



# Corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange

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## Abstract

**Purpose** – The purpose of this paper is to examine the interaction between corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange.

**Design/methodology/approach** – A multiple regression approach using the seemingly unrelated regression to mitigate the problems of multicollinearity between the cash-holding variable and other control variables is adopted.

**Findings** – Board size is found to be positively and statistically significantly related to share price among the corporate governance variables. However, a significant relationship between inside ownership and share price is not found. The results also indicate that additional units of cash holdings do not have a statistically significant influence on share price. Finally, leverage and income volatility are found to be significant determinants of share price.

**Originality/value** – This is the first of its kind in the country that considers the impact of corporate governance, ownership structure, and firm value on the Ghana Stock Exchange (GSE).

**Keywords** Corporate governance, Corporate ownership, Share prices, Ghana

**Paper type** Research paper

## 1. Introduction

Corporate governance, when effective, is to serve as a check on managerial behavior in the management of the resources of the company. Cash is perhaps one of the assets most vulnerable to wanton behavior by management. An effective corporate governance system should therefore hold the leash on managerial resource dispensation. To the extent that this is done successfully, shareholders would get the maximum return on their capital. Weaker corporate governance has consequences for cash management to the extent that weakly governed managers would keep smaller cash reserves (Harford *et al.*, 2008). The rationale is that, self-interested managers spend cash more quickly rather than stockpile primarily, perhaps, because of high discipline costs of visibly accumulating high cash balances Harford *et al.* (2008).



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Some of the discipline could come from a takeover threat, which might result in managers loosing their positions.

Inefficient investment induced by weak corporate governance would have a consequence on the profitability of the firm hence the value of the firm. Firm valuation literature tells us that discretionary cash flow is one means of valuing the firm, and to the extent that these cash balances are “wasted” the value of the firm would be affected. There is evidence to suggest that the investment of cash by managers in weak corporate governance set-ups reduces future profitability, which is priced into a firm’s stock (Harford *et al.*, 2008). This result is properly situated in the free cash flow hypothesis of Jensen (1986) and the general theory of agency problem. Corporate governance is essentially a tool for managing the agency problem or to minimize the negative effects of the agency problem. As hypothesized by Jensen (1986) and Stulz (1990) owners would want to limit managers’ access to free cash flow to prevent abuse by managers of firm resources in the light of agency conflicts.

Some prior studies suggest that owners need not worry about cash reserves at the discretion of managers (Opler *et al.*, 1999; Mikkelson and Partch, 2003). However, more recent evidence shows that shareholders value less additional dollar of cash reserves if they perceive higher conflicts of interest (Dittmar and Mahrt-Smith, 2007). Harford (1999) argues that shareholders need be concerned about managers’ accumulation of cash balances because firms with higher cash balances are often tempted to make acquisitions, which are probably going to be value decreasing. Thus, in the absence of a system of monitoring that would restrain managers, company investment would likely be inefficient, and might have negative effects on a firm’s value. Harford *et al.* (2008) proffer that weak governance is an indicator of high conflict of interests. Therefore, in the presence of weak corporate governance, cash holdings would not impact positively on firm value.

In cross-country level studies, it has been observed that shareholder rights have consequences for cash holdings and firm value (Dittmar *et al.*, 2003; Lins and Kalcheva, 2004; Pinkowitz *et al.*, 2004). The consequence is that where shareholders rights are low, firms hold lower cash levels. Country-level shareholder rights are contributory factors that affect corporate governance in a systemic level aside the company-specific corporate governance characteristics. The country level evidence suggest that weak governance systems leads to lower cash balance, perhaps, to avoid attention and also as a result of dissipate investment. What evidence can we find for the case of the Ghanaian economy in the light of these studies and arguments? This is the focus of our study.

We regressed share price on corporate governance variables, cash-holding variable, and insider ownership variable whilst controlling for the effects of leverage, volatility of income, investment opportunities, and dividend payout ratio. Our results indicate that additional units of cash holdings do not have a statistically significant influence on share price. Board size was found to be positively and statistically significantly related to share price among the corporate governance variables. Leverage and income volatility were found to be significant determinants of share price as well.

## 2. Literature review

### 2.1 Cash holdings and firm value

Studies conducted on the relationship between cash holdings and firm value have yielded conflicting results, with some suggesting a positive relationship and others

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a negative relationship. One category of the evidence suggests that there is a negative relationship between cash holdings and firm value. As stated in Lins and Kalcheva (2004), cash holdings are more negatively related to firm value. Earlier, Harford (1999) concludes that cash-rich firms are more likely to make value-decreasing acquisitions and mergers. Further, Myers and Rajan (1998) argue that, liquid assets can be turned into private benefits at lower cost than other assets, with Jensen (1986) also concluding that managers have an incentive to hoard cash to increase the amount of assets under their control and to gain discretionary power over the firm investment decision. Having cash available to invest, the manager does not need to raise external funds and to provide capital markets detailed information about the firm's investment projects. Hence, managers could undertake investments that have a negative impact on shareholders wealth. When companies hold excess cash, managers are able to pursue their own interests by spending on unnecessary expenses and unprofitable investments, without market discipline Jensen (1986).

Besides, Dittmar *et al.* (2003) opine that controlling-shareholders value investing the firm's assets in cash because doing so provides them with flexibility. The cash is there to be siphoned out of the firm or to be invested in projects that provide more private benefits. Opler *et al.* (1999) also conclude that managers prefer the control that comes with holding cash rather than paying dividends to stockholders. Papaioannou *et al.* (1992) also suggest that managers tend to retain more cash as a privilege, and Myers and Rajan (1998) argue that managers can obtain more private benefits from liquid assets. Further evidence suggests that excessive cash holdings in firms with less investment opportunities reduce firm value because excess cash may effectively force managers to over-invest (Easterbrook, 1984; Jensen, 1986; Dittmar *et al.*, 2003; Cheng, 2008). Paying dividends thus decreases cash holdings and the agency cost of overinvestment (Jensen *et al.*, 1992; Lins and Kalcheva, 2004). Faulkender and Wang (2006), find that the marginal value of cash declines with larger cash holdings. In Pinkowitz *et al.* (2006), it is stated that the relation between cash holdings and firm value is much weaker in countries with poor investor protection than in other countries.

However, another line of conclusion from the literature suggests that cash holdings have a positive relationship with firm value. In Mikkelsen and Partch (2003), the authors find that persistent cash holdings do not lead to poor performance. Chen (2008) suggests motives for holding cash in corporations, which include the transaction-cost motive, the precautionary motive, and the financial hierarchy theory. Firms hold cash for transactions purposes to avoid the higher cost of raising funds in the capital market, which, according to the financial hierarchy theory results from information asymmetry and make the cost of external financing for investment projects higher than the cost of internal financing. Firms hold cash for precautionary purposes to avoid losing out on profitable investment as a result of cash shortages (Opler *et al.*, 1999). Thus, in essence, holding cash increases the value of firms by reducing the cost of financing and increasing the number of value-creating investment ventures undertaken by the firm. This is consistent with Boyle and Guthrie (2003) who argue that holding a high level of cash is necessary for potential investments.

Yet, some of the evidence in the literature also suggests that the impact of cash holding on firm value is dependent on the financing structure of the firm. For highly leveraged firms, contingent claims analysis (Merton, 1973) predicts that almost all firm value is in the hands of the debt holders. As such, a small increase in cash reserves goes

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largely to increase debt value, not equity value, implying that the equity market will place a low value on an additional dollar of cash for these firms. Furthermore, this “option theory” predicts that the marginal value of cash to equity holders should increase as leverage declines, since the probability of avoiding bankruptcy, and therefore the probability of the extra dollar finding its way into the pocket of equity holders, increases.

### *2.2 Corporate governance and firm value*

Numerous studies have been conducted on the effect of corporate governance on firm value, arriving at conclusions that are very inconclusive. Some of these studies concluded that there is a positive relationship between corporate governance and firm value, while others concluded that the relationship that exists between corporate governance and firm value is negative. Yet, another line of conclusion that appears in the literature is that there is no statistically significant relationship between corporate governance and firm value. MacAvoy and Millstein (1999) argue that the mixed results have followed from concentrating on periods when boards were largely irrelevant and using unreliable proxies for board independence. Hermalin and Weisbach (2000) suggest that there is little to suggest that board composition has any cross-sectional relation with firm value.

Numerous studies have suggested that effective corporate governance impacts positively on firm value. Pinkowitz *et al.* (2006) postulate that firms that choose to use the capital markets of countries with better investor protection are valued more highly and that the associated valuation premiums are inversely related to investor protection in the firm’s country (see also Doidge *et al.*, 2004). Further, Durnev and Kim (2005) find that firm value is negatively related to proxies for investor protection. The literature further shows that outside investors discount firm assets in countries with poor investor protection to reflect their expectations that they will not receive the full benefit of these assets (Pinkowitz *et al.*, 2006).

Chen (2008) suggests that establishing effective governance mechanisms may in turn effectively enlarge the degree of freedom for firms to make timely business decisions, leading to an improvement in firm value. Dittmar and Mahrt-Smith (2007) show that governance has a substantial impact on firm value through its impact on cash, depending on the measure of governance. The evidence shows that firms with poor corporate governance dissipate cash quickly and in ways that significantly reduce operating performance. This negative impact of large cash holdings on future operating performance is cancelled out if the firm is well governed. The literature shows that poorly governed firms dissipate cash through acquisitions thus impacting negatively on firm value. Harford *et al.* (2008) find that a well governed firm has its excess resources better “fenced in,” and that firms with poor corporate governance dissipate excess cash reserves more quickly on less profitable investments than those with good governance. In short, poorly governed firms waste excess cash resources and thus destroy firm value. Gompers *et al.* (2003) find evidence that firms with stronger shareholder rights have a higher firm value, higher profits, and lower capital expenditures. Brown and Caylor (2006) create a corporate governance index (CGI) based on 51 corporate governance provisions propounded by Institutional Shareholder Services. They find that better-governed firms are associated with higher financial value.

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For Russian firms, Black (2001) finds a positive relationship between corporate governance behavior and market performance. Black *et al.* (2006) create a governance score using a survey conducted by the Korean Stock Exchange and find that firms with higher scores have a higher market value. Cheung *et al.* (2007) examine the relation between corporate governance and firm value by constructing a corporate governance index, which reflects the presence of good corporate governance practices as well as variation in the quality of corporate governance practices for Hong Kong listed companies and concluded that a company's market valuation is positively related to its overall CGI score, a composite measure of a firm's corporate governance practices. They further conclude that in Hong Kong, good corporate governance practices are consistent with value maximization. Rosenstein and Wyatt (1990) find a very slight increase in stock prices when a company appointed an additional outside director. MacAvoy and Millstein (1999) find a positive relationship between board independence and financial value. Carter *et al.* (2003) conclude that boards with both insiders and outsiders produce the best financial value. Baysinger and Butler (1985) test the relationship between the percentage of independent directors and a relative measure of return on equity. They find that boards with more outsiders outperformed other firms but that a majority of independent directors was not necessary to insure above average value. Agrawal and Knoeber (1996) find a negative relation between the proportion of outside directors and firm performance among the US firms. They posit that a political process within firms influences the selection of outside directors, and the directors may be less effective as they are beholden through the selection process. Shrader *et al.* (1997) investigate the relationship between the percentage of female board members and financial value and find a significant negative relationship between the percentage of women on the board and firm value. Jensen (1986) argues that entrenched managers – left unmonitored – may waste free cash flows.

Nevertheless, another group of studies also suggest that there exist no significant relationship between corporate governance and firm value. Bhagat and Black (1999) investigate the US firms and find no significant relation between board independence and long-term firm performance. Klein (1998) finds no association between a firm's committee structure and firm value. An earlier study, also conducted by Bhagat and Black (1999) also finds no relationship between long-term market returns and board independence. Hermalin and Weisbach (1991) compared the percentage of outsiders on boards to a relative measure of Tobin's Q. They conclude that there is no relationship between the percentage of outsiders on the board and firm value. Zahra and Stanton (1988) use canonical analysis to test the relationship between the percentage of ethnic minority directors and firm value but found no statistically significant relationship.

### *2.3 Ownership structure and firm value*

Studies that have been conducted on the relationship between ownership structure and firm value have come out with diverse conclusion. Some studies such as Morck *et al.* (1988) and McConnell and Servaes (1990) concluded that a non-linear relation between insider ownership and firm value. Thus, insider ownership increases firm value by aligning the interest of insiders with outside shareholders. However, as inside ownership increases, the entrenchment effects of inside ownership dominate and higher inside ownership becomes associated with a lower firm value. This is supported by Jensen and Meckling (1976), who argue that increasing managerial ownership

can better align the interests of managers and shareholders, which can increase firm value. Jensen (1986) argues that a high level of managerial ownership reduces the agency problem of cash flows.

Other studies such as Himmelberg *et al.* (1999) suggest that managerial ownership and firm performance are determined by a common set of characteristics, which are not related to ownership structure. Bhagat *et al.* (2004), however, do not find evidence supporting a positive association between ownership concentration and firm performance. Thus, neither activism of institutional investors (Carleton *et al.*, 1998) nor ownership by outside blockholders (Bhagat *et al.*, 2004) is found to have an important effect on firm value.

### 3. Data and methodology

Data for our study were derived from the *Ghana Stock Exchange Factbook* series and from our own survey results. Data relates to the period 2001-2007. Data on board size, the number of board meetings, board composition, and percentage of inside ownership were obtained through a survey. We model the implications of cash holdings, corporate governance variables, and ownership structure variables on firm value as follows:

$$Y_{it} = \beta' \mathbf{GOV}_{it} + \delta' \mathbf{OWNS}_{it} + \varphi \mathbf{CASH}_{it} + \phi' \mathbf{CONTRL}_{it} + \varepsilon_{it}$$

where subscript  $i$  and  $t$  represent the firm and time, respectively. In this case,  $i$  represents the cross-section dimension,  $t$  represents the time-series component, and  $Y_{it}$  is the dependent variable and measures share price. We used year-end share prices.

GOV is a vector of governance variables namely board size, board independence, and board intensity. OWNS is an ownership variable (the proportion of shares held by managers and employees), enabling us to test the relationship between inside ownership and firm value. CASH variable is included to observe the effect of cash holdings for firm value. It is measured as the natural logarithm of year-end cash balances. CONTRL is a vector of control variables that includes leverage, dividend payout ratio, and Tobin's Q. Tobin's Q is used as a proxy for future investment opportunities and leverage serves as proxy for financial risk.

Studies in liquidity demand shows that there is a relationship between changes in cash balances and some of the control variables. To avoid problems of endogeneity in the estimation due to the inclusion of the cash variable alongside dividend payout ratio, volatility of income, and inside ownership as control and explanatory variables, the seemingly unrelated regression approach was adopted to jointly estimate a regression of share price (firm value) and cash holdings to mitigate problems of multicollinearity due to perfect collinearity in the explanatory variables. We report here the share price equation part of the results, as we are interested in firm value results. The detailed results of the seemingly unrelated regression (SUR) are given in the Appendix.

### 4. Empirical results

The overall summary statistics of the data constructed is presented in Table I. The mean of inside ownership is about 13.27 percent, and the average board size is about eight board members with a minimum of five and a maximum of 17. In terms of the number of board meetings, there is a minimum of nil and maximum of seven and an average of about four. The liquidity variable has an average of 5.90. Average dividend payout ratio is about 5 percent and the average income volatility is about 10 percent.

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Variable <sup>a</sup>	Obs	Mean	SD	Min.	Max.
Shareprice	106	7.9146	1.8787	4.2047	12.6115
Insown	107	0.1327	0.1847	0.0034	0.9095
Levrg	107	0.5427	1.2594	0.1040	9.0496
Boardsize	107	2.1173	0.2668	1.6094	2.8332
Meet	104	1.4167	0.2067	1.0986	1.9459
Tobinq	107	0.1971	0.2060	0.0020	0.9502
Liqlog	107	5.9099	1.0770	1.2006	8.2986
Voi	107	0.1072	0.1553	0.0013	0.9468
Divp	105	0.0489	0.0664	0.0000	0.3180
Meetings	105	4.1714	0.9653	0.0000	7.0000
Bdsize	107	8.6262	2.5900	5.0000	17.0000

**Notes:** <sup>a</sup>Shareprice is the log of year end share prices, Insown is the percentage of outstanding issued shares owned by managers and employees, Levrg is a measured of total liability to equity, Boardsize is the natural log of the number of board members, TOBINQ is the Tobin's Q, Meet is the natural log of the number of board meetings in a year, Liqlog is the natural log of year end cash balances, Voi is the volatility of income measured as the three-year standard deviation of return on assets, Divp is dividend payout ratio measured as dividends paid as percentage of net income, Meetings is the number of meetings in a year and Bdsize is the number of board members

**Table I.**  
Summary statistics

We turn now to the analysis of the results obtained from the regression. Table II presents the results of regression analysis with share price as the dependent variables, which are a part of the SUR results. The other part of the results is left to the Appendix.

Table II reports the marginal contribution of the independent variable to Firm value. It also reports the *Z*-scores and *P*-values that test significance of the relationship. We used shares held by directors, managers, and employees as ownership and we found a negative but statistically insignificant relationship with firm value. This implies that investors will discount shares of companies with inside share ownership. Investors on the Ghana Stock Exchange (GSE) will shy away from companies with

Variable	Coefficients	Z-score	Prob.
Ownership structure	-0.2498	0.30	0.765
Board composition	-0.7030	0.55	0.852
Board intensity	0.1539	0.21	0.836
Board size	3.521	6.38***	0.000
Leverage	0.4878	4.04***	0.000
Dividend	6.5304	2.85**	0.004
Liquidity	0.0041	0.03	0.977
Risk	-2.5837	2.49**	0.013
Tobin's Q	0.0852	0.11	0.911
Constant	0.0666	0.04	0.970
RMSE	1.4391		
$R^2$	0.4220		
$\chi^2$	75.20		0.0000

**Table II.**  
Regression results:  
dependent variable –  
share price

**Notes:** Significant at \*10, \*\*5 and \*\*\*1 percent levels, respectively; the regression results includes constant, *Z*-score and *P*-values

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inside ownership. There is a negative but statistically insignificant relationship between board composition and firm value. This presupposes that investors devalue companies with majority of board members as independent. On the board intensity, there is a statistically insignificant positive relationship with value of the firm. A board that fails to hold regular meetings runs the risk of being unable to fulfill its responsibilities to the shareholders and the company as we document a positive association between board intensity (meetings) and firm value. There is however positive and statistically significant relationship between board size (a measure of numerical strength of the board) and value of the firm. The size of the board is one of the devices used to align interest of managers and board members. Consistent with Chaganti *et al.* (1985) that a larger board may be more valuable for the breath of its service, the evidence from the GSE shows a positive association between board size and firm value.

There is also a positive relationship between financial leverage and firm value on the GSE. This relationship is also statistically significant. Firms with more long-term debt relative to equity tend to meet the expectations of investors hence the positive relationship between them. Probably, the present value of tax deductibility allowed by the Income Tax Act (Act 592) adds significantly to the value of the firm hence the positive relationship observed. We also found a positive relationship between dividend and firm value and this is statistically significance. Dividend payment is strongly valued by investors on the GSE. A 1 percent increase in dividend leads to 6.5304 increase in firm value.

There is a positive but statistically insignificant relationship between corporate cash holdings and firm value. How much liquid assets firms hold on their balance sheet positively influence firm value but the extent of the influence is not strong. There is negative and statistically significant relationship between volatility in earnings (risk) and firm value. Uncertainty in earnings negatively affects investors' valuation of companies. And finally, there is a positive relationship between investment opportunities and corporate value even though the relationship is not statistically significant.

## 5. Conclusions

Firm value is influenced by risk characteristics of the firm in terms of both income and leverage. However, the influence of cash holdings is less clear. Perhaps, this is because the evidence of on the reasons why firms accumulate cash is less conclusive. Among the governance variables that show an influence on firm value is the board size. Probably, this signifies the fact that companies with larger board sizes brings about better management, weaken control by one individual and provides benefit of a diversified skill set and experience which leads to a positive impact on share price. Shareholders, perhaps, do not value additional cedi (dollar) accumulated by managers on the GSE. They would prefer that it was invested more profitably or paid back to them. Though, corporate managers cannot directly influence the share price of the companies they manage on the GSE, they can act in a manner consistent with the desires of investors which will consequently reflect on the value of the company on the exchange. Corporate managers must review their governance structures in line with the expectations of the investing public. In addition, corporate managers' desire to build financial slack will significantly be discounted by shareholders, as this is not viewed as being in



their interest. Returning additional cash to shareholders or investing it in financially viable project is more preferred to storing it on the balance sheet.

Considering that the study focuses on only Ghana, we recommend that effort should be made to look at this study in a more elaborate viewpoint and across borders as well as incorporating the views of corporate managers. Various forms of ownership structures such as ownership concentration, family ownership, state ownership, institutional ownership, and foreign share ownership must be explored in future research. This will present a broad based approach to understanding the dynamism of ownership structure and other governance structures and how they impact on firm value.

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<i>Equation</i>	<i>Obs</i>	<i>Parms</i>	<i>RMSE</i>	<i>R<sup>2</sup></i>	<i>χ<sup>2</sup></i>	<i>P</i>
Shareprice	102	9	1.4391	0.4227	5.2000	0.0000
Liqlog	102	5	0.9654	0.2201	9.1200	0.0000
	<i>Coef.</i>	<i>SE</i>	<i>Z</i>	<i>P &gt;  z </i>		
<i>Shareprice</i>						
Bcomp	-0.7030	1.2785	-0.55	0.5820		
Liqlog	0.0041	0.1391	0.03	0.9770		
Voi	-2.5837	1.0387	-2.49	0.0130		
Levrg	0.4878	0.1208	4.04	0.0000		
Divp	6.5304	2.2879	2.85	0.0040		
Insown	-0.2499	0.8343	-0.30	0.7650		
Meetings	0.1539	0.7454	0.21	0.8360		
Boardsize	3.5214	0.5512	6.39	0.0000		
Tobin	0.0852	0.7667	0.11	0.9110		
_Con	0.0666	1.7756	0.04	0.9700		
<i>Liqlog</i>						
Levrg	0.1521	0.0783	1.94	0.0520		
Insown	-0.3436	0.5492	-0.63	0.5320		
Divp	-0.8686	1.5638	-0.56	0.5790		
Lsale	-0.5695	0.1371	-4.15	0.0000		
Tobinq	0.1014	0.4827	0.21	0.8340		
_Con	8.4035	0.5700	14.74	0.0000		

Table AI.

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