

Relationship between Inflation and Dividend Payout for Companies Listed At the Nairobi Securities Exchange

Ochieng Duncan Elly* & Kinyua Wairimu Hellen*

ABSTRACT

Earlier studies conducted have a mixed opinion on the effect of inflation on dividend payout. Due to the nominal increase in the volumes of money, which result from the increase in inflation, at least for a short run, some studies have concluded that inflation has a positive effect on dividend payout. However, in the long run, studies in general seem to show that the inflation rate and stock returns are negatively related. This study, which considers a sample of all the firms that consistently paid dividend between the year 2002 to 2011 and were listed at the Nairobi Security Exchange showed that, inflation rate has no impact on the dividend payout.

However, other variables considered, that is, the spot Dollar exchange rate to Kenya Shillings, the Volumes of Money Supply and the T-Bill rate (91 day rate) show mixed results. The study reveals that, the exchange rate and the T-Bill rate have a positive correlation with dividend payout, while volume of money supplied has no impact on the dividend payout.

Key Words: Nairobi Securities Exchange (NSE), Dividend Payout, Inflation, Exchange Rate, Money Supply, T-Bill rate.

*Tutorial Fellow, School of Business, University of Nairobi, KENYA

INTRODUCTION

Understanding the behavioral aspects of dividend policy was attempted by Lintner (1956) who split the reasons for a dividend policy into two: firstly, most management sought to avoid making changes in their dividend rates that might have to be reversed within a year, this caution leads to a consistency in dividend payments over time. Secondly, companies pay dividends on the basis of their earnings. Companies had a flexible – but definite – payout policy, with incremental adjustments being employed to achieve the target payout level. Lintner further suggested that there is a behavioural model of dividend policy where the current year's dividend depended upon the earnings in the current and the dividend in the previous year.

In understanding dividend policy, Merton Miller and Franco Modigliani made three assumptions: the market is perfect, there is perfect certainty of events and that the managers are perfect stewards

of investors. Based on these assumptions, dividend policy is a positive residual of the firm's requirement for funds. It does not therefore matter how the earnings are divided between payments to shareholders and reinvestments. An optimal policy does not exist. Hence a firm's dividend policy has no effect on either its value or its cost of capital (Miller & Modigliani, 1961).

Explaining dividend payout has been one of the most difficult challenges facing financial economics. Despite decades of study, a complete understanding of the factors that influence dividend payout and the manner in which these factors interact is yet to be known. Two decades ago, Black (1976) as cited by Bhattacharyya (2007) observed that the harder we look at the dividend picture the more it seems like a puzzle, with pieces that just do not fit together. The situation is pretty much the same today.

Expectations for future inflation are closely, but not perfectly, correlated with rates experienced in the recent past. Therefore, if the inflation rate reported for the last month increases, investors often raise their expectations for future inflation, and this change in expectations will cause an increase in dividend payout (Brigham & Daves, 2010).

Enduring interest to academics, investment professionals and monetary policy makers has been the empirical relationship between inflation and stock prices. Effects of inflation on performance of Kenyan firms seem to vary, depending on which sector a firm is in. Retailers (commercial sector) particularly do not well during periods of inflation. In financial sector, banks also face risk of losing customer deposits to the high interest Government securities. Banks are borrowing from the CBK and putting the same money into T-bills. In the industrial sector, firms may experience less demand for its products as the biting inflation forces consumers to change eating habits in favour of cheaper foods. The agricultural sector presents a mixed bag. While they earn more money from exports as a result of cheaper shilling, expenditure also rises as costs such as fuel increase. These mixed fortunes necessitate a need for this study to establish the nexus between inflation (which affect firm performance) and dividend payout. This study therefore answers the research question: what is the effect of inflation on dividend payout?

The specific research objectives of the study are:

- (i) To examine the impact of inflation on dividend payout for companies listed at the Nairobi Securities Exchange.
- (ii) To determine the extent to which other factors, other than inflation determine the dividend payout.

REVIEW OF RELATED LITERATURE

Basse and Reddemann (2011) examine the relationship between dividends, corporate earnings, real growth and inflation in the US by applying co integration techniques. In this framework, impulse responses analysis is used to test the two popular theories of dividend determination. The study confirms that dividend smoothing seem to be a relevant phenomenon. Further, inflation has a

positive effect on dividends. In this study Basse and Reddemann determine that the nominal increase in earnings due to inflation have the same effect on dividend payout.

Hussainey, Mgbame and Mgbame (2011) examine the relationship between dividend policy and share price changes in the UK stock market. Multiple regression analyses are used to explore the association between share price changes and both dividend yield and dividend payout ratio. A positive relationship is found between dividend yield and stock price changes, and a negative relation between dividend payout ratio and stock price changes. In addition, it is shown that a firm's growth rate, debt level, size and earnings explain stock price changes.

Khan, Burton and Power (2011) set out a study to find out the influence of dividend policy in Pakistan. The results suggest that, despite differences in environmental idiosyncrasies, past dividends do not influence current dividends levels in Pakistani, respondents were not reluctant to announce news of dividend cut, firms focus only on the current earnings and company liquidity when deciding on a disbursement levels. The study therefore shows that dividend payout has a behavioural aspect. Managers do not like dividends cuts and that the industry in which a firm falls determine dividend payout decisions as well.

Basse (2009) observe that many investors seem to believe that stocks are a useful hedge against inflation. This assumption is based on the argument that stocks are claims on real capital. At first sight it seems to be very convincing to assume that inflation by definition increases the nominal value of real capital and therefore leads to higher stock prices. A more detailed view on the relationship between inflation and the stock market reveals a quite simple mechanism that can help to explain why there should be a positive relationship between inflation rates and stock returns: higher prices increases the revenues of firms leading to higher corporate earnings and- ultimately- to an increase of stock prices. While this mechanism intuitively appealing, there are some obvious problems.

Bhattacharya (2007) reviews principal theories of dividend policy and summarizes empirical evidences on these theories. The author compares the various dividend theories on a number of parameters and finds that the famous dividend puzzle is still unresolved. Black (1976) in his paper, the dividend puzzle, note that what the firm can do the investor can also do, however, firms still pay dividend. Black is yet to find the reason as to why firms pay dividend. Hence Empirical evidence is still equivocal and the search for new explanation for dividends continues.

METHODOLOGY

This is a correlation study. It involves collecting data in order to determine whether and to what degree a relationship exists between two or more quantifiable variables. This design permits a researcher to analyze inter-relationship among a large number of variables in a single a study. Additionally, a correlation study also allows a researcher to analyze how several variables either singly or in combination might affect a particular phenomenon being studied.

All listed companies at the NSE compose the population of this study. The current population of all the listed companies as at July 15, 2012, stood at 59 (www.nse.co.ke, July, 2012). The period of interest begins 1st January, 2002 to 31st December, 2011. This period is chosen purposely chosen due to the high rates of inflation experienced in Kenya between 2008 and 2011 while the period from the year 2002 to 2007 was chosen due to the economic stability enjoyed. Hence the two periods provided comparison for the impact of inflation. The estimation technique used is the error correction mechanism, which takes into account the time series characteristics of the variables.

The study selects a sample from all listed companies at the NSE in Kenya as at 31st December 2011 that have maintained positive average earnings per share (EPS) and have been consistently listed at the NSE over the period of study (from 2002 to 2011). All the industries are considered. This is done in order to know how each industry react to inflation as far as dividend payout is concerned. However, consistency is applied to come up with firms that have been continuously listed for the above period besides maintaining a positive EPS.

Secondary data is used. Annual rates of dividend paid are collected from records of the NSE. These are obtained from at least one company from each industry. A company that has been consistently listed at the NSE for the last 10 years ending 31st December 2011 is considered. Annual figures of inflation rate levels are collected from the Kenya National Bureau of Statistics (KNBS). Volumes of Money Supply (MS), Exchange rate (EXR) levels data are collected from the KNBS as well. The Treasury bill rate (T-bill rate) panel data is obtained from the central bank.

The Engler-Granger two step procedure is applied to measure co integration. The model is represented mathematically and explicitly to include the error term ϵ_i as:

$$DP(t) = \alpha + \beta INF + \beta_2 MS + \beta_3 EXR + \beta_4 INTR + \epsilon_i \dots \dots \dots (i)$$

Where;

DP (t) – is dividend payout at year t, α – is the constant term, β_i – coefficient, ϵ_i – the error term.

RESULTS AND DISCUSSIONS

In the model used in this study, the coefficient of determination (r^2) is equivalent to 0 .055. This denotes that 5.5% of the changes in the dependent variable can be explained by the changes in the predictor variable. The variation of 94.5% would therefore be left unexplained. Intuitively then, the study reveals that inflation rate has no effect on dividend payout.

In consideration with the other Macroeconomic variables (EXR, MS, T-bill rate), It can now be summed up in a simple trend line multiple regression model, by using the regression coefficients, thus the equation:

$$Dividend\ Payout = -1.504 + 2.646\ EXR - 0.680\ INF - 0.135\ MS + 2.039\ TBR \dots \dots (ii)$$

It should be noted that the foregoing depicts a direct correlation between EXR, T-Bill rate and Dividend payout. Based on the foregoing analysis, it could be noted that there exist converse correlation between INF, MS and Dividend payout as revealed in the findings in this study. Going with the outlined model, it then shows that the exchange rate has more weight in the explanation of dividend payout as is also seen with the T-bill rate. Whereas MS has little effect on the negative direction.

CONCLUSION

The expectation of the study that inflation has an effect on dividend is therefore nullified. Based on these results, it can be concluded that, inflation has no positive impact on dividend payout. Further, the results of the analysis reveal that Exchange rate and T-Bill rate variables are integrated at order one () but volumes of money supply and Inflation rate are integrated at order zero (Ho).

REFERENCES

- Bhattacharya, S. (1979). Imperfect information, dividend policy, and the bird in hand fallacy. *The Bell Journal of Economics*, 10, (1), 259-270.
- Basse, T. (2009). Dividend policy and inflation in Australia: results from cointegration tests. *International Journal of Business and Management*, 4, (6), 13-16.
- Basse, T., & Reddemann, S. (2011). Inflation and the dividend policy of US firms. *Journal of Managerial Finance*, 37, (1), 34-46.
- Black, F. (1976). The dividend puzzle. *Journal of Portfolio Management*, 2, (1), 1-22.
- Brigham, E. F., & Daves, P. R. (2010). *Intermediate financial management* (10th ed.). Nature Boulevard: Cengage learning.
- Campbell, J. Y. & Shiller, R. J. (1988). Stock prices, earnings and expected dividends. *Journal of Finance*, 43, 661-676.
- DeAngelo, H., & DeAngelo, L. (1990). An empirical investigation of troubled New York stock exchange (NYSE) firms. *The Journal of Finance*, 45, (5), 1415-1431.
- Hussainey, K., Mgbame. C.O., & Mgbame, A. M.C. (2011). Dividend policy and share price volatility: UK evidence. *The Journal of risk Finance*, 12, (1), 57-68.
- Khan, N.U., Burton, B. M., & Power, D. M. (2011). Managerial views about dividend policy in Pakistan. *Journal of Managerial Finance*, 37, (10), 953-970.

Kiptoo, S. C. (2010). An empirical investigation of the relationship between selected macroeconomic variables and stock prices: evidence from the Nairobi stock exchange. Unpublished Master of Business Administration research project, University of Nairobi, Nairobi.

Lintner, J. (1956). Distribution of income of corporation among dividends, retained earnings and taxes. *Journal of American Economics Review*, 46, (2), 97-113.

Mibei, J. J. (2010). Impact of the 2007-2009 world financial crisis on share price Behaviour at the Nairobi stock exchange. Unpublished Master of Business Administration research project, University of Nairobi, Nairobi.

Miller, M. H., & Modigliani, F. (1961). Dividend policy growth and the valuation of shares. *The Journal of Business*, 34, (4), 411-433.

Appendix 1: Listed companies at the Nairobi Securities Exchange

Agricultural sector

Eaagads Ltd
Kapchurua Tea Co. Ltd
Kakuzi
Limuru Tea Co. Ltd
Rea Vipingo plantations Ltd
Sasin
Williamson Tea Kenya Ltd

Commercial and Services Sector

Express Ltd
Kenya Airways Ltd
Nation Media Group
Standard Group
TPS Eastern Africa (Serena) Ltd
Scan Group Ltd
Uchumi Supermarket Ltd
Hutchings Biemer Ltd
Longhorn Kenya Ltd

Telecommunication and Technology Sector

Access Kenya Group Ltd
Safaricom Ltd

Automobiles and Accessories

Car and General (k) Ltd
CMC holdings Ltd
Sameer Africa Ltd
Marshalls (E.A) Ltd

Banking Sector

Barclays Bank Ltd
CFC Stanbic Holdings Ltd
Diamond Trust Bank Kenya Ltd
Housing Finance Company Co. Ltd
Kenya Commercial Bank Ltd
National Bank of Kenya Ltd
NIC Bank Ltd
Standard Chartered Bank Ltd
Equity Bank Ltd
The co-operative Bank of Kenya Ltd

Insurance Sector

Jubilee Holdings Ltd
Pan Africa Insurance Holdings Ltd
Kenya Re-Insurance Corporation Ltd
CFC Insurance Holdings
British American Investment Company (Kenya) Ltd

Investment Sector

City Trust Ltd
Olympia Capital Holdings
Centum Capital Holdings
Trans-Century Ltd

Commercial and Allied Sector

B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East Africa Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
A. Baumann Co. Ltd

Construction and Allied Sector

Athi River mining

Bamburi Cement Ltd

Crown Berger Ltd

E.A. Cables Ltd

E.A. Portland and Cement Ltd

Energy and Petroleum Sector

Kengen Ltd

Kenolkobil Ltd

Kenya Power LIGHTING Co. Ltd

Total Kenya Ltd

Source: <http://www.nse.co.ke/market-statistics/equity-statistics.html>. July 15, 2012.**Appendix 2: Yearly Average Data**

Serial No.	Year	Dividend payout	Inflation rate	Money supply(millions)	Exchange rate	T-bill rate
1	2002	72.05	2.0%	513,863	77.0723	8.38%
2	2003	44.80	9.8%	565,196	76.1389	1.41%
3	2004	55.45	11.8%	641,441	77.3444	8.29%
4	2005	49.65	9.9%	706,598	72.3667	8.14%
5	2006	59.85	6.0%	821,749	69.3967	5.83%
6	2007	42.85	4.3%	971,628	62.6750	6.87%
7	2008	41.60	15.1%	1,091,929	77.7111	8.59%
8	2009	47.00	10.5%	1,280,467	75.8200	6.82%
9	2010	52.70	4.1%	1,297,895	78.0340	2.28%
10	2011	69.82	14.0%	1,441,000	86.4600	11.93%

Source: Kenya National bureau of statistics statistical abstracts for 2004, 2005, 2006, 2007, 2008, 2009, 2010 and 2011. (For inflation rate, money supply, exchange rate and T-bill rate). And <http://www.nse.co.ke/market-statistics/equity-statistics.html>. July 15, 2012.