

Determinants of Abnormal Returns on the Ghana Stock Exchange

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Abstract

This study examines the determinants of market's reaction to dividend initiation announcements in Ghana. In particular, it considered the magnitude of abnormal returns during the days that surround announcements of dividend initiation. This study expects to reveal the factors that determine abnormal returns on the Ghana Stock Exchange. This is accomplished by measuring the abnormal returns before, during and after dividend initiation announcements. Using an event study approach, factors such as: the firm's earning changes, earning volatility, dividend yield, firm's age, institutional shareholding, firm's size, market-to-book ratio, investment opportunities available to the firm and the industry of the firm are analyzed to ascertain if the abnormal return is dependent on them. The results suggest that older firm and firms in the manufacturing industry experience stronger and positive investors' reaction than younger firms and firms in the other industries. The results also revealed that investors react negatively to firms that have viable investment opportunities but decide to initiate dividend payment.

Keywords: Determinants, dividend initiation, abnormal returns, GSE

1.0 Introduction

Over fifty years ago, John Lintner undertook thorough research on corporate dividend decision regarding payment. Subsequently, a lot of literature has developed seeking to explain the market reactions to dividend initiation announcements. The phrase, "dividend puzzle" by Black (1976) has been used by many researchers in an attempt to explain the myth behind dividend behavior. The theoretical and empirical work of Modigliani & Miller (1961) had initially thrown the issue of dividend policy into controversy, which has led to a lot of scrutiny. Under their perfect capital market assumption, Modigliani & Miller (1961) argued that any amount of dividend paid should, in no way affect the firm's value or the share price of a company. They further added that the value of the firm's shares was the present value of the stream of future cash flows from current assets and future growth opportunities. This assumption is true if only the issue of securities to raise funds is fairly priced.

In recent past however, a new area in the literature mainly dividend initiation literature has emerged that sought to explain the main causes of the market reaction to such unique events as it is usually the first dividend in the firm's corporate history. As a result, a great deal of work has been done in the area of the market reaction to dividend initiation announcement together with the information content of dividend hypothesis. Signaling hypothesis states that dividend initiation conveys to the market information about the future prospects of the firm. However, previous works did agree on one common result that the message from such announcements signals a good prospect.

Studies on dividend initiation have not been given attention in Ghana over the years despite its importance in unraveling stock price behavior. This resulted to deficient literature in understanding stock market reaction to dividend initiation announcement in Ghana. Though this area is widely studied in the developed markets in Europe and the Americas, for instance, Healy & Palepu (1988), Jin (2000), Asquith and Mullins (1983) and Schultz (2004); the same cannot be said of Ghana. Previous studies that have attempted work on the stock market in Ghana include: Amidu & Abor (2006), Amidu (2007), Bokpin & Abor, (2010). However, these studies only looked at dividend payout ratios and how the policy as a whole affect firms performance. They did not focus on the determinants of the market reaction to dividend initiation announcement. This study has two objectives which include: To examine the share price changes following dividend initiation announcement and to explore the determinants of market reaction to dividend initiations announcement. The study is expected to contribute to the understanding of the signaling hypothesis literature in Ghana. This study largely followed the work of Schultz (2004), Jin (2000) and Norton (2008) as they have tried to explain the market reaction to such events.

2.0 The Signaling Theory

In a world where information about the future prospect of a firm is costly, dividend initiations are considered an

important alternative source of information for investors Ayse and Elif (2010). The information content theory suggests that managers can communicate information to investors about their optimism of the firm's prospect in the future through dividend announcement Aharony and Swary (1980), Asquith and Mullins (1983), Healy and Palepu (1988) and Norton (2008). Since managers spend most of their time in analyzing the firm's performance, they are by default having deeper understanding about the firm's investment opportunities, operations and limitations. That understanding may influence their decisions and actions that presuppose that any decision by managers to initiate dividend payment reflect their view that the firm's future earnings, cash flows and other opportunities will likely be favorable.

The signaling theory suggests a number of possible reasons that may explain the investor's reaction to dividend initiation announcement. These include: the firm's earning changes, earning volatility, dividend yield, firm's age, institutional shareholding, firm's size, market-to-book ratio outlook, investment opportunities available to the firm and the firm's industry. It appears on the surface that the above mentioned factors could determine investors' reaction leading to abnormal returns; however, if this conjecture is factual then one would need to do an empirical analysis to ascertain its certainty. The work of Schultz (2004), Dyl & Weigand (1998), Amidu (2007) suggest that these factors could influence the abnormal returns. Are they factors applicable to investors of the stock exchange of Ghana? This research work is therefore intended to bring to light whether the aforementioned factors motivate the investors reaction to dividend initiation announcement on the Ghana Stock Exchange.

Extant literature on the market reaction to dividend initiation announcement shows that earning changes could affect investors' behavior towards firms' dividend initiation news. Schultz (2004) and Jin (2000) argue that the variable Earning Changes (ECHG) could determine investors' reaction to dividend initiation announcement leading to abnormal. Earning changes has dual arguments. On one hand, Jin (2000) argued that it is inversely related to cumulative abnormal returns and this result was supported by Schultz (2004). On the other hand, he got evidence to show that if investors are informed of the firm's positive earnings, they will likely react strongly by purchasing more stocks anytime the firm announces dividend initiation.

3.0 The Determinant of Abnormal Returns

Earning Volatility (EVOL) has been espoused in many studies to represent the level of the firm's risk. Dyl & Weigand (1998), Marsh & Merton (1987), and Schultz (2004) have all used the volatility level of the firm earnings to unravel the firm's exposure to risk. Specifically, Dyl *et al.* (1998) argued that the decision of the firm to initiate dividend payment is enough to convey information to the investor that the firm is stable and therefore, the risk level is minimal. Again, it indicates that the management does not expect any high risk exposure in the near future.

Dividend Yield (DY) is one of the factors some researchers have argued to be a determining tool for abnormal returns. The works that have attempted to explain the market reaction to dividend announcement using dividend yield include: Asquith & Mullins (1983), Jin (2000), Mikhail *et al.* (2003), Schultz, (2004) and Amidu (2007). These authors advanced the argument that higher dividend will be a good signal to the outside investor. This means the higher the dividend yield prior to dividend initiation announcement the better the signal to investors that the firm is performing well and this will make investors within the dividend yield preference bracket to react positively. In addition to that, Amidu (2007) used the clientele effect argument to advance the understanding that if majority of the firm's shares are held by people of low marginal tax bracket, and decide to invest in high yielding stocks, anytime they get the news of dividend initiation announcement, they will respond positively leading to abnormal returns. However, if the shares are held by those in the higher tax bracket, the response will be expected to be negative.

Smith & Watts (1992) explained firm's age as how long the firm has gone public. They added that the longer the existence of the firm on the stock exchange the more likely investors will anticipate its dividend initiation. This is because older firms usually have good rating from the rating companies. Rajan and Zingale (1995) suggested that older firms can borrow from the capital market on better terms than their short-lived counterpart firms. The argument here is that the market is expected to react slowly to older firm's dividend initiation because they expect the firm to have reached stabilization stage; therefore, its dividend initiation will not surprise investors. By contrast, younger firms may want to consider growth as an option in order to lay a strong foundation before they can consider the decision of dividend initiation.

Works in recent past by Amidu & Abor (2006) and Amidu (2007) have all argued that agency cost could be reduced by institutional holding of firm's shares. Firms by nature are more willing to release information to institutions compared to individual owners. If the firm's shares are held by majority of individuals, dividend initiation will be the best to mitigate agency problems. Because the shareholders will tend to believe that management will not have excess cash to invest in unprofitable projects. This was argument was earlier advanced by Easterbrook (1984). However, the same does not hold for a firm whose majority shares are held by institutions. Therefore, Schultz (2004) argued that the benefit of agency cost reduction may be small with a firm that has large institutional holding. This led Jin (2000) to conclude that large institutional holding result in greater availability of information about the firm. This suggests that smaller institutional shareholding will lead to stronger reaction to dividend initiation announcement from investors and the reverse is true.

Existing literature suggests that firm's size may be inversely related to the probability of bankruptcy Ferri & Jones (1979), Titman & Wessels (1988) and Rajan & Zingales (1995). Therefore, large firms will be willing to release a lot of information to the public and that will further reduce agency conflict with shareholders. Atiase (1985) and Schultz (2004) used firm size to determine the accessibility of information. Large-cap firms' dividend initiation announcements are more likely to elicit a slow market reaction compared to their smaller counterparts. Bajaj & Vijn (1990) showed that smaller firms exhibit stronger market reaction to dividend initiation announcements than larger firms. Large firms tend to be more diversified and their cash flows are more regular and less volatile. Therefore, investors may not be surprised if they initiate dividend payment.

Signaling theory suggests a "reputation effect" from market-to-book ratio factor. A firm with high MTB signals to the market that the firm has good internal quality management which gives the investor more confidence as against a firm with low MTB. It is proposed that a firm with high MTB will likely meet a stronger investors' reaction than the one with low MTB. High market-to-book ratio could be one of the signals to investors that there exists strong internal management quality.

Investment opportunity (INV) available to the firm could be regarded as another determinant of market reaction to dividend initiation. Smith & Watts (1992) argue that dividend initiation information can be effective in dealing with corporate free cash flow problems. When the company has good prospects for growth but decides to announce dividend initiation, investors may become skeptical of the firm's intentions and actions.

Extant literature in the work of Smith and Watt (1992) revealed that the industry type could also drive investors' perception about their decision to buy the firm shares or not. One such good example is the precious metal extractive industry. We see the precious metal companies in the mining and extractive industry experiencing high patronage during economic meltdowns. This is because investors normally consider those metals as valuable asset that can store the value of their investments. For example, during the 2008 world economic crises, the precious metal such as gold price hit record high of \$1,224.53 per ounce in 2010 from a bottom low of \$871.30 per ounce in 2008." Source: www.WorldGoldCouncil.

4.0 Methodology

The study used stock price to calculate the abnormal returns and the financial statement for the determinants of the abnormal returns. The data collected was based on information from 1990-2010. The following criteria were used to select the firms for the study:

- The firm must have initiated dividend payment.
- The firm must have dividend initiation declaration date and that date must be available.
- The company must have at least 150-day trading share prices before and at least 10-day trading share prices after the dividend initiation was announced.

The traditional event study methodology by Brown and Warner (1985) was used. The market model was used to estimate the abnormal return. This model assumes that the return on a security can be estimated using the relationship between the individual security's return and the return on the market index. Under the market model assumption, the expected return $\epsilon(R_{it})$ for security i on day t is calculated as follows:

4.1 Model Estimation

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \dots \dots \dots \text{Eqn(1)}$$

R_{it} = the expected rate of return on the share price of firm i on day t . R_{mt} = the rate of return on the market portfolio of stocks of (GSE) on day t . α = the intercept term, β = the systematic risk of stock i , and ϵ_{it} = the error term, with $\epsilon(\epsilon_{it}) = 0$. The study used 140 days observations before the event window to estimate the betas. From that estimation, the research used estimates of daily abnormal returns (AR) for the i^{th} firm using the equation below:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}) \dots\dots\dots \text{Eqn (2)}$$

AR_{it} = abnormal return of firm i surrounding the announcement date, R_{it} = actual return of firm i surrounding the announcement date, α = the intercept term, β = the systematic risk of stock i , R_{mt} = the rate of return on the market portfolio of stocks of (GSE) on day t . The abnormal returns (AR_{it}) represent the returns earned by the firm after subtracting the expected return from the actual return.

11-day returns were collected for each dividend initiation announcement to examine the impact. 5-days return before and after the dividend initiations were necessary to capture the entire impact of the dividend initiation announcement. Day $t = 0$ is the day the news of the dividend initiation is published at the Ghana Stock Exchange. For each of the

11-days average return was calculated as:

$$AAR = \frac{1}{N} \sum_{i=1}^N AR_i \dots\dots\dots \text{Eqn(3)}$$

AAR = average abnormal return; N = number of firms in the sample; $i=1$ =the i^{th} firm;

The average abnormal returns were cumulated over the event window that gives us the cumulative abnormal returns as shown below:

CAR = cumulative abnormal returns; n = the number of days in the event window;

$$CAR = \sum_{t=1}^n AAR \dots\dots\dots \text{Eqn(4)}$$

The t-statistic was computed for as $= AAR / \delta / \sqrt{N} \dots\dots\dots \text{Eqn (5)}$

Where δ = the standard deviation of the abnormal returns; AAR=average abnormal return; N =number of firms in the sample. To insight into the determinants of the cumulative abnormal return, the following regression was run to determine these determinants that influence the abnormal returns.

$$CAR = \beta_0 + \beta_1 ECHG + \beta_2 EVOL + \beta_3 DY - \beta_4 AGE - \beta_5 INSH - \beta_6 SIZE + \beta_7 MTB - \beta_8 INV + IND + \varepsilon \dots\dots\dots \text{Eqn (6)}$$

CAR = Cumulative Abnormal Returns, ECHG = Earning Changes, EVOL = Earnings Volatility, DY = Dividend Yield, AGE = Firm's Age, INSH = Institutional Holding of Shares, SIZE = Firm's Size, MTB = Market-to- Book Ratio, INV = Investment Opportunities Available to the firm, IND = Firm's Industry and ε = Error Term.

4.2 Determinants of Abnormal Returns Variable Measurement Procedure

$ECHG_{it}$ = dummy variable taking on a value of 1 if annual earnings during the period immediately preceding the announcement are an increase over earnings during the same period the previous year, and 0 otherwise;

$EVOL_{it}$ = standard deviation of earnings-per-share (basic EPS excluding extra-ordinary items) over the 2 years prior to the dividend announcement;

DY_{it} = dividend yield calculated as the initial dividend amount divided by closing share price 6 days prior to the dividend announcement;

AGE_{it} = the number of calendar years the firm i went public by listing on the stock exchange.

$INSH_{it}$ = percentage of firm i 's stock held by institutions (banks, investment firms, insurance, group, endowments' fund & money managers);

$SIZE_{it}$ = the natural log of the market value of equity, calculated as the stock price 2-days prior to the dividend announcement multiplied by shares of common stock outstanding;

MTB_{it} = the market-to-book ratio, with the numerator calculated as the closing market price 2-days before the announcement multiplied by outstanding common shares and the denominator as the value of shareholders' equity less the book value of preferred stock, plus deferred taxes and investment tax credits on the balance sheet;

INV_{it} = is the investment opportunities available to firm i at time t . It is measured as the percentage of sales growth. The dividend initiation year sales minus the previous year's sales divided by the previous year's sales;

IND_{it} = dummy variable taking on a value of 1 if a firm belongs to the manufacturing industry, and 0 otherwise; ε = the disturbance term, assumed to be 0.

5.0 Empirical results

The empirical analysis of the market's reaction to dividend initiation announcement on the Ghana Stock Exchange starts with an examination of the abnormal returns in Table 5.1.1 below. This explains the way investors reacted to each of the firm's dividend initiation announcement. Because dividend initiation is usually a deliberate action designed, to disseminate price-sensitive information, this section attempts to examine how the market instantaneously incorporated and adjusted stock prices before, during and after the dividend initiation information. If the Ghana Stock Exchange was a semi-strong informational efficient market, the stock prices will undoubtedly adjust instantaneously to dividend initiation information and the prices reflect the real sentiment of the investors. On the other hand, semi-strong form efficient market implies that analysts cannot use publicly available information to gain any significant price advantage that could lead to abnormal returns. In this section, we examined if: a) Trading results were associated with important released information of dividend initiation announcement, b) if there is any unusual return associated with trading before and after dividend initiation declaration.

5.1 Correcting for thin trading on the Ghana Stock Exchange

When there is thin trading of stocks, the OLS – estimates of the market model betas could be affected. Thin trading of stocks can cut or reduce the measured correlation with the market index and consequently the wrong estimate of the betas. Peter-Jan (2001) and Brown and Warner (1985) lamented that thinly traded stocks appear to have downwards bias betas while actively traded stocks have upwards bias betas estimates. Strong (1992) argued that these bias betas could make certain abnormal returns to be misleading and even make the test statistics inaccurate. It was observed therefore that majority of the firms that constituted the sample for this study experienced thin trading. Therefore, correction was made to take care of the under-and-over estimates by using the market model. In doing so, we opted for the O'Hanlon and Steele (1997) Model. The estimation of the beta using O'Hanlon *et al.* (1997) procedure consists of the aggregation of three estimated beta coefficients. We lead one and lag one market return variables. $\beta_t = b_{-1,t} + b_{0,t} + b_{+1,t}$ where $b_{-1,t}$, $b_{0,t}$ and $b_{+1,t}$ represent O'Hanlon and Steele (1997) Model use to lead one and lag one market return variable respectively for the corrected betas. These aggregated estimated betas were then used to calculate for the expected returns. This was to enable comparisons between the abnormal returns using the market model betas and the O'Hanlon and Steele (1997) Model estimated betas to see if there could be any improvement. Brown and Warner (1985) got improved results after correcting for the thin trading effect using the new estimated betas. The results in this study had also shown an improvement after the thin trading correction as shown in table 5.1.1.

TABLE 5.1.1: ABNORMAL RETURNS FOR 29 SAMPLE FIRMS SURROUNDING THE DIVIDEND INITIATION DATE USING O'HANLON & STEELE (1997) MODEL TO CORRECT THIN TRADING AND COMPARED WITH THE ABNORMAL RETURNS USING THE MARKET MODEL ON THE GHANA STOCK EXCHANGE.

MARKET MODEL(n=29)					(O'HANLON & STEELE 1997) MODEL (n=29)			
DAY	AR%	t-test	+ve:-ve	Z	AR%	t-test	+ve:-ve	Z
-5	-0.68	-1.6397	10 : 19	-1.6713	-0.94	-2.02211*	10:19	-1.6713
-4	0.44	0.9970	13 : 16	-0.5571	1.13	1.3719	15:14	0.1857
-3	-0.15	-0.7145	14 : 15	-0.1857	-1.05	-1.4014	14:15	-0.1857
-2	-0.04	-0.1593	13 : 16	-0.5571	-2.21	-1.9403*	15:14	0.1857
-1	0.25	0.8464	12 : 17	-0.9285	0.017	0.0456	11:18	-1.2999
0	0.57	0.8406	10 : 19	-1.6713	3.81	2.4919**	13:16	-0.5571
+1	0.60	1.0174	13 : 16	-0.5571	2.81	2.0860**	14:15	-0.1857
+2	0.95	1.6210	13 : 16	-0.5571	2.10	1.9341*	14:15	-0.1857
+3	0.55	0.5261	10 : 19	-1.6713	0.24	0.2313	11:18	-1.2999
+4	-0.25	1.0778	14 : 15	-0.1857	0.007	0.0178	15:15	-0.1857
+5	0.53	-0.7157	14 : 15	-0.1857	-0.75	-0.9657	13:16	-0.5571

The symbols ***, ** and * denote statistical significance at 1%, 5% and 10% level respectively, using 2-tail test. The z-statistic for percentage positive is a proportional test for percentage positive (or negative). This shows how many of the sample firms recorded positive versus negative.

Taking a careful look at the results in table 5.1.1 above, they are similar to previous studies results that experienced thin trading. The abnormal return for day 0 is 0.57% and 3.81% for the thin traded and the corrected beta results respectively. The t-tests are 0.8406 and 2.4919 for the thin traded results and corrected traded results respectively. It has shown some level of improvement after the correction using O'Hanlon and Steele (1997) procedure. On day +1, using the market model, the abnormal return is 0.60% whereas 2.81% was recorded for the corrected traded results using estimated betas from O'Hanlon and Steele (1997) procedure. The results improved again in day +2 when abnormal returns increased to 0.95% with the non corrected betas results while that of the corrected beta results dropped marginally to 2.10%. After day +2, abnormal returns from both thinly traded stocks' results and thinly traded corrected abnormal returns gradually reduced to a minimal level of 0.55% and 0.24% respectively. This is a signal indicating that investors on the Ghana Stock Exchange are very sensitive to dividend initiation news. However, it shows that there was no information leak since the results in table 5.1.1 above shows that the returns prior to the dividend initiation news were small.

TABLE 5.1.2: INDUSTRY ANALYSIS OF CUMULATIVE ABNORMAL RETURNS USING THE O'HANLON AND STEELE (1997) BETA CORRECTION ESTIMATES

DAY	MANUF IND.(n=8)			FIN SERV SERV.(n=11)			OTHER(n=10)		
	CAR%	Z	t-STAT	CAR%	Z	t-STAT	CAR%	Z	t-STAT
-5 +5	13.2580	2.121	2.1082*	-0.1775	-0.302	-0.0226	4.6049	1.265	0.5643
-2 +2	11.0839	2.121	2.7827**	0.9803	-0.302	0.1544	9.0138	0.633	1.4945
-1 +1	9.7162	0.707	2.3959**	4.0827	-0.905	1.0743	6.9926	0.633	1.7875
0 +3	10.9135	1.414	2.5635**	7.1869	-0.905	1.1072	9.3574	0.633	1.6415
-1 +4	11.6109	1.414	2.5302**	7.5417	-0.905	1.0783	8.4777	0.633	1.2771
-4 +1	10.9731	2.121	2.0329*	-1.9924	-1.508	-0.3719	6.5124	1.265	1.2812

The symbols ***, ** and * denote statistical significance at 1%, 5% and 10% level respectively, using 2-tail test. The z-statistic for percentage positive is a proportional test for percentage positive (or negative). This shows how many of the sample firms recorded positive versus negative.

Table 5.1.2 gives a clear analysis of the cumulative effect of industry analysis using the corrected beta estimates to calculate for the cumulative abnormal returns. Day -5 to +5 registered CAR of 13.2580% for the manufacturing industry, while -0.1775% CAR for the financial service industry and 4.6049% for the other industries. However, the days of interest were -5 to +5, -2 to +2 and -1 to +1. With that, -2 to +2 shows a remarkable difference among the three industries. The manufacturing sector realized cumulative abnormal returns (CAR) of 11.0839% which were larger than the cumulative abnormal returns of the other industries that registered 9.0138%. They also performed better than the financial service industry that recorded cumulative abnormal returns of 0.9803%. Again, day -1 to +1 followed in an order when it recorded 9.7162%, 4.0827%, and 6.9926% for manufacturing, financial service and the other industries respectively. On day 0 to +3, 10.9135%, 7.1869% and 9.3574% were registered as CARs for the three industries. The manufacturing industry recorded 11.6109% and 10.9731% for day -1 to +4 and day -4 to +1 respectively. 7.5417% and -1.9924% CARs were documented for the financial service industry on day -1 to +4 and -4 to +1 respectively. Observing the cumulative abnormal returns, the firms in the manufacturing industry did well follow by the other industries and financial service industry.

TABLE 5.1.3: SUMMARY STATISTICS OF THE REGRESSING RESULTS

	ECHG	EVOL	DY	AGE	INSH	SIZE	MTB	INV	IND
Mean	46.80	0.83	0.09	2.12	37.57	1.48	5.21	0.36	0.52
Median	8.36	1.00	0.04	2.08	50.30	1.58	1.89	0.41	1.00
Maximum	293.80	1.00	0.75	3.00	100.00	2.07	37.97	0.79	1.00
Minimum	0.00	0.00	0.00	0.69	0.00	-0.36	0.01	-0.52	0.00
Std. Dev.	74.31	0.38	0.17	0.73	35.00	0.46	9.24	0.32	0.51
Observations	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00	29.00

Summary statistics from the Regression results are shown in table 5.1.3. The robust analysis ran in this work was the OLS regression, thus we report results of the OLS panel regression. The cumulative abnormal (CAR) is regressed against the nine explanatory variables. These variables include earning changes (ECHG), earning volatility (EVOL), dividend yield (DY), firm's age (AGE), institutional holding of shares (INSH), firm's size (SIZE), market-to-book ratio (MTB), investment opportunities available to the firm (INV) and industry the firm belongs to (IND).

TABLE 5.1.4 THE DETERMINANTS OF MARKET REACTION LEADING TO ABNORMAL RETURNS.

Variable	Coefficient	Std Error	t-statistic	Prob
ECHG	-0.03199	0.0375	-0.85315	0.4042
EVOL	4.637266	6.354964	0.729708	0.4745
DY	0.941636	14.62078	0.064404	0.9493
LAGE	11.49744	4.452832	2.58205**	0.0183
INSH	0.034593	0.072032	0.480245	0.6365
LSIZE	6.0386	6.297913	0.958826	0.3497
INV	-16.2856	7.856592	-2.07286**	0.052
IND	8.795539	4.900557	1.794804*	0.0886
MTB	-0.02102	0.257101	-0.08176	0.9357
C	-33.6102	18.18618	-1.84812	0.0802

Adjusted R-squared	0.301712	Mean dependent var	2.053103
S. E. of regression	10.87489	F-statistic	2.344232
Log likelihood	-104.225	Prob(F-statistic)	0.056493
Durbin-Watson stat	1.991715		

The symbols ***, ** and * denote statistical significance at 1%, 5% and 10% level respectively, using 2-tail test. The z-statistic for percentage positive is a proportional test for percentage positive (or negative). This shows how many of the sample firms recorded positive versus negative.

CUMULATIVE ABNORMAL RETURNS AND FIRM'S AGE.

The results in this study revealed that there is high level anticipation of dividend initiation by investors; it is actually met with stronger market reaction. These were expected given that firms in the stock exchange generally did not experience frequent trading. This result agrees with the results of Schultz J. (2004) and Jin (2000) who documented that the investors' expectation of dividend initiation by consideration of the firm's age could influence the magnitude of their reaction. The table above shows a strong relationship between firm's age and cumulative abnormal returns (CAR) with a corresponding t-statistic of 2.58205. In addition, existing literature such as the work of Smith & Watts (1992) argue that older firms are more likely to initiate dividend payment. They argue that because older firms sometimes reach their maturity level in growth and investment prospects, they have to consider dividend initiation as an option. Therefore, dividend initiation announcement from such firms may not come as a surprise to investors. The same does not seem to be applicable at the Ghana Stock Exchange. Because the work done by Smith and Watts (1992) did indicate that firm's age could be negatively related to its cumulative abnormal returns. However, firm's age on the Ghana Stock Exchange is positively related to cumulative abnormal returns. By implication, the older the firm at the Ghana Stock Exchange, the stronger its dividend initiation will be responded to, by investors. One of the possible reasons could be that though the news may not be surprising because they could have anticipated it, however, they have more confidence in older firms than younger ones. This probably conformed to the argument put up by Ferri & Jones (1979), Titman & Wessels (1988) and Rajan and Zingales (1995) that older and larger firms have more credibility in the eyes of the investor than younger and smaller firms.

CUMULATIVE ABNORMAL RETURNS AND INVESTMENT OPPORTUNITIES

An investment opportunity (INV) available to the firm is another determinant that could make investors to react

immediately to the news of dividend initiation. Smith and Watts (1992) documented that dividend initiation can be effective in dealing with corporate free cash flow problems. They further added that companies with few investment opportunities can limit management temptation from overinvesting in unprofitable projects by initiating and paying out dividend to shareholders from the earnings. By contrast, high-growth firms with lots of investment opportunities will be expected to be reluctant in initiating dividend payment because they have profitable uses for the capital. Previous works have shown that initiating dividend payment also means more frequent trips to the capital market to raise more funds Easterbrook (1984). This negative relationship between cumulative abnormal returns and the firm's investment opportunity was expected. It is again confirmed by previous studies including that of Rozeff (1982), Lloyd *et al.*(1985) and Collins *et al.* (1996). Their results have all shown significantly negative relationship between investors' reaction and high growth firm's dividend initiation.

CUMULATIVE ABNORMAL RETURN AND FIRM'S INDUSTRY

Extant literature argues that the type of the firm's industry could be a determining factor to investors' response when it initiates dividend payment. For instance, a firm in the mining industry will experience a different response from investors to that of a firm in the financial service industry. This is because precious metals do well during economic meltdowns as store of value for investors than products from other industries. In this work, the results appear to conform to the expected model in the literature. It is positively related to cumulative abnormal return. By implication this means that any time a firm on Ghana Stock Exchange initiates dividend payment in the manufacturing industry, investors respond quickly leading to positive abnormal return. The industry analysis in this study had shown that investors respond quickly to a firm's dividend initiation if the firm belongs to the manufacturing industry compared to firms in other industries. That could be one of the reasons why the industry is positively related to cumulative abnormal returns (CAR). The results conform to previous work by Eriotis *et al* (2007).

6. 0 Conclusion

Building on the general methodology developed by Asquith and Mullins (1983), Brown and Warner (1985) and Schultz (2004), an event study was conducted to analyze the five – day abnormal returns and other event windows, emanated from the various firms' dividend initiation declaration on the stock exchange. The reason behind this analysis was to measure the magnitude and speed of investors' reaction to corporate events such as dividend initiation announcements. Drawing from Otchere (2004), industry based analysis was made to ascertain if firms in different industries stock prices reacted differently to dividend initiation announcements. On this analysis, the firms on the stock exchange used for this study were divided into three different industries which included: a) manufacturing industry, b) financial service industry and c) the other industries. We estimated an ordinary least square regression to ascertain the determinants of the abnormal returns using the following independent variables: earning changes, earning volatility, dividend yield, firm's age, firm's size; institutional holding of firm's shares, investment opportunities available to the firm and industry the firm belong. Results from this regression indicate a better significance relationship for the firm's age, investment opportunities available to the firm and the firm's industry. The results indicated that investors on the stock exchange will demand more of older firm's shares and shares of firms in the manufacturing industry than younger firms and firms in the other industries respectively leading to price rise. The results as well suggested that investors will likely dump a firm's shares if that firm has viable projects to invest but decides to initiate dividend payment by pushing the price down.

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