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Portfolio Selection in the Stock Market: Institutional and Historical Perspective

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Abstract: This paper examines the portfolio selection strategies of investors investing in the quoted companies of the Nigerian stock market. The investor can select his or her stock using highest dividend paid or randomly selecting his stocks from selected companies. While some investors prefer investing in growth stock companies, other investors choose to invest their funds in value stocks companies. A Rational investor in selecting his investment portfolio will try to maximize returns and reduces risk.

Key words: portfolio selection; investment; stocks market; value stocks companies; rational investor; quoted companies

JEL codes: O16, O43, G11

1. Introduction

The Nigerian Stock Market is the Market where investors have various set of securities or assets in which they can commit their fund to earn a return at a given level of risk. The term portfolio means a combination of securities, investment and assets either of a financial or physical nature, which an investor holds to satisfy his or her defined returns objectives. While portfolio selection is choosing the best combination of securities by a rational investor that will maximizes return and reduces risk. The idea of which portfolio to invest on by the investor is base on the risk and return profile of the investment. While some investors will prefer investing in growth stocks companies other investors will choose to invest their funds in value stock companies.

The idea of the growth stock investor is to focus on stocks that have growing potential. While the value stock investors focus are to seek out companies with strong fundamentals like earnings, dividends, books value and cash flow, that are selling for less than their intrinsic value while hoping that the market will ultimately correct itself once it realizes its value and will then begin to price the stock correctly. One way an investor can achieve this, is to assess his or her stock portfolio for growth stocks and value stocks and the proportions of each. Understanding the difference between the two is especially important for effective financial planning and reaching an investor financial goals. Modern portfolio theory holds that diversification of assets may increase returns at a reduced risk level and the expected return on investments. Many people are of the school of thought that it is not good that one should put all his eggs in one basket. This statement explains the need for an investor to spread his risk. Therefore,

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instead of investors investing in a single stock, an investor can select a balanced portfolio across different stocks in portfolio management, the objective is to select securities which will subsequently have a ready market where they can be disposed off at any time the investor wishes to do so and at attractive prices that will achieve his returns objectives.

2. Theoretical Frame Work

Every stock market has various set of securities or assets in which an investor can commit his or her funds in order to earn a return. But most investors will prefer to invest in a combination of securities which will assure better and more stable returns while minimizing risk. In building a portfolio of securities, a rational investor would only be interested in high returns with low risk (Osaze, 2007).

A rational investor in selecting his or her investment will tend to choose an investment that maximizes return and reduces risk. According to Osaze (2007), returns are the expected earnings from a portfolio. In other words, the expected return on a portfolio is simply the weighted average of the expected returns on the individual securities in the portfolio. However, the best combination of expected return and risk depends on the investor's utility function. The efficient combination or efficient frontier of portfolios shows the tradeoff between risk and expected return.

According to Markowitz (1959), an efficient frontier is a portfolio of securities in which for a given risk has the highest expected return and for a given expected return has the lowest risk. Since investors are risk-averse and they behave rationally, they would choose an efficient portfolio rather than inefficient portfolios that is, lower return and higher risk (Pandey, 2008).

For a portfolio to be on the efficient frontier, the portfolio must maximize return for a given level of risk (Manganelli, 2002). A portfolio is not efficient if there is another portfolio with a higher expected return and a lower risk. An investor would arrive at his or her optimal portfolio where his most attainable indifference curve is at a tangent to the efficient frontier of portfolios (Markowitz, 1959).

According to Pandey (2008) an investor's tradeoff between risk and return depends on his or her risk preference. The optimization principle should follow when the investor know the relation between risk and return. Investors are better off with investments that are on the indifference curves that are situated further up to the right (Markowitz, 1991). Therefore, in building a Portfolio of securities, a rational investor would only be interested in high return with low risk. In other words, he or she will want to invest in a portfolio that is efficient in terms of returns and risk (Osaze, 2007).

3. Classification of Stocks

In the Nigeria Stock Market, stock are classified either as dividend per share price ratio or cash flow per share price ratio or earnings per share or cash flow per share price ratio.

According to Fama and French (1998), the dividend per share price ratio can be used to classified stocks into value stocks and growth stocks. According to them, in each market, stock are sorted at the end of each year by book to market, earnings to price, cash flow to price and dividend to price ratios. The value stock portfolio in the market comprises of the top thirty percent of stocks when ranked while the growth stock portfolio comprises of the bottom thirty percent of ranked stocks.

When stocks are selected using dividend per share price ratio to get top thirty percent of value stock and bottom thirty percent to get growth stock, the result will be either deep value or deep growth.

3.1 Value Stock Portfolio

Value stock investors are bargain hunters who search for companies believe are undervalued companies whose stock is trading at low prices that do not reflect that true value of their asset or earnings. Most often, these companies are overlooked by other investors which tend to lower their share prices. Sometimes, the share price many be temporarily depressed due to corporate restructuring, management changes or a short-term setback.

According to Miranda (2010), value stocks are those that are not usually cheap but are considered to be good deals. They are solid, steady companies, their growth is slower, but their strong fundamentals make them more likely to survive a bear market. Value stock investors seek stocks with low price/earnings ratio, a sign that other investors do not have much faith in the company. Value stock investors also focus on companies with solid fundamentals. For instance, they are affordable and since the stock is already selling at a discount, a disappointing quarter of the year may not cause it to decline as steeply as a growth stock (Capital Management Report, 1999). A company might be considered undervalued base on criteria such as price/earnings ratio, price to book ratio, dividend yield etc, such stocks are not recommended by investment advisors to their clients, therefore, the shares are relatively cheap compared to the value of the company's assets.

3.2 Growth Stock Portfolio

Growth stocks are stocks that have high share prices relative to the company's current earnings. This means that, the stock is valued on growth potential. The stock tends to do well particularly, in a bull market and can cause problem or a dramatic set back in a bear market (Ranganatham & Madhumathi, 2007).

According to Miranda (2010), growth stocks are stocks that represent rapid growth. Growth stock investors anticipate continuing improvements in operating performance, such as earnings, assets or sales (John, David & Walter, 2005). Growth stocks have some common features there are:

- Strong Return on equity
- Strong growth rate
- Increasing stock price
- High earnings per share (EPS).

According to Capital Management Report (1999), growth investors search for companies whose revenues and earnings are growing rapidly, generally at an annual rate of 15% or more. Many investors are willing to pay high price to participate in the potential for continued strong appreciation. Growth stocks investors believe that the past high growth in operating performance will continue unabated, even when the high growth rates are unlikely to be sustained beyond one or two post- formation year (Lakonishok, Shleifer & Vishny, 1994).

3.3 Portfolio Selection Strategies

A portfolio is concentrated, when it is build around very few under valued securities for the purpose of earning more returns. According to Cohen, Edward and Arthur (1987), a good portfolio tactics is when an investor concentrates his stocks holding on selected undervalued securities rather than diversity broadly.

According to Markowitze (1952), Diversification reduces the risk associated with holding a portfolio of assets. The main advantage of diversification is the reduction of risk without necessary reducing the expected returns (Winger & Frasca, 1988).

Portfolio selection can be based on different diversification tactics such as selecting stocks based on highest dividend paid or based on highest share price or based on every industry listed on the stock market or selection can be done randomly without any consideration for industry, dividend, price per share etc. (Lewis, 1978). Peters

(1991), support the idea of investing in growth stock Portfolio arguing that growth stock investors earn higher returns than value stock investors. Other writers such as Basu (1977), Lakonishok (1991), Fama and French (1992), argued that value stock investors earn higher returns in their Portfolio selection than growth stocks investors.

According to Eriki (1999), the return from each successive portfolio is given as

$$\text{Portfolio Return} = \frac{\text{Total Dividend Earned in a Portfolio}}{\text{Number of shares in the Portfolio}}$$

Thus, the standard deviation (∂) was used to measured risk. Therefore, the standard deviation of a successive Portfolio was computed as:

$$\partial p = \sqrt{\frac{\Sigma X^2 F}{N}} - \mu$$

Where

∂p = Portfolio Standard Deviation

F = Number of shares of a security

X = Dividend per shares of a security

N = Total Number of shares in a portfolio

μ = Average return of a portfolio

An investor wishing to invest in companies quoted in the Nigerian stock Exchange can use any of the above portfolio selection strategies in selecting his or her stocks. The trend is shown on appendix I-III using successive selection of value stocks by highest paid dividend.

4. Conclusions

For effective stock market operations, it is most suitable that effective and efficient portfolio selection would lead to national as well as individual economical prosperity. Most investors in the Nigerian stock market are passive investors who just buy shares and keep, and not really speculating for capital gains. Hence they stand at high risk of losing their capital for any unexpected fall in stock prices. The stock market indices particularly share prices, dividend paid and price earnings ratio are relevant variable determining investors portfolio selection decisions.

5. Recommendations

The purpose of this study is to examine the value stock and the growth stock portfolio selection strategies, and in doing this the various methods of building a portfolio where looked into. That is, the various selection strategies such as selecting stocks based on highest dividend paid or highest share price or randomly selecting stocks without considering the industry price per share or dividends paid. In the light of the above, the following recommendations are offered.

- For the stock market to function effectively and ensure investors gains there should be sound macroeconomic policies.
- There should be a deliberate policy by the government to lowered the lending rate for investors, to enable them borrow and invest in the stock market.

- The government and the regulatory authority should institute measure to check sharp practices in the stock market to ensure discipline and transparency in market operations.
- An investor should engage the service of stock brokers and finance experts when taking investment decision.
- Investors need to be abreast of the changes in stock market indices in order to minimize their risks when taking investment decisions.

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Appendix 1 Fifty Selected Companies in the Nigerian Stock Market and the Dividend Paid between 2005-2009 and the Average Dividend for the Five Years

S/N	Names of Companies	Dividend Paid in Naira					Five Years Average Dividend in Naira
		2009	2008	2007	2006	2005	
1.	Nigeria Bottling Co	0.00	0.75	0.30	0.60	1.20	0.57
2.	7up Bottling Co.	1.50	1.50	1.30	1.25	1.25	1.36
3.	Ashaka Cement Co.	0.30	0.00	1.50	2.32	2.85	1.39
4.	Benue Cement Co.	2.00	2.00	2.00	2.00	2.00	2.00
5.	Cement co. of North Nig.	0.90	0.10	0.10	0.10	0.30	0.30
6.	Access Bank Plc	0.70	0.65	0.40	0.00	0.00	0.35
7.	Diamond Bank Plc.	0.90	0.56	0.55	0.00	0.00	0.40
8.	Eco Bank of Nig. Plc.	0.00	0.00	0.24	0.90	0.90	0.41
9.	First Bank Plc	1.30	1.20	1.00	1.00	1.40	0.88
10.	Union Bank Plc.	0.00	1.00	1.00	1.00	1.40	0.88
11.	UBA Plc.	0.10	1.00	1.20	1.00	0.60	0.78
12.	Zenith Bank Plc.	0.45	1.70	1.00	1.10	0.70	0.99
13.	FCMB Plc.	0.40	0.35	0.13	0.08	0.02	0.20
14.	Guaranty Trust Bank Plc	0.80	0.70	0.75	0.95	0.00	0.64

15	Skye Bank Plc.	0.50	0.60	0.35	0.00	0.10	0.31
16.	Gadbury Nig. Plc.	1.30	1.30	1.30	1.30	1.30	1.30
17.	Nestle Food Nig. Plc.	12.55	12.55	8.20	10.35	10.00	10.73
18.	UAC Nig. Plc.	2.00	1.20	1.00	1.00	0.85	1.21
19.	African Petroleum Plc.	5.20	7.00	1.00	1.00	0.00	2.64
20.	Chevron Oil Nig. Plc.	0.00	7.50	5.12	4.10	3.00	3.94
21.	Conoil Plc.	1.00	2.75	2.75	2.50	2.00	2.20
22.	Mobil oil Plc.	7.00	5.00	4.70	7.14	9.10	6.59
23.	Japaul Oil Plc.	0.80	0.70	0.14	0.11	0.10	0.37
24.	Oando Nig Plc.	3.00	8.00	6.00	4.00	2.50	4.70
25.	Guinness Nig. Plc.	7.50	6.00	7.25	6.30	4.15	6.24
26.	Nigerian Breweries Plc.	3.69	3.40	2.50	1.44	1.05	2.42
27.	Dangote Sugar Refinery Plc.	1.20	1.70	1.15	1.35	1.35	1.35
28.	Flour Mills Plc.	0.50	1.00	0.90	0.85	0.70	0.79
29.	I PWA Plc.	0.00	0.45	0.45	0.35	0.30	0.31
30.	IBTC Chartered Bank Plc.	0.30	0.40	0.20	0.25	0.27	0.28
31.	Glaxo Smithkline Plc.	0.75	0.60	0.45	0.45	0.40	0.53
32.	Fidson Health Care Plc.	0.22	0.20	0.22	0.21	0.21	0.21
33.	CAP Plc.	3.30	3.75	3.00	0.70	0.55	2.26
34.	May & Baker Nig. Plc.	0.35	0.40	0.40	0.30	0.30	0.35
35.	Neinth Int’l Pharm	0.00	0.12	0.15	0.10	0.20	0.11
36.	Evans Medical Plc.	0.20	0.00	0.12	0.00	0.20	0.10
37.	C & I Leasing	0.12	0.12	0.10	0.10	0.10	0.11
38.	Julius Berger Nig. Plc.	2.40	1.75	5.00	0.90	0.70	2.15
39.	Lafarge WAPCO Plc.	0.10	0.60	1.20	1.00	0.30	0.64
40.	PZ Industries Plc.	0.68	0.62	0.71	0.69	0.75	0.69
41.	Unilever Nig. Plc.	1.07	0.68	0.25	0.00	0.00	0.40
42.	Total Nigeria Plc.	11.68	12.93	9.50	7.40	9.50	10.20
43.	Okomu Oil Co. Plc.	0.30	0.25	0.25	0.00	1.00	0.36
44.	Presco Plc.	0.20	0.30	0.05	0.60	0.60	0.35
45.	RT Brisco Plc.	0.10	0.40	0.50	0.50	0.35	0.37
46.	Vita Foam Nig. Plc.	0.25	0.30	0.25	0.12	0.15	0.21
47.	Nigerian Aviation Handling co.	0.70	0.55	0.30	0.30	0.30	0.43
48.	WAPIC Insurance Plc.	0.00	0.13	0.13	0.18	0.23	0.13
49	Niger Insurance Plc.	0.05	0.15	0.15	0.05	0.20	0.12
50	Prestige Insurance Plc.	0.20	0.20	0.15	0.12	0.11	0.16

SOURCE: Nigerian Stock Exchange Factbook, Various Years.

Appendix 2 Value Stock Selected Based On Highest Dividend Paid as at End of Year 2009

S/N	Names of Companies	Average Share Price In Naira	Average Dividend Paid in Naira	No. of Shares Bought on the Average
1.	Nestles Food Nig. Plc.	182.00	10.75	165
2.	Total Nigeria Plc.	149.00	10.20	201
3.	Mobil Oil Nig. Plc.	147.00	6.59	204
4.	Guinness Nig. Plc.	114.00	6.24	263
5.	Oando Nig. Plc.	82.00	4.70	366
6.	Chevron Oil Nig. Plc	93.00	3.94	323
7.	African Petroleum Plc.	104.00	2.64	288
8.	CAP Plc.	33.00	2.26	909
9.	Julius Berger Nig. Plc	31.00	2.15	968

10.	Benue Cement Co.Plc.	33.00	2.00	909
11.	Ashaka Cement Co.Plc.	12.00	1.39	2500
12.	Dangote Sugar Refinery Plc.	16.00	1.35	1875
13.	Cadbury Nig. Plc.	13.00	1.30	2308
14.	Zenith Bank Plc.	15.00	0.99	2000
15	Union Bank Plc.	12.00	0.88	2500
16.	UBA of Nig. Plc.	12.00	0.78	2500
17.	First Bank Plc.	11.00	0.67	2727
18.	GTB Plc.	13.00	0.64	2308
19.	Presco Plc.	6.00	0.35	5000
20.	May & Baker Nig. Plc.	5.00	0.35	6000

Source: Nigerian Stock Exchange Factbook, 2010.

Appendix 3 Growth Stock Selected Based on Dividend Paid as at End of Year 2009

S/N	Names Of Companies	Average Share Price In Naira	Average Dividend Paid in Naira	No. of Shares Bought on the Average
1.	Nigerian Breweries Plc	47.00	2.42	638
2.	Conoil plc.	59.00	2.20	508
3.	7up Bottling Co. Plc.	34.00	1.36	882
4.	UAC Nig. Plc.	34.00	1.21	882
5.	Flour Mills Plc	24.00	0.79	1250
6.	PZ Industries Plc.	19.00	0.69	1579
7.	Lafarge WAPCO Plc.	24.00	0.64	1250
8.	Nigerian Bottling Co. Plc.	23.00	0.57	1304
9.	Glaxo Smithkline Plc.	18.00	0.53	1667
10.	Nigerian Aviation Handling Co.	8.00	0.43	3750
11.	Unilever Nig. Plc.	13.00	0.40	2308
12.	RT Brisco Plc.	9.00	0.37	3333
13.	Okomu Oil	27.00	0.36	1111
14.	Access Bank Plc.	6.00	0.35	5000
15	Cement co. Of North Nig.	9.00	0.30	3333
16.	IBTC Chartered Bank Plc.	6.00	0.28	5000
17.	FCMB Plc.	9.00	0.20	6000
18.	Prestige Insurance Plc	5.00	0.16	7200
19.	WAPIC Insurance Plc.	2.00	0.13	8000
20.	Niger Insurance Plc	2.00	0.12	6800

Source: Nigerian Stock Exchange Factbook, 2010