b) The inadequacy of information and data in the market.
(c) the inflation of official presence and controls that have rendered securit prices too insensitive and unresponsive to market trends.
(d) Severe imperfections in the Nigerian capital market structure.

Indeed, as the Kaduna Seminar on portfolio management in Nigeria rightly summarised "The market is too small, holdings are too few and too thinly dispersed over too man shareholders, ye there are virtually no market indices for gauging performance and trends. The situation arises in which there is hardly anything to manage in the form of portfoli investment."

Portfolio investment which comes through the stock exchange is a necessary but no sufficient foreign capital inflow for economic development. What the country needs is combination of both direct foreign investment and portfolio investment. [22]

22. Apostle Hayford Alile (Being the text of a paper at the Senior Executive Course No. 19 Organised by the National Institute for policy and strategic studies Kuru). 17th March, 1997

The final chapter of this research report, will attempt to advance recommendations and solutions that will bring a lasting solution to a country experiencing the growth pains of nation building.

CHAPTER FOUR

CONCLUSIONS AND RECOMMENDATIONS

In the foregoing chapters, we have tried to show that optimal portfolio management is not practiced in Nigeria. The observations of Briston are, in a global context, also in agreement, "The theoretical developments in the field of portfolio selection have moved far in advance of what is either conclusively testable by empirical research, or capable of practical implementation... However, they do provide much greater understanding of the actual processes in the world."

It may be a bit unrealistic for one to expect all the models of portfolio theory to apply in full with all their sanctions, in the portfolio management business in the Nigerian capital market. The more advance exchanges of the industrialised countries are yet to attain that height. But, one still expects that the system as it operates in Nigeria, should provide a basis framework for rational portfolio management.

We had earlier outlined the tasks of portfolio management as including security market analysis, determination of investment objectives and strategies, selections of securities and portfolios, and evaluation of portfolio performance. In an analysis of the Nigerian experience, we have gone on to prove that a conducive investment scene does not actually exist in Nigeria for optimal portfolio management to be fully practiced. Not only are the imperfections in the system severe enough, but the higher incidence of control activities, has further rendered suspect, the data on which a successful programme of portfolio management would be based

In the light of the above, Onosode's apparently harsh but very accurate indictment is worthy of mention, "In a regime under which price movements are not merely monitored but are as regimented or managed to the extent that I believe they are on the Nigerian stock Exchange, there is hardly what one might call a market. Portfolio investment consequently becomes for all practical purposes, neither an art nor a science"" [23]

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23. Onosode, Op. Cit P. 78

Beyond the imperfections of the system and the insensitivity that stems from rigid control, there is the problem posed by uninformed, unspeculative passive investors. A portfolio manager whose defined objectives are inconsistent with adopted strategies, who carries out risk-return analysis of securities in a slip-shod if not irresponsible manner, and whose market analysis and portfolio evaluation rank next to zero, has doubtful claims to the title of portfolio manager. No wonder Adeosun observes concerning our investors, "...the majority of Nigerian are not aware of the benefits they could derive by proper management of their portfolio investments. The attitude hitherto, has been that of buying shares, enframing the share certificates, and holding till death, if possible."

The truth of the matter is that optimal portfolio management is not practiced in Nigeria. Portfolio management has vacuum for us, no more than "accuracy and comprehensiveness of the records kept by managers – the correct name of the company in which they have invested. .. what dividends or scrip, though due, they have failed to receive .. a proper securities register."

Observations

The situation though hopeless enough, still lends itself to remedial measures. An effective and active capital market must hold the key to the optimal management of investment portfolios. Such a market requires four basic qualities:

(i) Liquidity, so that dealings can take place easily and in large amounts, and also retain that flexibility which encourages investor participation.

(ii) Choice, generating a broad spectrum both of types of security and distinct characteristics within each type.

(iii) Efficiency, both allocation and operational, to ensure that equivalent rates of return and equal access to funds are achieved for comparable investment opportunities.

(iv) Regulation, to ensure an orderly market and fair prices to both buyers and sellers.

(v) Government to make investors aware of protfolio management gains

With any eye on the attainment of these target qualities, the following steps need urgently b taken

1. There is a need for the organisation for investor awareness seminars to educate investors on their rights and duties as shareholders, and the processes of good portfolio management. Here, the recent seminars organised by the Stock Exchange in Lagos, Enugu and Kaduna, are well intentioned, and should be further encouraged. Where the stock market authorities purposely allow some but of speculation in the market and answer could be found to problem of our thin non-resilient market in securities. The alternative to rigid inflexible control need not be wild speculation and unrestrained gambling on the exchange. Regulations can exist side by side with a healthy market process that includes allowing investors to take advantage of swings in stock prices. Also, more individual investors should seek out the services of brokers, who should be better informed about capital market operations.

2. Investment trust need to be established with greater freedom as to portfolio spread. These trust will need to build up funds from individual savers, and apply these funds in properly constructed, well managed and efficiently diversified portfolios. This will also increase the level of financial intermediation in the country, which presently is very low. The investment trust us should engage, on an increasing scale, the services of professional portfolio managers.

3. There is a need for government to encourage family style and private businesses to go public. Tax incentives could go into the 'bait' to encourage these businesses to get listed on the Exchange. The Stock Exchange on its part, needs to review its listing requirements should them in line with the more urgent need of a broader market. Impediments should also be removed by the automation of the system.

4. Parastatals and State governments need positive encouragement to float stocks and bonds on the stock market, and where necessary, the Central Bank could underwrite such issues. This will not only encourage unwilling investors, but also embolden 'market shy' Stage governments to come forth and tap the resources of this potentially vast market. It is a sad commentary on the level of our financial understanding that most of our State Government by-pass the very cheap funds in our security market to go abroad chasing Euro-currencies and petro-dollars at their present interest rate peaks.

5. We need in this country a well thought out legal infrastructure to stimulate the equity and bonds market, attract foreign financial investments, and provide a major source of bonds for the country's financial needs. This would call for a Securities Market Law comparable to the Brazilian Capital Market Law of 1965.

6. All major market participants need to join hands to create a more efficient market. Stock brokers should be conversant with the performance on an up to date basis, of quoted companies to enable them provide adequate and regular information to their clients. Issuing houses should give more corporate advisory services, accepting patronage from small firms which they can nurture to public quotation, experimenting with either and more innovative variety of securities. The Nigerian Stock Exchange Council should have more professional members and establish a research in it for the market. The Exchange should also be able to build up effective market indices and be more efficient in dissemination and analysis of

market data. It should also relax its hold on security prices, allowing them to reflect current trends both in the market and in the issuing company. The Registrars owe it a duty to their investor-clients to recruit more personnel and speed up the processes of share registration. Where it is adjudged necessary, more registrars should be appointed.

These recommendations, by no means, constitute a magic wand, which when waved will transform our stock market overnight. But then, a journey of a thousand miles begins with the first step. A beginning must be made somewhere, to broaden the Nigerian Stock Exchange, improve the quality of its services, and achieve a more efficient allocation of our scare capital funds. Says Dennis Odife, "The concept of portfolio management if very relevant to us in Nigeria, and economic growth and development if being seen increasingly to be a result of the extent to which the nation's portfolio of resources is well managed or badly managed."[24]

7. Unless we accept the challenge to transform the theoretical principles of portfolio theory into practice in Nigerian situation, the theory will remain for us, just a theory, a futile academic exercise that contributes nothing to the understanding and progress of our security market processes. We must face the challenge, to rid the system of the stigma of inefficiency, and go on to develop a sound capital market structure as the bedrock for optimal management of investment portfolios.

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20. A copy of the questionnaire is shown as Appendix I

21. A list of Institutional investors involved, is attached as Appendix II.

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APPENDIX 1

COPY OF QUESTIONNAIRE

Please tick (✓) where necessary; otherwise, brief direct answers will be greatly appreciated.

1. Are you:-
   (a) An Individual Investor: .....
   (b) An institutional Investor?.....

2. Which of the following represents your central objective in security investment?
   (a) To derive a steady source of income over time either as interests or dividends?.....
   (b) To maximise immediate gains as a result of change in stock prices?.....
   (c) To benefit from long-term capital appreciation?
   (that is, growth in value of security investments).....

3. In how many different securities do you hold your investment?
   (a) 1-4 securities..... (b) 5-8 securities.....
   (b) 9-12 securites..... (d) Over 12 securities.....

4. Give a breakdown of your securities according to the following divisions, stating how many of each type held
   (a) Ordinary shares of public companies.....
   (b) Corporate bonds/loan stocks.....
   (c) Government loan stock (Development stock).....
   (d) Short-term government bill.....

5. Which of the following factors influence your purchase and sale of securities?
   (a) Return – interest or dividends expected.....
   (b) Risk attaching to the company.....

(c) Your financial position.....

(d) Availability of securities.....

(e) Desire to accumulate for your children.....

(f) Changes in stock prices.....

(g) Shifts in the country's economy.....

(h) Desire to be known as a shareholder.....

6. How many securities have purchased in the last one year?

(a) None..... (b) 1-4 securities.....

(b) 50\-8 securities..... (d) 9-12 securities.....

(c) Over 12 securities.....

7. How many securities have you sold within the past one year?

(a) None..... (b) 1-4 securities.....

(b) 5-8 securities..... (d) 9-12 securities.....

(c) Over 12 securities.....

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8. How would you estimate expected returns from an investment in a company's securities? (if no such estimates are made, indicate).....

.....

9. How do you estimate the probable risk on a given securities? (If you make nc such estimates, indicate).

.....

10. How do you evaluate the performance of your collection of securities? (if you make no such evaluation indicate).

.....

11. What factors do you consider impediments to transactions in secretes? (List in order of importance) .....

.....

.....

12. In what ways would you like to see the impediments removed?.....

.....

13. Do you consider yourself:-

    (a) Quite well informed

    (b) Fairly well informed

    (c) Note well informed

    About the processes of securities investment?

14. Do you employ brokers to manage your securities?

    If so, why?.....

15. What is your occupation?.....

THANK YOU ! !

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