

## Determinants of dividend payout policy of some selected manufacturing firms listed on the Ghana Stock Exchange.

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### Abstract

Dividend payout has been a focus of debate in financial literature over the years. Academicians and researchers have developed many theoretical models describing the factors that managers should consider when making dividend policy decisions. This study seeks to empirically examine the factors that affect dividend payout policy among some selected manufacturing firms using linear panel data regression methods to evaluate the factors that determine the dividend payout policy covering the period 1997 – 2006. The results shows that dividend per share as per the fixed effects estimator is a negative function of prior year's dividend and positively related to profitability and size of the firms. The other variables appeared to have insignificant impact on dividend payout policy. Therefore, firms should efficiently increase profitability in order to maintain dividend payment to their shareholders and should also improve their liquidity base to sustain dividend payment.

**Key words:** dividend policy, Ghana, profitability, Ghana Stock Exchange, biavarite model

### 1. Introduction

Dividend payout has been a subject of debate in financial literature over the years. Academic and corporate scholars have developed various theoretical models describing the factors that managers should consider when making dividend policy decisions. Miller and Modigliani (1961) argue that given perfect capital markets, the dividend decision does not affect the firm value and is, therefore, irrelevant. Most financial practitioners and many academic scholars agreed with this conclusion with surprise because the conformist wisdom at the time suggested that a properly managed dividend policy had an impact on share prices and shareholders' wealth. Thus setting corporate dividend policy remains debatable and involves judgment by decision makers. In addition, there has been emerging consensus that there is no single explanation of dividend payments. There are many reasons as to why companies should pay or not to pay dividends; company's income can be invested in operating assets, used to acquire securities, used to retire debt or distributed to shareholders in the form of cash dividends. Issues that arise if a company decides to distribute its income to shareholders include the proportion of the after tax income that would be distributed to shareholders; whether the distribution should be as cash dividends, or the cash be passed on to shareholders by buying back some shares; and how stable the distribution should be.

Black (1976) argues that "the harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together. However, Allen & Michaely (1995) concluded that more empirical research on the subject of dividend is required before a consensus can be reached. The issue of whether dividend is relevant or irrelevant as much as the value of a firm is concern in a real world situation has called for an intensive research in the area. In Ghana and the world as a whole, dividend payment matters. Several studies have shown that an announcement of dividend increase (decrease) was followed by an increase (decrease) in share prices (Norhayati 2005; Chandra 1997). With the proliferation of unit trusts, investors were made more aware of returns in the form of dividends. Furthermore, these funds represent an important investing arm that invests in shares that give good returns in the form of capital gains and dividend payments. Therefore, a study on determinants of dividend policy will be a relevant decision in view of this observable fact.

## 2. Literature review

### 2.1 Theories of Dividend Policy

A number of theories have been developed on dividend policy. Some of these are bird-in-hand, signaling theory, tax preference theory, agency theory and Clientele effect. The bird-in-hand theory asserts that because of uncertainty of future cash flow, investors will often tend to prefer dividend to retained earnings. As a result, higher payment of ratio will reduce the required rate of returns and have increased the value of the firm (Gordon 1963). However, the signaling theory points out that share prices do not react to dividend payout rate in itself but to the information that investors believed changes in dividend levels have for the future prospects of the firm. Brigham *et al.* (1999) have argued that like most other aspects of dividend policy, many studies on signaling have had mixed result. There is clearly some information content in dividend announcement. However, it is difficult to tell whether the stock price changes that follow increases or decrease in dividends reflects only signaling effect or both signaling and dividend preference. Support for the signaling effect includes (Nissan & Ziv 2001; Ball 2003).

The tax preference theory asserts that low dividend ratios lower the required rate of return and increase the market valuation of firms stock. Studies by Litzenger & Ramaswamy (1979) and Barclay (1987) also support the tax preference theory. Because of tax advantages, investors may prefer to have companies who retain most of their earnings. If so, then low payment companies than otherwise similar higher-payment companies would be preferred. Management of many companies are in a dilemma about whether to pay a large, small or zero percentage of their earnings as dividends or to retain them for future investments. This has come about as a result of the need for management of companies to satisfy the various needs of shareholders Amidu (2007). The Clientele effect is another theory related to dividend policy. The theory recognizes that different groups prefer different dividend payment policies. For instance, while one may want the firm to payout a higher percentage of its earnings another may prefer otherwise. If dividend income is taxed at a higher rate than capital gains, investors in high tax bracket may prefer non dividend or low-dividend paying stocks, and vice-versa. Prior studies that present evidence on clientele effect include (Dhaliwal *et al.* 1999).

Another theory is the agency theory; the relation between shareholders and managers of a company is an agency relation. The shareholders are the principals and the managers are the agents. The managers are charged with acting in the best interest of the owners. However, there are possibilities for conflicts between the interests of the two. The key force of the agency theory is that managers may take actions in accordance with their own interest which may not always be beneficial to shareholders. Empirical studies in support of agency theory on dividend include Lloyd *et al.* (1985) and Jensen *et al.* (1992). The payment of dividend therefore is seen as a means of reducing the amount of excess money available to managers which may not be used in the best interest of shareholders.

The life cycle theory is also cited as one of the justification for dividend payment. It is argued that firms pass through the various stages; they tend to alter the dividend policy depending on the financial needs of each stage. This theory implies that firms that are in their growth stages are less likely to pay more dividends as compared to firms that are at their maturity stages. Old firms therefore do not have a lot of growth opportunities so such firms are expected to pay more dividends. Murhadi (2010) argued that firms which enter in growth phase tend not to pay a lot of dividend, compared to firms at their maturity stage. In a study of electric utilities, Hansen *et al.* (1994) focused on the role that dividend play in the monitoring process to reduce equity agency costs. Their study concluded that the use of higher payout raises the likelihood of monitoring by both management and the regulatory authority. If the regulator sets the rate of return to shareholders (dividend yield) below that is required by market, then assuming efficient markets, the marginal investors will drop out. This lowering of the demand for the company's stock will adversely affect its price reflecting greater difficulty in raising equity funds. Moreover, the associated costs (transactions and opportunity costs) will go up. Therefore, even if one assumes that this does not affect the costs of other sources of financing, the increased cost of equity financing will result in a higher overall cost of capital for the firm.

### 2.2 Determinants of Dividend Policy

#### 2.2.1 Profitability

The size of a firm's profit has been a long standing determinant of dividend policy. Directors normally recommend the payment of dividend when the firm has made sufficient profit to warrant such payments. Al-Kuwari (2009) is of the view that profitability is among the main characteristics that strongly and directly influences dividend policy. A similar

conclusion was reached by Pruitt & Gitman (1991) that current and past years' profits, the year-to-year and prior years' dividend are important factors that influence dividend policy. Consequently, it is expected that profitable firms are likely to pay dividend as compared to non profitable firms (Eriostis & Vasiliou 2003; Ahmed & Javid 2009). Several surveys provide useful insights into what factors financial managers considered most important in determining their firm's dividend policy. Baker *et al.* (1985) surveyed 562 New York Stock Exchange (NYSE) firms with "normal" kinds of dividend policy. Based on their analysis of 318 responses from utility, manufacturing, and wholesale/retail firms, they found that the major determinants of dividend payments were the anticipated level of future earnings and the pattern of past dividends. A similar conclusion was reached by Pruitt & Gitman (1991) who surveyed financial managers of the 1,000 largest US firms about the interplay among the investment, financing, and dividend decisions in their firms. Their evidence suggested that important influences on the amount of dividends paid were current and past years' profits, the year-to-year variability of earnings, and the growth in earnings. Baker & Powell (2000) found support for their hypothesis that the most important factors influencing a firm's dividend policy are the level of current and expected future earnings and the pattern or continuity of past dividends. Aivazian & Booth (2003) establish that emerging market firms exhibit dividend behaviour similar to US firms, in the sense that dividends are explained by profitability, debt, and the market-to-book ratio; however, their sensitivity to these variables varies across countries.

The liquidity position of a firm is also an important determinant of dividend payments. Section 71 of Ghana's Company Act 1963, (Act 179) stipulates that a company cannot pay a dividend to its shareholders until and unless it is able after such payments to pay its debt when they fall due, without any embezzlement. Also Section 30 (1) of Banking Act 2004, (Act 673) adds that a Bank shall not declare or pay dividend on its shares unless it has: a) completely written off all its capitalized expenditure; b) made the required provisions for non-performing loans and other erosions in asset values; c) supplied the minimum capital adequacy ratio requirements; and d) completely written off all its accumulated operating losses from its normal operations. A company that may be growing and is quite profitable may not be able to pay a specified cash dividend because of lack of cash on hand. Alli *et al.* (1993) observed that dividend payment depend on cash flow, current earnings do not really reflect a firm's ability to pay dividend. Firms with large portion of idle cash are more likely to retain a portion to invest than those which do not. It is also anticipated that when firms reduce the amount of idle cash available to management, they lessen the ability of management to use this idle cash in their own interest rather than in the best interest of management. Limiting the availability of cash to management also pushes management to go for debt financing, which reduces agency cost. What is not clear, though, is as to whether the same outcome would be shown on Banks which have a wide array of short-term investment avenues to place unused funds. Liu & Hu (2005) in their study of Chinese listed firms found that cash dividend payout ratio of most firms were between 20 to 50%. This implies that cash dividend payment was higher than the accounting profit. Nonetheless, they further explained that 50% of the sample firms had dividend cash payment higher than the free cash flow. They attributed this finding to the ruling made by the Security Commission of China in 2000 which stated that listed companies must have cash dividend payment in the past three years. Thus the shortage of cash was usually financed through selling shares or right issue.

Firms that finance their activities mostly with debt put pressure on their liquidity. Debt principal and interest payments reduce the ability of firms to have residual income to guarantee dividend payment. Consequently, it is expected that debt would impact negatively on the amount of dividend paid for a period. Kowalski *et al.* (2007) argued that more indebted firms prefer to pay lower dividends. A similar conclusion was also reached by Al- Kuwari (2009) that dividend policy is negatively related to leverage ratio. Nonetheless, the use of debt has been associated with lower agency cost and enhanced firm profitability, both of which have the tendency of improving dividend leverage. Amidu & Abor 2006; Kowaleski *et al.* 2007 all argued that volatility of earnings reduces the precision of earnings predictability. Thus directors of firms become reluctant to declare and pay dividend, when the certainty of future return is not assured. Therefore, business risk is hypothesized to have a negative relationship with the dividend policy. Firms that experience recent growth in revenues tend to pay lower dividends as concluded by Chen & Dhiensiri (2009). They further argue that if the firm is growing speedily, there will be a high demand of capital. The pecking order theory states that firms should finance new projects first with least information-sensitive sources using retained earnings. Consequently, firms with high growth opportunities are likely to retain a greater portion of their earnings to finance their expansion projects as against returning these dividends to shareholders. This would especially be true if the rate of returns the firm earn on its assets was in excess of what the individual shareholders could expect to receive by asking dividend and investing these funds elsewhere. This view is support by Higgins (1981) who noted that there is a

direct link between growth and financing need; rapidly growing firms have external financing needs because working capital needs usually exceed the incremental cash flow. Higgins (1972) studies showed that payout ratio is negatively related to a firm's need for funds to finance growth opportunities.

Tax-adjusted models presume that investors require and secure higher expected returns on shares of dividend-paying stocks. The significance of tax-adjusted theory is the division of investors into dividend tax clients. Modigliani (1982) argues that the clients' effect is responsible for the alterations in portfolio composition. However, Masulis & Trueman (1988) model predicts that investors with differing tax liabilities will not be consistent in their ideal firm dividend policy. They concluded that as tax liability increases (decreases), the preference for dividend payment also increases (decreases). Tax-adjusted model assumes that investors maximize after-tax income. Farrar & Selwyn (1967) concluded that in a partial equilibrium framework, individual investors choose the amount of personal and corporate leverage and also whether to receive corporate distributions as dividends or capital gain. Recently, Amidu & Abor (2006) found a positive relationship between tax and dividend payout ratios.

Market-to-book ratio reflects the market view of the value of equity in comparison to what shareholders have contributed to the firm since the day it was established. Omran & Pointon (2004) points that market-to-book ratio is an important factor that influence dividend payout ratio. However, Amidu & Abor (2006) found a negative relationship between market-to-book ratio and dividend payout ratios. The debt-to-equity ratio is a financial ratio that indicates the relative proportion of equity and debt used to finance a company's assets. This ratio is also known as risk, gearing or leverage. Pruitt & Gitman (1991) indicate that risk affects firms' dividend policy. Firms with high growth rates and high dividend payout ratios utilize debt financing and firms with high leverage compared to their respective industry. Dhillon (1986) however, found contradictory evidence for the relationship between dividend payout ratios and leverage. In some industries payout and leverage ratios are positively related while in other industries the relationship is negative. The study by (Rozeff 1982; Collins *et al.* 1996) found a negative relationship between firm's risk and the dividend payout ratios. Their findings suggest that firms having a higher level of risk will pay out dividends at lower rate. A similar conclusion was reached by D'Souza (1999) of the negative relationship between risk and dividend payout.

Generally, firms which have a greater portion of their assets in the form of tangible assets enhance their ability to raise debt finance and at cheaper cost, thereby reducing the pressure on internally generated funds. These assertions were made by Bradley *et al.* (1984). Therefore collateral capacity is expected to have a positive effect on a firm's dividend policy. Firms that have existed for some time are better placed to create good reputation for themselves. Reputation when managed properly can be used as a basis for attracting cheaper credit to finance expansion projects. In fact, Diamond (1989) suggests that financial institutions use firm reputation to assess the credit worthiness of firms. This implies that age and dividend policy would be negatively related. This notwithstanding, firms that are aging tend not to have more growth opportunities to fund because they may either be at their maturity or decline stages. Such firms therefore are likely to pay more dividends.

The study of (Collins *et al.* 1996; Mitton 2004) found that firm size has positive relationship with the dividend payout. Collins *et al.* (1996) argued that larger firms have more generous payout resulting in positive relationship with dividend payout. Ramcharran (2001) argue that the larger the firm size, the less observable the actions of management and the higher agency costs may be incurred. Therefore, paying high dividends may reduce the agency cost. Mitton (2004) and Bhattacharya (1979) indicated that the firm size proxies for symmetric information where the larger firms have less asymmetric information therefore pay higher dividends. Fama & French (2001) found that payers and non-payers differ in terms of profitability, investment opportunities, and size. Their evidence suggests that three fundamentals – profitability, investment opportunities, and size – are factors in the decision to pay dividends. Dividend payers tend to be large, profitable firms with earnings on the order of investment outlays. Firms that have never paid are smaller and they seem to be less profitable than dividend payers, but they have more investment opportunities, and their investment outlays are much larger than their earnings. The salient characteristics of former dividend payers are low earnings and few investments. Li & Lie (2006) reported that firms are more likely to raise their dividends if they are large and profitable and the past dividend yield, debt ratio, cash ratio, and market-to-book ratio are low. Firms are more likely to cut their dividends if they have poor operating income, low cash balances, and a low market-to-book ratio.

The variability of dividend paid for previous years can have consequence on the dividend to be paid for the recent year. Firms that vary their payments signal that at least some level of dividend would be paid. Farrelly *et al.*, (1986) concluded that the major determinants of dividends payment are anticipated level of future earnings and the pattern of past dividends. This is confirmed by Vasliou & Eriostis (2004) who postulated that firms set dividend policy not only by the net distributed earnings, but also by change from previous year's dividend. Miller & Rock (1985) extended earlier models by explicitly recognizing the signaling potential of announcements of dividend changes. Their model can be separated into two components. One is the dollar-for-dollar effect of the dividend surprise itself. The other effect relates to the persistence in earnings. The dividend announcement serves to provide the missing piece of the sources-equal-uses constraint that the market needs to establish the company's current earnings. That earnings figure is used by the market as the basis for estimating future earnings. Therefore the importance of the dividend signal is the additional information it provides, which allows analysts to improve their estimates of future earnings. It is earnings that are important, not dividends per se. In contrast, Born *et al.* (1988) examined growth in earnings per share subsequent to dividend changes and failed to support dividend signaling.

### 3. Methodology

#### 3.1 Model Specification

The general form of the panel data can be written in bivariate model as:

$$Y_{it} = \alpha + \beta X_{it} + \eta_i + \varepsilon_{it} \quad (3.1)$$

Where  $Y_{it}$  represents the dependent variable and  $X_{it}$  contains a set of explanatory variables in the model whereas the subscripts  $i$  and  $t$  denote the cross-sectional and time-series dimension respectively. In the light of equation (3.1), the current study used the following econometric model on the basis of the selected variables:

$$DPS_{it} = \beta_1 + \beta_2 DPS_{it-1} + \beta_3 EPS_{it} + \beta_4 PROF_{it} + \beta_5 CF_{it} + \beta_6 SG_{it} + \beta_7 SIZE_{it} + \beta_8 LIQ_{it} + \eta_i + \mu_{it} \quad (3.2)$$

$i = 1, \dots, N$  and  $t = 1, \dots, T$

The explanatory variables used for the determinants of dividend policy are explained with expected signs in Table1, whereas the dependent variable is dividend per share.

Table 1: Description and Expected Sign of Variables

Variables	Description	Expected Sign of Variables
DPS <sub>it-1</sub>	Last year's dividend per share	+
EPS	Earnings per share	+
PROF	Profitability; measured by net income	+/-
CF	Natural logarithm of firm's cash flow	+/-
SG	Sales growth	+/-
SIZE	Firm's size; measured by natural logarithm of total assets	+
LIQ	Liquidity; measured by current ratio	+

#### 3.2 Variable Description

The study used dividend per share (DPS) as dependent variable. The Dividend policy independent variables include:  
 Profitability (**PROF**) Earnings before interest and taxes divided by total assets for firm,  
 Cash Flow (**CASH**) Log of net cash flows from operating activities for firm,  
 Sales Growth (**GROW**) Growth in sales for firm,  
 Dividend per Share (**DPSit-1**) Last year's dividend per share,  
 Firm's Size (**SIZE**) measured by natural logarithm of total assets,  
 Earnings per Share (**EPS**) the earnings per share of the firm,

Liquidity (LIQ) measured by current ratio.

### 3.2 Sources of Data

This study uses linear panel data regression methods to evaluate the factors that determine the dividend payout policy of some selected manufacturing firms listed on the Ghana Stock Exchange. The cross-section data includes manufacturing firms for which annual observations covering the period 1997 – 2006 were made. Due to the unavailability of all manufacturing firms' data listed on the GSE to construct a balanced panel and for selected time period, the study used data for ten (10) firms which represent more than 70% of the total manufacturing industries listed on the GSE.

## 4. Discussion of results

### 4.1 Descriptive Statistics

The findings shows that on average, firms included in the sample over the period under consideration paid out GH¢21.2 as dividend to shareholders. Profitability on average was about 13% with some firms recording as low as -26% and the maximum being 119%. The average sales growth for the firms for the period was 67.4%. The standard deviation of the sales growth indicates that there is a wider difference in sales between the firms; as the firm with the minimum sales growth recorded -15.3% while maximum recorded 134.5% sales growth. The mean and standard deviation of the cash flow also indicate a greater variability between the firms. However, as far as liquidity of the firms is concerned, there is somewhat a lesser degree of variability as indicated by a mean of 1.5 and a standard deviation of 0.7. The Size of the firm recorded an average of 11.23 and a standard deviation of 1.5. This also confirms the vast differences between the firms considered in the sample. On average, earnings per share of the firms was GH¢583.4. The statistics presented provides a firm ground to further carry on with the regression and correlation analyses as there seems to be some degree of variability in the variables.

Table 2 Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
DPS	72	212.0722	279.9951	5	1050
PROF	88	0.1291012	0.1655	-0.2610	1.1938
CF	71	9.333387	1.6598	5.2203	14.3195
SG	84	0.6743416	2.1050	-0.1527	13.4451
LIQ	89	1.516714	0.7227	0.63516	4.8230
SIZE	88	11.23108	1.4902	6.9017	16.0729
EPS	89	583.4071	1296.983	-830	7833

### 4.2 Regression Results

Based on the Hausman test, the fixed effects estimator is more appropriate for estimating the regression model. The results indicate that, generally the coefficients are consistent over the various estimators in terms of the signs but not necessarily the statistical significance. The regression results indicate that dividend per share (DPS) has a positive relationship with the previous year's dividend per share ( $DPS_{t-1}$ ) as far as the REM and OLS estimators are concerned. However, with regards to the FEM, the results indicate otherwise, as there is a very strong negative relationship between prior period dividend and that of the current period. This results, though is not consistent with the theoretical expectations, it confirm the work of Pruitt & Gitman (1991) and Baker *et al.* (2000). The results suggest that the dividend patterns of the firms are generally not smooth and that managers are highly concerned with cash dividend continuity and believed that dividend policy affects share value of the firm.

The regression results further suggest that, earning per share has a miniscule positive relationship on dividend per share. Thus, increases in earnings of the firms infinitesimally benefit shareholders. Moreover, profitability has a significant positive effect on dividend per share. This implies that, greater profitability enabled the firms to easily afford a higher amount for dividend payouts. Thus, firms which are profitable are more likely to pay dividend as compared to those that are not, sales growth also had an insignificant positive effect on dividend payouts as far as the pooled OLS and random effects estimators are concerned. As the Hausman specification test has already indicated that

the fixed effects estimator results are preferable; sales growth rather indicated an insignificant negative relationship with dividend per share. Thus, the results indicate that, higher sales of the firms' products tend to have a deleterious effect on dividend payouts, albeit not significant. The immediate corollary is that firms do not receive adequate amounts from sales to distribute among shareholders as dividend. Additionally, according to the fixed effects estimator results, the size of the firm significantly has a positive correlation with dividend payout. Consequently, larger firms have the greater propensity to pay dividend to their shareholders and vice versa. The magnitude of the coefficient of *SIZE* (logarithmic of total assets) indicates that, a percentage increase in total assets increases dividend per share by approximately 0.5% point. This result is in consonance with the theoretical assumption of Mougoue & Rao (2003) which states that, size of firms is negatively related to both agency conflicts and information asymmetry. Thus, the results suggest that larger firms are more likely to use dividends as a signaling mechanism and consequently pay dividends to shareholders unlike smaller firms. Finally, liquidity consistently had an insignificantly negative relationship with dividend per share across the various estimators. As liquidity is measured by current assets divided by current liabilities, in the present case, there is no significant impact of liquidity on the dividend payout.

## 5. Conclusion

The study sought to investigate the factors that determine the dividend payout policy of some manufacturing firms listed on the Ghana Stock Exchange. The results show that dividend per share as per the fixed effects estimator is a negative function of prior year's dividend and positively related to profitability and size of the firms. The other variables appeared to have insignificant impact on dividend payout policy. The results thus suggest that larger firms have greater propensity to pay dividend because of higher profitability. Also, a number of variables showing an insignificant impact on the dividend payout perhaps is an indication that most of these manufacturing firms are in their nascent stages and are yet to properly develop in relation to their stock market operations.

## 6. Recommendations

It is recommended that one avenue for future research is to extend the investigation to Ghanaian unlisted firms. There is also an enticement to conduct similar research in other emerging markets, especially those in the sub-Saharan African countries as few studies exist currently. Further research that will replicate these studies using more comprehensive governance variables such as board activity intensity, Chief Executive Officer Tenure, audit committee and its characteristics for both listed and unlisted firms in Ghana will share more light on issues raised in this study. Moreover, following the findings of this study, it is recommended that: Firms should efficiently increase profitability in order to maintain dividend payment to their shareholders. Second, it is also required that firms improve their liquidity base to sustain dividend payment.

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APPENDIX:

**Table 3: Estimation Results based on OLS, FEM and REM**

	OLS	Fixed Effects	Random Effects
$DPS_{it-1}$	0.616***	-0.082	0.616***
	(0.109)	(0.147)	(0.109)
<i>EPS</i>	0.0001	0.0002*	0.0001
	(0.0001)	(0.0001)	(0.0001)
<i>PROF</i>	3.239**	4.494***	3.239**
	(1.597)	(1.337)	(1.597)
<i>CF</i>	0.031	0.032	0.031
	(0.151)	(0.126)	(0.151)
<i>SG</i>	0.028	-0.019	0.028
	(0.044)	(0.046)	(0.044)
<i>SIZE</i>	0.232	0.466*	0.232
	(0.187)	(0.253)	(0.187)
<i>LIQ</i>	-0.220	-0.420	-0.220
	(0.146)	(0.251)	(0.146)
<i>Constant</i>	-1.493	-1.041	-1.493
	(1.428)	(2.328)	(1.428)
<i>Hausman Test (<math>\chi^2</math>)</i>		53.46	53.46
		[0.000]	[0.000]

Notes: Dependent Variable: *lnDPS*. Values in ( ) indicate standard errors. \*\*\*, \*\* and \* indicate significance levels at the 1%, 5% and 10% respectively. Values in [ ] indicates p-value.

**Table 4: THE AVERAGE VALUES FOR THE PARAMETER ESTIMATE AS COMPUTED FROM THE FINANCIAL REPORT**

Years	PROF	CASH	GROWTH	SIZE	LIQUIDITY	EPS	DPS-1	DPS
1998	0.1258	0	0.1650	4.5712	1.0165	139.30	55.00	64.69
1999	0.0834	3.6064	0.1274	4.6326	0.9810	77.45	64.69	68.29
2000	0.1547	4.0609	0.7101	4.8458	1.0729	310.54	68.29	125.76
2001	0.2251	4.1126	0.4301	4.9560	1.1652	296.17	125.76	136.95
2002	0.2278	4.2446	0.1984	5.0129	1.1685	378.91	136.95	193.88
2003	0.1971	4.2259	0.2506	5.1439	1.0685	443.33	193.88	177.87
2004	0.1417	4.3999	0.1646	5.1689	1.2045	962.35	177.87	213.73
2005	0.1411	4.2134	0.1150	5.2223	1.2380	629.57	213.73	185.35
2006	0.1504	4.6544	0.0969	5.2327	1.3065	851.75	185.35	171.90
2007	0.1388	5.2506	5.1965	6.0649	1.5760	1052.90	171.90	188.50

**Table 5: Data Computed from the various data source**

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11
Sales	40283.60	46930.00	52908.00	90480.50	129393.00	155068.90	193936.20	225851.43	251827.01	276218.38	1711593.41
Fixed Assets	17366.80	21332.30	25034.70	40439.50	48503.30	53670.70	69428.50	78390.10	81316.88	88587.87	441675.91
Income Tax	1043.70	1288.60	1298.20	2213.20	6949.10	6788.60	5330.70	1644.42	2284.23	3496.41	19828.93
EBIT	4167.70	4685.10	3573.60	10842.70	20341.00	23471.90	27458.70	20945.68	23537.15	25703.65	161149.52
Total Asset	29646.10	37252.40	42917.70	70106.10	90368.30	103017.50	139288.10	147827.02	166841.68	170901.60	1161169.21
Dividend	1628.50	1856.20	1983.90	3238.40	6276.50	8177.00	9429.60	12504.60	9842.75	9453.47	9637.01
profit after tax	3011.80	3265.40	1675.10	6899.00	12616.40	16682.90	20637.30	17338.70	19410.30	19324.90	138882.61
net cashflow from operating activities	0.00	0.00	4023.20	11506.30	13262.20	17561.90	16822.90	25111.70	16344.30	45119.80	178066.00
debt/equity	0.12	0.10	2.97	0.27	0.12	0.14	0.18	0.15	0.27	0.20	0.63
Dividend per share	55.00	64.69	68.29	125.76	136.95	193.88	177.87	213.73	185.35	171.90	188.50
Earnings per share	111.04	139.30	77.45	310.54	296.17	378.97	443.33	962.35	679.57	851.75	1052.90
Current Asset	11585.56	14885.38	16776.73	24682.76	33893.01	42998.48	58362.99	66735.04	70635.22	79694.58	109044.84
Current Liability	9285.13	14643.69	17101.33	23004.43	29087.48	36797.86	54621.52	55402.97	57057.42	60998.41	69192.47

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