ABSTRACT
This study was set out to investigate the influence of dividend payments on stock prices in an inflationary environment. The study also aimed at establishing the rational for and against dividend payments during periods of marked inflation rates, the forms of dividends and the dividend policies pursued by firms in inflationary environments. Dividend paying firms listed on the Zimbabwe Stock Exchange were the primary focus of this study. Random sampling was employed to pick the 20 companies under study. Data was collected using documentary review and questionnaires. A total of 88 company executives from these sampled firms participated in this study. Both qualitative and quantitative techniques were used to analyze the findings. The findings of this paper show that the number of dividend paying firms that paid cash dividends reduced to 40%; about 60% of the firms pursued the residual policy; and the majority of firms distributed value using bonus issues. The statistical analysis employed proved that dividend payouts have an effect on share prices in a hyper-inflationary economy. However, it was also proved that share price increases were due to other factors other than dividend payments. The currency was valueless for inflation rates were far too high for planning purposes and firms were struggling to survive. The few companies that paid dividends were fulfilling their long established obligations to investors and some didn’t have good investment projects. The paper recommends that corporate management should carefully examine the inflationary environment when formulating an optimal dividend policy for their firms during periods of marked inflation as survival must be the overriding goal of the organisation. This study has some additional implications for further research. Efforts to analyze the exact extent of price movements triggered by other factors other than dividends in a hyper-inflationary economy would be of great interest.

Key Words: Dividend Policy, Dividend Signaling, Hyper-inflation, Residual Policy, Bonus Distributions.

1.0 INTRODUCTION
Corporate dividend policy has managed to attract the attention of financial scholars from as far back as the 1960s, with the ground breaking theory by Modigliani and Miller in 1961. Surprisingly, with such wide research, it remains one of the unresolved issues in corporate finance. Frankfurter and Wood (2002) observed that a number of conflicting theoretical models lacking strong empirical support define current attempts to explain the puzzling reality of corporate dividend behaviour. Surely if dividend policy still remains a puzzle in the developed and stable economies, how about in a hyper-inflationary developing economy? This paper is a direct attempt to provide new truths concerning dividend policy issues in a hyper-inflationary environment.

The majority of previous studies placed much emphasis on dividend policy in inflationary developed economies, with inflation which is relatively low and stable. However, that is hardly the case in developing economies where inflation remains a threat and companies need to find ways of circumventing its effects. Zimbabwe recently went through a hyper-turbulent macro-economic environment characterized by ever-skyrocketing prices, accelerated erosion of the purchasing power of the local currency, shortage of almost all economic resources such as fuel, foreign currency, and raw materials. The hyper-inflation hit one of the highest levels in the world ever. In late January 2009, Z$20 Trillion was equivalent to US$1 and the highest note in circulation was Z$10 Trillion which was not enough to buy a loaf of bread. Inflation quite clearly is a macroeconomic phenomenon which has major consequences for capital markets and affects a wide range of important financial variables like interest rates and corporate earnings (Basse and Reddemann, 2009).

There is a common belief that the equity market can act as an effective hedge against inflation because stocks are claims on real capital. According to Basse and Reddemann (2009), accepting this argument, inflation should lead to higher stock prices by increasing the nominal value of real capital. The period from late 2007 to mid 2008 was characterized by a huge demand of shares on the Zimbabwe Stock Exchange. The investor pool had grown significantly. In 2008, the Zimbabwe Stock Exchange was rated the best performing stock exchange in Africa. In such an environment, this study sought to provide empirical evidence regarding the relationship between dividend policy and inflation in Zimbabwe, thereby providing a new perspective on two very important financial aspects; why some firms decided to pay dividends in the hyper-inflationary economy and whether stocks are a useful hedge against inflation. Moreover, establishing the market’s reaction to these dividend declarations was also at the core of this research.

2.0 LITERATURE REVIEW
In inflationary environments companies can avoid paying cash dividends to their shareholders. Instead they give them bonus shares. Bonus distributions allow companies to use cash on investments, and importantly, they can use the inflation revaluation equity reserves, instead of the retained earnings. According to Adaoglu and Lasfer (2008), in the Turkish case they studied, inflation was high and access to external financing was limited. Firms are more likely to recur to bonus distributions as a high level of inflation erodes their paid-in capital. Stock distributions are puzzling corporate behaviour. They are just cosmetic operations aimed at dividing the corporate pie into more pieces without a change in the total value of the firm.

The research by Adaoglu and Lasfer (2008) using a sample of 371 announcements over the period 1995 to 2006 on Istanbul Stock Exchange, found that the number of bonus distributions follow the inflation index, increasing monotonically from 20 in 1986 to 97 in 1995 as inflation rate rose from 35% to 106%, and then decreasing to 31 in 2006 as inflation decreased progressively to single digit rates. They also found that the pre-event period cumulative abnormal returns are positive and significant, but the post event period returns are negative but not significant. Their results also imply that companies use bonus distributions as a financial tool to gain more credibility in an inflationary environment for the continuity of their debt financing.

Inflation magnifies the revenues of the corporate sector leading to higher earnings and an increase of stock prices (Basse and Reddemann, 2009). However, empirical evidence seems to indicate the existence of a negative contemporaneous correlation of stock returns and inflation (Bodie, 1976; Fama and Schwert, 1977; Schwert, 1981). Making matters worse, the theory of finance has problems to explain this negative correlation. Fama (1981) has suggested that the observed negative relationship between inflation and stock returns originates from a positive relationship between stock returns and future economic growth and an inverse relationship between future economic growth and inflation.

Inflation distorts the price systems and increases transaction costs. As a consequence, high inflation rates may retard economic growth. This would of course, hurt the stock market as well (Barro, 1996; Faria and Carneiro, 2001). Schotman and Schweitzer (2000) argued that two countervailing trends are present. Firstly, corporate earnings scale with inflation, therefore inflation could increase expected dividend payments in the future. Secondly, higher inflation tends to increase inflation expectations leading to a higher discount rate thereby reducing stock prices. The existence of these two conflicting effects may help to explain why the empirical evidence reported in the literature is mixed.

In spite of the negative correlation of stock returns and inflation rates, inflation may even have a positive effect (being inflation hedge) on stock returns in the long run (Boudoukh and Richardson, 1993; Kolar and Anari, 2001). Inflation rates are more volatile in emerging markets, as a result firms in these economies seem to have less stable dividend payments (Adaoglu, 2000; Aivazian et al, 2003). However, the research by Basse and Reddemann (2009) found no empirical evidence for dividend signaling in an inflationary environment. They concluded that in the USA there is a stable long-run equilibrium relationship between dividend payments, corporate earnings, real economic activity and price level. There is a positive relationship between dividends and inflation. Companies do increase their dividends in inflationary environments. Higher inflation seems to be a major driver of dividend growth.

Studies based on data collected during times of relatively high inflation found that many companies paid dividends in excess of their real earnings (Du Plessis, Archer and Affleck-Graves, 1986; Gevers and Hamman, 1988), suggesting that at least maintenance of the current nominal dividend is an important factor in setting dividend policy. Chances are high that some firms could have paid dividends greater than their real earnings in an effort to give something meaningful to stockholders before being eroded by the effects of hyper-inflation.

2.1 Information Signaling

Damodaran (2006) observed that financial markets examine every action a firm takes to determine the implications for future cash flows and firm value. When firms announce changes in dividend policy, they are conveying information to markets, whether or not that is their intent. Financial markets tend to view announcements made by firms about their future prospects with a great deal of skepticism, since firms routinely make exaggerated claims. Houston and Brigham (2009) noted that MM argued that a higher-than-expected dividend increase is a signal to investors that management forecasts good future earnings, while a dividend reduction or a smaller-than-expected increase is a signal that management forecasts poor future earnings. Ramirez (1993); Holder et. al., (1998), the announcements of cash dividends signal information to investors that include the company’s efficiency such as the profitability, liquidity and investment opportunity. Signaling theory suggests that firms need to take actions that cannot be easily imitated by firms without good projects. Increasing
dividends is viewed as one such action (Damodaran, 2006).

According to Black et al (1995) the relationship between share price and dividend announcements depends on how much information is contained in the announcements and how much the information influences the investors’ expectations. For the vast majority of public companies, cash dividend announcement is an important factor to maximize the value of shareholders (Escherich, 2000; Keown et al., 2002). According to Gonedes (1978) and Watts (1973, 1976), unexpected dividends do not influence the stock markets. Managers usually establish a stable cash dividend policy to avoid sending negative information to investors (Dewenter & Warther, 1998; Nadler, 1977; Escherich, 2000). Companies with an unstable cash flow pay a greater proportion of cash dividends than companies with stable cash flow (Bradley, Capozza & Sequin, 1998).

Controversies among empirical studies related to cash dividend policy exist (Juma’h et al, 2008). Although the cash dividends decision affect the structure of capital (Gordon, 1959), the relation between cash dividend announcements and share prices is not obvious (Bernstein, 1996; Black, 1976; Dempsey, Laber & Rozeff, 1993; Holder, Langrehr & Hexter, 1998; Litzenberger & Ramaswamy, 1982; Miller, 1986; Brigham & Gapenski, 2002; Breailey & Myers, 2002; Van Horne, 2001). Bhana (1997), in Firer et al (2008), studied the behavior of share prices on the announcement of scrip dividends over the period 1986-1995. They found a significant increase in share price on announcement. The question still remains unanswered; Do dividend payments in an inflationary economy convey information to investors? Are dividend payments of any material effect in an inflationary environment?

2.2 The Bird in hand fallacy

Early critics of MM’s (1961) theory, like Gordon and Lintner (1956), suggested that investors preferred a sure dividend today to an uncertain future capital gain. They argued that the firm’s cost of its equity declines as the dividend payout is increased because investors are less certain of receiving the capital gains that should result from retaining earnings than they are of receiving dividend payments (Houston and Brigham, 2009). Investors appear to prefer dividends to capital gains because dividends are certain, whereas capital gains are uncertain. Proponents of this view of dividend policy feel that risk-averse investors will therefore prefer dividends (Damodaran, 2006).

2.3 The Residual Theory

The theory of residual dividend suggests that a company will pay dividends only when generated gains are not used for investment (Ali et al., 1993; Keown et al., 2002). According to Gitman (2006), Houston and Brigham (2009), the dividend paid by a firm should be viewed as a residual- the amount left over after all acceptable investment opportunities have been undertaken. It is important to note that internal equity is cheaper than external equity (new common stock); so if good investments are available, it is better to finance them with retained earnings than with new stock. Companies that are experiencing higher rates of growth will need to maintain minimum payments of dividends to avoid external financing costs (Holder et al., 1998; Rozeff, 1982). Because investment opportunities and earnings vary from year to year, strict adherence to the residual dividend policy would result in unstable dividends.

3.0 METHODOLOGY

Dividend paying firms listed on the Zimbabwe Stock Exchange were the primary focus of this paper. Random sampling was employed to pick the 20 companies under study. A total of 100 company executives from these sampled firms were targeted, but 88 questionnaires were completed and collected for analysis. These executives provided useful information in addition to the financial records analyzed with some historical dividend and stock price movements. Both qualitative and quantitative techniques were used in analyzing the findings. The Chi-square, regression and correlation analysis were the quantitative techniques employed in data analysis.

4.0 FINDINGS

4.1 Firms that declared dividends during Zimbabwe's hyper-inflationary period

Only 40% of the sampled companies paid dividends during Zimbabwe's hyper-inflationary period. The other 60% didn’t make any distributions to stock holders during the hyper-inflationary period. These findings are consistent with Marx (2001) who concluded that less than half the number of dividend paying companies declared dividends during times of marked inflation. Some of the firms were forced to close down due to the harsh macro-economic environment prevailing in the country during the hyper-inflation. Other firms were making huge losses due to the fast paced erosion of their revenues.

4.2 Reasons for dividend payments in a hyper-inflationary environment

The results of the survey showed that the most commonly cited reasons for paying dividends in a hyper-inflationary environment include;

1. Unavailability of good projects to reinvest in which would earn a higher rate than the cost of funds. The inflation rate was fast paced that it didn’t make economic sense to retain earnings when the investment projects didn’t yield gains higher than the inflation rates.
2. The other company executives indicated that it was their tradition to just pay dividends to their stockholders every year. So they were just fulfilling their long established obligations to stockholders. Du Plessis and Archer (1986) carried out studies based on data collected during times of relatively high inflation and found out that many companies paid dividends in excess of their real earnings.

4.3 Reasons for non-payment of dividends in a hyper-inflationary environment
The commonly cited reasons for non-payment of dividends in the hyper-inflationary environment include;
1. Survival was at stake. Most companies were drowning; therefore they didn’t have the funds to commit to dividends at a time when survival was at stake. Some respondents reviled that they went for some months without even paying salaries, utility bills and raw material supplies because all savings were eroded by the inflation.
2. The companies were reinvesting the retained earnings and it was unpredictable whether the funds made would not be eroded by the effects of hyper-inflation. Therefore all earnings would be ploughed back into the firm’s projects.
3. The majority of respondents felt it was pointless to distribute dividends as the currency was valueless; the purchasing power of money was being eroding at an alarming rate. As a result the majority of firms engaged in ‘illegal purchase of foreign currency’ like the US Dollar, British Pound, and the South African Rand.
4. Inflation rates were too high for planning purposes. Budgets became obsolete as soon as their crafting was over.

4.4 Forms of Dividends used in an Inflationary Economy
Pie Chart 1: Forms of dividends in an inflationary economy.

Source: Primary Data
The findings of this study presented in Pie Chart 1 above show that the majority (65%) of the firms which paid dividends during the hyperinflationary period distributed value as bonus (stock) distributions. The number of firms which paid cash dividends dropped to 30%. The cash shortages could have been responsible for such a huge number of firms that distributed stock dividends. Firms are more likely to recur to bonus distributions as a high level of inflation erodes their paid-in capital. This finding is consistent with Adaoglu and Lasfer (2008) who found that companies use bonus distributions as a financial tool to gain more credibility in an inflationary environment for the continuity of their debt financing. They also found that the number of bonus distributions follow the inflation index, increasing monotonically from 20 in 1986 to 97 in 1995 as inflation rate rose from 35% to 106%, and then decreasing to 31 in 2006 as inflation decreased progressively to single digit rates.

4.5 Dividend Policies Pursued in an Inflationary Environment
Fig 1: Dividend policies pursued in an inflationary environment
Figure 1 above shows that the highest number, 60% of the sampled firms use the residual policy when distributing value to stock holders. Survival was perceived as the overriding objective when a firm is threatened by such a macro-economic challenge. Profits were ploughed back into the business’s projects whose returns were greater than the cost of capital to ensure survival of the business enterprise. Moreover cash shortages in such an environment may have been responsible for the high number of subscribers of the residual policy. Companies that are experiencing higher rates of growth will need to maintain minimum payments of dividends to avoid external financing costs (Holder et. al., 1998; Rozeff, 1982).

4.6 Dividend payments and stock prices in an inflationary environment

**H0:** Share price changes are independent of dividend payouts in a hyper-inflationary economy.

**H1:** Dividend pay-outs have an effect on share prices in a hyper-inflationary economy.

Table 1: Computation of the chi-square

<table>
<thead>
<tr>
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<th>Expected</th>
<th>(O-E)^2/E</th>
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<tbody>
<tr>
<td>18</td>
<td>25.26</td>
<td>2.0866</td>
</tr>
<tr>
<td>39</td>
<td>31.74</td>
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<td>13.7</td>
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<tr>
<td>10</td>
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<td>3.0537</td>
</tr>
<tr>
<td>ΣO = 88</td>
<td>ΣE = 88</td>
<td>10.6907</td>
</tr>
</tbody>
</table>

Source: Survey Data 2011

- Degrees of freedom = (2-1)(2-1) = 1
- Significance Test Level = 5%
- Rejection Criterion: $X^2$ 5% (1) = 3.841

Since the calculated $X^2$ is above 3.841 and is in the rejection zone, therefore the Ho must be rejected. Share price changes in a hyper-inflationary environment depend on dividend payouts. It means share price changes are as a result of dividend payouts or announcements. Dividend payouts have an effect on share price movements in a hyper-inflationary environment. The excessively high inflation rates could have been responsible for the price movements. Share prices have been skyrocketing even prior to the announcements of dividends. The correlation coefficient of 0.835 indicates a strong positive relationship between dividend announcements and stock price movements. However, it can be also be argued that stock price movements were fueled by other factors like speculative tendencies and it’s apparent that investors desire a genuine hedge against the effects of hyperinflation hence the high demand for shares.

These findings support earlier work by Reddemann (2009), whose paper investigated the relationship between dividends and inflation in the USA. He concluded that there is a positive correlation between dividends and inflation.

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He found that companies seemed to increase their dividend payments more strongly in an inflationary environment, because inflation may simply increase the nominal volume of corporate earnings and therefore dividend payouts. It is true that the nominal size of dividends declared increases in an inflationary environment, but one thing that came out loud from the findings of this paper is that stock price increases were not solely due to dividend declarations. Inflation caused stock prices to sky rocket far beyond the dividend paid disqualifying the signaling hypothesis, which has some proponents who put forward that stock prices increase from announcement date by an amount equivalent to the dividend declared and decrease by the same amount from the ex-dividend date.

5.1 SUMMARY

This study was set out to investigate the influence of dividend payments on stock prices in an inflationary environment. The study also aimed at establishing the rational for and against dividend payments during periods of marked inflation rates and the role of the signaling hypothesis. The statistical analysis employed proved that dividend payouts have an effect on share prices in a hyper-inflationary economy. However, it was also proved that share price increases were due to other factors other than dividend payments like reinvestments and cash conservations. The majority of firms reinvested the retained earnings in lucrative projects and thus could not distribute for survival was at stake. The currency was valueless for inflation rates were far too high for planning purposes. Some companies were like sinking ships hence couldn’t commit themselves to dividend payments at a time they were struggling to survive. However, the few companies that paid dividends were fulfilling their long established obligations to investors and some didn’t have good investment projects which would earn a higher rate than the cost of funds.

5.2 RECOMMENDATIONS

Corporate management should examine the inflationary environment in formulating an optimal dividend policy for their firms during periods of marked inflation. The researcher recommends that management must avoid dividend payments in hyper-inflationary environments if they have projects whose returns exceed the prevailing cost of funds to ensure survival during such hyper-turbulent periods. Survival must be the overriding goal of the organisation.

This study has some additional implications for further research. In particular it would be more interesting to examine this whole dividend puzzle from a more statistical stand point. To this end, efforts to analyze the exact extent of price movements triggered by other factors other than dividends in a hyper-inflationary economy would be of great interest. The researcher recommends that further research be done to establish the dividend policies pursued by firms with high leverage in their capital structures in developing economies. Also of interest is the need to establish if there is a relationship between a firm’s cash holding levels and dividend policy pursued. The interest here would be to find out if firms that hold huge cash reserves have a tendency to pay high dividends or not.

REFERENCES


