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CORPORATE CONCEPT APPROACH TO STOCK SELECTION IN THE NIGERIAN CAPITAL MARKET: LESSONS FOR THE EMERGING MARKETS

By

EMEKA J. OKEREKE, B.Sc, MBA, MSc, PhD, FNISM.
Department of Finance and Banking
University of Port Harcourt.

ABSTRACT

Nigerian Capital Market (NCM) provides an enabling environment for financial assets Investors, who are not always guided on the best .investment option among alternatives, taking into consideration the risk and return parameters. This paper provided such guide by adopting the "Corporate Concept Approach". Secondary data were utilized and ten companies quoted in the NCM were selected from the financial service sector using simple random sampling method. Analysis of five year financial statement of these quoted companies were conducted using relevant models and their returns and risk, measured by profit after tax and standard deviation respectively, were determined.

It was found that some company's performance is not always a reflection of the risk-return rule which states that the higher the risk, the higher the return. It was also found that some company's performance followed the rule. Evidently, it implies that risk is not the sole determinant of return on investment. Strong correlation and positive relationship was found between risk and return of companies selected in the Nigerian Capital market. These findings have their obvious implications. The selection of stock using only risk level may be misleading. Investment decision can also be taken based on the corporate performance of the company as such corporate performance reflects the value of the companies/stocks in the capital market.

Based on the above findings, we proffer that company's performance should constantly be reviewed. Emerging markets should draw lesson from this study especially in the area of stock selection based on the profit of the company as a corporate entity. Investment experts should be engaged in stock selection. Such experts are encouraged to update their analytical and judgmental skills. Investment in high risk company's (Stocks) is encouraged but with caution, as other performance parameters should be considered in its totality. Facilities and sound legal framework that are investor-friendly focused should be made available by regulatory and supervising institutions.

1. Introduction

Individuals and firms in any society, without regard to their status, are always conscious and apprehensive of the need to prepared for the rainy day. Such preparations are made against the uncertainties of the future using limited resources of the present as the input. These uncertainties push individuals and corporate bodies into certain INVESTMENT in order to hedge against the vicissitudes of the future and as a security against the variations of time. Investment can therefore, be said to be the profitable postponement of consumption or the process of postponing immediate consumption in expectation of greater consumption in the future (Okereke, 1997:1). This profitable postponement of greater consumption is said to be realized only when the initial resources committed yields benefits in excess of the minimum benefits as per the opportunity cost of capital. But this is not always that case. It obviously calls for caution on the part of the investor. Such caution requires an objective evaluation of the available investment opportunities whether in financial assets or real assets. Basically, the evaluation will enhance the realization of the fundamental objective of any investment, which is the maximization of returns at the least risk level. No wonder, investors are always attracted to investments characterized by high expected returns at lowest risk level. But these investment areas cannot be ascertained by mere guess work rather by proper evaluation of their returns vis-à-vis risks associated with them. For the purposes of this paper, evaluation of investment in financial assets is our focus.

Financial asset investments are commitment of resources in stocks (intangible assets) traded in organized capital and money markets. The evaluation of stocks traded in the former (capital) market is of special interest in this paper. And it involves the determination of the rate of return of the individual stocks as well as the measurement of the risk component of each stock. This is with a view to selecting the best investment outlet(s) among numerous outlets.

It has been observed that Nigerian investors are not knowledgeable and/or ignorant of the ways and means of selecting the most valuable security in the capital market. According to Alile and Anao (1986), 'most Nigerian investors prefer buying and keeping of equity shares even when the value is declining". This attitude will be changed among investors and portfolio managers, as the paper provides a procedural awareness of the analyses, evaluation and selection of securities in the Nigerian Capital Market using a non-conventional approach. This will no double replace the hunches and inspired guesses that have dominated investors in our capital market. The paper will also establish correlation relationship between risk and return measured by standard deviation and rate of return on net assets respectively instead of the conventional risk and expected return used in the Capital Asset Pricing Model (CAPM).

2. Our Methodological Approach

This study utilized mainly secondary data. Like we indicated in the introductory part, this study did not adopt the conventional approach to security selection. Rather the corporate concept approach was used. To this end shares, securities and stock are interchangeably used to represent companies. Essentially, they represent investors interest in a company. Such interest may be in form of ownership (shares) or lending (stocks). Specifically, a share is the smallest unit of an investors ownership interest in a company e.g. equity share or common stock, preference shares, and their variants. A stock is the smallest unit of an investor's interest in a company through lending example the debenture and bond.

The totality of these interests (i.e. the shares, the bonds and debenture) is, in a nutshell, the company. The performance of the company as a corporate entity is reflected in stocks. Therefore, stocks or securities represent the issuing company and are accordingly applied in this paper. Positive performance normally attracts the fancy of investors and will increase demand for and consequently price of stocks or securities which are the 'quasi company'. It follows that the selection of the company based on corporate performance is as good as selecting the 'quasi company' or stocks. Therefore stocks or securities in the Nigerian Capital Market and other Emerging Markets can be selected using this new method of looking at the corporate performance figures vis-à-vis stocks other than the conventional expected return of individual security. This involves the adoption of rate of returns measurement itemized below and the determination of total risk component of any company selected using standard deviation.

Ten companies quoted in the Nigerian stock exchange were selected for the study using simple random sampling method. They are made up of banks and insurance companies. Commercial and Merchant Banks, life and non-life insurance companies were selected. This is our effort to take care of the sub-sectors in the financial sector. Five year financial statements of these companies were adopted while employing such statistical tools as coefficient of determination and correlation coefficient.

3. Risk And Return: An Overview

Rational investment decision involves the trade-off between the risk and return on an investment. Pedestrian investor would want a return that achieves or satisfies his immediate economic objective. But informed investors would want to know the risk component of an investment before a choice is reached. Let us therefore look at risk associated with investment in securities.

We operationally live in a world of uncertainty. Our business expectations are not always met. This is the risky nature of the business world, which stems from the deviation of the realized outcome from the expected outcome. Essentially, risk denotes different meanings and is used accordingly. Sometimes, it is referred to a s general uncertainness, doubt, chance of loss, exposure to danger of the insured object. Perceptively, risk is the uncertainty that exists as to the occurrence of some events happening or the possibility that the actual return will deviate from that which is expected (Okereke, 1997:87). Francis (1994) defined risk as the variability of return on a security while Solomon and Prigle (1980) defined risk as the degree of uncertainty about an outcome. Different types and classifications of risk are associated with investment in securities in the Nigerian capital market. The major ones are as follows:

3.1 **Business Risk:** The returns excepted from an investment rises and falls as a result of the economic situation and market conditions. The variability in the rise and falling of the returns in an investment is the risk inherent in it. Thus business risk is the inherent variability of uncertainty of an investors return from a security investment as a result of economic conditions.

3.2 **Operating Risk:** This is the pay off from increased operating earnings.

3.3 **Financial Risk:** This refers to variability of company's (banks) returns to shareholders.

3.4 **Total Risk:** Total risk of an investment is seen as the standard deviation or square root of the variance. It comprises of both the systematic and unsystematic, controllable and uncontrollable and diversified and non –diversified risk. It covers the entire risk inherent in a giving investment.

These and other risks can be classified into systematic and unsystematic risk. Systematic risks are those that affect all securities alike. They are uncontrollable risk neither can they be diversified. They are usually caused by factors, which simultaneously affect the behaviour and prices of all marketable securities in the capital market. Unsystematic risks are risks that can easily be managed through effective and efficient evaluation and selection of securities for proper portfolio construction. Both risks affect the value of a security. For purpose of this study total risk, which is measured by standard deviation, is used as risk associated with a company or security. It is this total risk that affects the expected return or rate of return on an investment.

Expected return on an individual stock or security is the risk free rate plus a risk premium of the security's return with that of the market. This is the conventional definition different from our new definition of rate of return. And the security's rate of return or Return on Investment (ROI) is the ratio of mean return to total amount invested in that security. The higher the variability of expected net returns associated with a security the riskier the security becomes. It follows that the return on security investment increases with higher risk in that security. This satisfies the risk – return rule which states that, the higher the risk, measured by standard deviation, the higher the return, measured by different return parameters.

4. Measures of Rate of Returns

Different parameters are used in measuring rate of return. Some of these include:

4.1 **Rate of Return on Net Assets:** This is arrived at by dividing net assets with profit after deducting interest and taxation. This is mathematically represented by

Rate of Return on Net Assets = PAT/Net Assets.

Where Net asset = Total assets less liabilities.

4.2 **Profitable Margin:** This is arrived at by dividing operating return with turnover.

4.3 **Rate of Return On Equity:** This is mathematically represented by NP/Equity

Where NP = Net Profit.

The capital asset pricing model (CAPM,), attributed to Sharpe (1964), is the most elaborate and popular theory on the subject of expected return on a security. However, this paper adopted the rate of return on assets of the individual stock (company) selected.

5. Risk-Return and Securities Evaluation

Before we get into the actual evaluation of risk-return profile, let us take a brief look at research findings on risk-return profile. Sharpe and Cooper (1972) measures risk (Beta) and returns among ten groups of New York stocks over a 30 year period. The deciles of stocks with the highest risk hard the biggest returns of 22.6 percent. In Sharpe and Sossin (1976) it was similar when they concluded "higher returns usually goes with higher risk; differences in returns might thus be entirely due to differences in risk". In the United States, the US treasury bond (1994) had a range of returns of 29 percent to 50.6 percent between 1965 and 1994 and mean returns of 6.28 percent. The IBM common stock was more risky with range of -61.9 to 131.3 percent (Francis, 1994).

In terms of relationship between risk and return, empirical investigations have shown positive relationship. Foma and Macbeth (1973) in Ogunyemi (1995) in their study found a positive linear relationship between risk and return. This is in line with CAPM postulation. According to Umoh (1984), "the relationship between risk and return when the latter is measured as standard deviation is normally linear".

It must be noted that some findings have deviated from the above recorded findings in terms of risk - return rule and positive linear relationship. According to a study by Pratt (1971) in Miller (1977), it was

earlier found that the riskiest classes of New York stock Exchange had lower return than less risky stocks. Also Soldosky and Miller (1978) in Ogunyemi (1995) reported that between 1966 and 1976 period, common stocks had higher risk and lower returns than bonds. Hougen and Hines (1975) have reported that mean monthly returns of a large sample of portfolio studied had a significant negative correlation with both the total and systematic risk measures for most five years periods as well longer periods. Sharpe (1964) in explaining the irrelevance of unsystematic risk component described how a plot of securities in return - risk space would appear; such points may be scattered throughout the feasible region with no consistent relationship between expected returns and total risk.

Table 1: Summary Result of Computation of Mean Rate of Return on Net Assets, Mean Return and Standard Deviation of the Selected Securities

S/N	Security/Company	Mean Rate of Return on Net Assets (%)[1]	Mean Returns (R_E)[2]	Standard Deviation (σ)[3]
1	AFRIBANK	10.8	238.2	271.84
2	INLAND BANK	9.7	17.6	31.71
3	TRADE BANK	23.0	27.1	16.55
4	UBA PLC	18.8	537.4	802.32
5	UNION BANK	19.3	515.2	696.55
6	WEMA BANK	34.0	178.8	208.03
7	CRUSADER INSURANCE	2.2	8.5	15.34
8	PRESTIGE ASSURANCE	17.2	17.6	17.72
9	ROYAL ASSURANCE	7.6	24.3	30.85
10	NAL MERCHANT BANK	11.72	123.64	100.002

Source: Authors Computation from Company's Financial Statements

A close look at the above Table 1 is quite revealing. It revealed that some securities do not follow the known risk-return rule. Take for instance, Trade Bank, which has one of the lowest risk level of 16..55 is surprisingly accompanied with a high mean rate of return on Net assets of 23% and mean returns of N27.1m This is evidence of efficient, dedicated and result- oriented management team.

On the other hand Inland Bank has one of the highest risk level (with standard deviation of 31.71) but with low mean return of N17.6m and mean rate of return on Net assets of 9.7%. these deviations go to confirm our earlier literature.

It is fascinating from the table that Wema Bank Plc earned the highest in terms of mean rate of return on net assets. This earning power may be attributed to their expertise in managing the bank's assets and liabilities.

From the table also, we see that most risky security with standard deviation of 802.23 is UBA Plc. This high class risk level is reflected in its highest mean return of

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1. *The mean rate of return on net assets are calculated based on data collected from NSE Fact Book, 1997. five year period is studied for each security. Net Asset is arrived at by deducting Total Assets from liabilities and Profit After Tax is taken as the return. The mean rate of return of Net asset is derived thus PAT/ NET Assets.*
2. *Mean Return is derived by dividing profit after tax by 5 years period.*
3. *Standard deviations is the derived using the following model*

$$\partial = \sqrt{\frac{1}{n}\sum\left(R_t - \bar{R}_t\right)^2}$$

N537.4m. This is followed by Union Bank Plc and Crusader Insurance with the least risk level of 15.34 (standard deviation) and N8.4m mean return and 2.2% mean return on net assets. It goes to confirm the risk – return – rule which states that the higher the risk, the higher the return and vice versa. It also explained the fact that risk and return are positively related.

To test the relationship between risk and return of the selected securities in the stock market, the Pearson correlation coefficient is appropriate of this purpose. It is mathematically represented as

$$ny = \frac{n\left(\sum xy\right) - \left(\sum x\right)\left(\sum y\right)}{\sqrt{n\sum x^2 - \left(\sum x\right)^2 n\sum y^2 - \left(\sum y\right)^2}}$$

Where

ny is the correlation coefficient
x = Mean Return = Independent variable
y = Standard Deviation = Dependent variable

Ten securities were used for this purpose. Their mean returns and standard deviation, as computed using data from NSE Fact Book, 1997 were employed.

Table 2: Computed Values for the Calculation of Correlation Coefficient

x	y	xy	x^2	y^2
238.2	271.84	64752.29	56739.24	73896.99
17.6	31.71	558.096	309.76	1005.52
123.64	100.002	12364.25	15286.85	10000.4
27.092	16.56	448.64	733.98	274.23
537.38	802.32	431150.72	288777.26	643717.38
515.2	696.55	358862.56	265431.04	485181.90
178.8	208.03	37195.76	31969.44	43276.48
8.508	15.34	130.51	72.39	235.32
17.56	17.72	311.16	308.35	314
24.3	30.85	749.66	590.49	951.72
Σx= 1688.28	Σy = 2190.92	Σxy=896523.65	Σx^2=6602.17	Σy^2=19190.70

$$ny = \frac{8965240 - 3698}{\sqrt{(6{,}602{,}170 - 2{,}849{,}344)(19190700 - 4000481)}}$$

$$= \frac{5266832}{\sqrt{(3752826)(14390219)}}$$

$$= \frac{5266832}{7348740.57} = 0.7167$$

$\therefore$ Correlation coefficient = 71.67%

The correlation coefficient depicts that risk and return are strongly correlated and positively related. This is explained by 71.67%. Thus, there is a significant positive relationship between return (expressed as profit after tax) and risk (measured with standard deviation) of the selected stocks in the Nigerian Capital Market.

Recommendations and Conclusion

The results obtained are striking and informative. Investors can predict the prices of securities in the capital market. It can also help them to ascertain the future returns on an investment before the actual investment decision is made. Therefore, investors should form the habit of constantly reviewing the performance of their investment in securities rather than the old habit of buying and keep attitude even when such security is declining in value in the market. Investors, who are not knowledgeable in the rigorous exercise of evaluating securities, should employ the services of brokers, investment advisers/counselors or portfolio managers before any investment decision is made. Every party to the investment (investors, managers, counselors, brokers, etc) should be more concerned on how best to maximize the return on investment while minimizing risk associated with such investment. They are encouraged to use total risk to ascertain the risk level in investment. It requires constant monitoring, periodic reviews and re-appraisal of company's financial statements.

The satisfactory positive relationship and the risk-return-rule behaviours of selected companies established from our findings shows that investors should be encouraged to invest in securities with high risk. Thus, investors stand a better and greater chance of securing higher return on high risk asset. Different securities can be chosen among selected securities.

It was found that some securities outperform others even with less risk level. This implies that performance can be enhanced through other means other than the risk level. Therefore, investors are advised to equip themselves with the necessary skills (managerial, technical, analytical, etc) relevant for the management of their investment portfolio.

The capital market regulators; Securities and Exchange Commission (SEC), and other authorities in the market should provide facilities and legal framework that will make the market investor-friendly. This will encourage investors to be active participants in the market rather than passive ones.

The paper x-rayed the return and risk level associated with selected securities in the Nigerian Capital Market using data from Nigerian Stock Exchange (NSE) Fact Book, 1997 and other secondary sources. It is established that risk is strongly related to return and sometimes the risk-return-rule may not apply. It therefore, calls for caution on the part of investors and portfolio managers. The recommendations proffered above, if objectively implemented, would not only help investors in making the best choice of selected stock/ securities but also would ensure the realization of nominated investment objectives.

References

Alike, H.I and Anao, A.R (1986), The Nigerian Stock Market in Operation, Lagos: Jeremolaio and Association Ltd.

Miller, E.D (1977) "Risk, Uncertainty and Divergence of Opinion" Journal of Finance, Sept.

Nigerian Stock Exchange Fact Book, 1997.

Ogunyemi T. (1995) "Risk and Return Profile: An Empirical Analysis of Selected Securities Quoted on the Nigerian Stock Exchange" Project Work, Department of Finance and Banking, University of Port Harcourt.

Okereke, E.. J. (1997) Dimensions of Project Evaluation, Okigwe: Avan Global Publications.

Umoh, P.N. (1984), "Business Risk and Investment Return in Nigerian" Management and Business Studies in Nigeria, Oduduwa and Company Ltd. Uyo.