Corporate disclosure, transparency and firms’ cash holdings: Evidence from the Emerging capital market of Ghana

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The paper documents the monitoring effect of corporate disclosure and transparency on cash holdings on the Ghana Stock Exchange (GSE). The paper employs the Fama and French (1998) valuation model by relating firm level variables to firm value with panel data covering a period from 2002 to 2007 for 23 firms. It builds further on the agency theory and its relevance to emerging markets. We find that the relationship between corporate disclosure, transparency and cash holdings is economically significant and inversely related. We provide that a 1% increase in the composite disclosure and transparency index decreases cash holding by 0.0338 with the market also discounting the value of such firms by 0.0522. Additionally, we provide that firm size, profitability, financial leverage and investment needs are economically significant determinants of cash holdings. The sample refers to only Ghana and the extent of generation of the findings could be affected. We argue that further research should be carried out using other country data to confirm or contradict our findings. The paper includes implications for the management of cash resources on the GSE and builds on the mechanism of aligning the interest of shareholders with managers. It further provides implications for the development of the capital market in Ghana and argues that further research should be carried out using other country data to confirm or contradict our findings.

Key words: Corporate disclosure, transparency, cash holdings, emerging market, Ghana.

INTRODUCTION

Generally, holding cash aggravates the agency problem as in the spirit of Myers and Rajan (1998) liquid assets can be turned into private benefits at lower cost than other assets and therefore represent a promising opportunity to investigate the implications of agency theories (Pinkowitz et al., 2006). Though Acemoglu et al. (2003) contend that countries in which the appropriation of private benefits is easier are also typically riskier, and therefore firms in these countries may hold more cash simply because they require a larger buffer to protect themselves against adverse shocks (see Pinkowitz et al., 2006), holding cash exacerbates the agency problem. This is because according to Dittmar et al. (2003) agency costs and information asymmetries are expected to have a significant impact on the value of cash resources. With improved governance leading to enhanced disclosure and transparency, holding cash should significantly add to shareholder value. Corporate disclosure and transparency impacts the agency problem through reduction in information asymmetry (information effect leading to reduction in cost of capital (Botosan and Plumlee, 2002) improved liquidity and stock performance (Healy et al., 1999)) and monitoring effect (moral hazard effect of corporate disclosure and transparency). Whilst the former
(disciplinary effect of corporate disclosure and transparency) has received considerable research attention, the latter has not received as nearly an important place in the literature. According to Huang and Zhang (2008) no research to date has unambiguously isolated the monitoring effect from the information effect of corporate disclosure activity and therefore there is the need to examine the monitoring effect of corporate disclosure on cash holdings. This is particularly important as Jensen (1986) argues that conflicting interests between investors and managers are especially severe when managers stockpile cash to grow their firms beyond the optimal size to pursue their private control benefits. It is imperative then to separate the information effect of corporate disclosure and transparency from the monitoring effect. This according to Huang and Zhang (2008) will help to understand the sources of value derived from corporate disclosure activity more precisely. Empirically, Harford (1999) documents that firms with stockpiles of cash tend to undertake value-decreasing acquisitions. Later, Harford et al. (2005) find that firms with weak shareholder rights dissipate cash quickly through acquisitions because shareholders in such firms are particularly concerned with mounting cash reserves. According to Mitton (2002) improved transparency mitigates management's proclivity for investing in assets that destroy investor value, which in turn improves shareholder protection. Bushman and Smith (2001) posit that when companies engage in higher disclosure quality and greater transparency, investors can effectively monitor firm performance and contractual commitments thus emphasizing the monitoring effect of corporate disclosure and transparency.

The paper argues is consistent with Huang and Zhang (2008) that greater transparency limits insiders' capacity to accumulate liquid assets for their private benefits because they have little to conceal from outsiders. Ghana’s stock market has gained momentum since its establishment a little over two decades ago, being judged the best performing stock market in 2004 and the most innovative African stock market in 2010 by the New York Exchange. Ghana has also experienced significant changes in corporate governance since the establishment of the GSE. Corporate governance has gone through transformations both at the firm level and the political governance level following reforms principally led by the World Bank and IMF. Empirically, corporate governance has received a considerable attention both by academicians and industry practitioners (Abor, 2007; Kyereboah-Coleman et al., 2006), but corporate disclosure and transparency has not received much empirical attention. Extant literature on corporate disclosure has focused on disclosure level and determinants (Tsamenyi et al., 2007); corporate disclosure and foreign share ownership (Bokpin and Isshaq, 2009) but the monitoring effect (essentially meant to reduce moral hazard component of information asymmetry) of corporate disclosure has remain under studied as has also been noted by Huang and Zhang (2008) at the international level. The paper seeks to contribute to extant literature using an emerging market data. Empirical evidence focused on international comparative data and we argued their results can better be understood with country-specific findings because as K slaughter and Love (2004) suggest that firms can adopt firm-specific shareholder protection to distinguish themselves from other firms in the same country (Durnev and Kim, 2005) and even in the same industry. This is because La Porta et al. (1998) had earlier opined that countries that include more disclosure items in firms’ annual reports generally have better legal protection for investors (Levitt, 1998). There is considerable bias in sample selection in recent international comparative studies relating corporate disclosure and transparency to cost of capital (Huang and Zhang, 2008) as most authors focus on country level studies. But, more detailed within-country studies can complement the results of cross-country investigations and this would enable specific policies to be fashioned out that takes into consideration institutional and cultural differences. Using emerging market data will further buttress or refute the argument that international findings are not attributed entirely to the level of countries’ stock market development or the sophistication of investors or number of analyst following.

THEORETICAL FOUNDATION AND EMPIRICAL EVIDENCE

Empiricists underscores that perhaps no other theory has had profound impact on the world of business as the agency theory. The theory is predicated on the premise that organisations should be seen as no more than a set of implicit and explicit contracts with associated rights. Jensen and Meckling (1976) defined an agency relationship as “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent”. The premise of agency theory is that self-interested managers hold motives that often conflict with organizational goals and shareholder expectations and hence will only disclose information to their advantage; accordingly, self-interested managers need to be monitored and sufficiently motivated (Fama, 1980). Firms hold cash for a number of reasons including transactional, precautionary, speculative and compensating balance purposes. Thus, how much liquid balance is held by a corporation is influenced by factors such as transaction costs, opportunity costs and informational asymmetries (Bruinshoofd and Kool, 2004). Cash is the life blood of the firm and it enables the firm to turn itself around especially in the short run in terms of meeting its short term financial obligations as and when they fall due.
Thus, consistent with Pinkowitz et al. (2006) we do not expect that controlling shareholders or managers transform a firm’s liquid assets into private benefits in such a way that the firm is always starved for cash. But holding cash also presents challenges for expropriation by managers or controlling shareholders. The presence of cash exacerbates this agency problem. This is because according to Dittmar et al. (2003), agency costs and information asymmetries are expected to have a significant impact on the value of cash resources. This is against the backdrop of the prepositions of Keynes (1936) who argues that cash hoardings can add value to firms in which asymmetric information increases the cost of external financing and thus exacerbates the underinvestment problem (Myers, 1984). Acemoglu et al. (2003) contend that countries in which the appropriation of private benefits is easier are also typically riskier, and therefore firms in these countries may hold more cash simply because they require a larger buffer to protect themselves against adverse shocks (Pinkowitz et al., 2006). According to Myers (1984) the precautionary motive of cash reserves requires that financial slacks can reduce underinvestment costs because information asymmetries inherent in capital markets often make outside funds prohibitively expensive. Jensen (1986) reports that liquid assets aggravate agency conflicts because managers often over invest cash in negative NPV projects whilst to Myers and Rajan (1998), it is easier for managers to steal cash than fixed assets. With the separation of the ownership of companies’ resources from their control, corporate disclosure is a potentially important means of communication between management and outside investors (Hassan et al., 2009). This will significantly reduce the information asymmetry (agency problems) between ownership and control that leads to adverse selection and moral hazard. Stiglitz and Weiss (1981) relate that greater information flows can mitigate the principal-agent problem, which in turn improves resources allocation in financial markets.

Later, Harford et al. (2005) find that firms with weak shareholder rights dissipate cash quickly through acquisitions because shareholders in such firms are particularly concerned with mounting cash reserves. Berger and Hann (2007) affirm that managers conceal segment information to obscure their firms’ underlying agency problems, suggesting that greater disclosure reduces agency costs. Black (2001) contends that extensive disclosures on matters regarding governance mechanisms, ownership structures, and financial reports improve external monitoring, thereby reducing agency costs. Kanodia and Lee (1998) further argue that company disclosure facilitates external discipline, thereby preventing managers from expropriating the wealth of investors. Healy and Palepu (2001) posit that disclosure of relevant information allows investors to closely monitor firms’ operations and thus effectively evaluate whether managers have utilized the resources in the best interests of shareholders. In this same spirit, Bushman and Smith (2001) relate that when companies engage in higher disclosure quality and greater transparency, investors can effectively monitor firm performance and contractual commitments.

**DATA AND MODEL SPECIFICATION**

The study used data mainly from the Ghana Stock Exchange (GSE) FactBook for the various years (2002-2007) and the annual reports and financial statements of the firms listed on the GSE. The market data namely dividend yield, share prices were extracted from the GSE FactBook whilst Tobin’s Q was calculated by the author from the FactBook. Contacts were made with the GSE library and the Securities and Exchange Commission for the annual reports. Missing figures were filled by making contact with the specific firms for the annual reports and financial statements. There are six financial institutions on the GSE today. These financial services companies such as banks and insurance companies were excluded because of their specific financial characteristics, affect their information disclosure (Hassan et al., 2009) and liquidity requirements. For corporate disclosure and transparency, we adapted the S&P’s overall transparency and disclosure rating which is categorized into three dimensions: ownership structure and investor rights, financial transparency and information disclosure and board and management structure and processes. The index is adjusted for non-applicable items and reconciled with the Ghana National Accounting Standards for conformity and compliance. Ghana however adopted the IAS in 2007 though implementation did not start immediately and therefore significant variation is expected which should significantly increase the marginal contribution of corporate disclosure and transparency to cash holdings, which makes it also easier comparing Ghana’s disclosure practices at the international level. The disclosure and transparency index was arrived at bearing in mind the disclosure and governance framework as enshrined in the Companies Code 1963 (Act 179). The Securities Industry Law, 1993 (PNDCL 333) as amended by the Securities Industry (Amendment) Act 2000, (Act 590), which provides among other things for governance of all stock exchanges, investment advisors, securities dealers, and collective investment schemes licensed under by the Securities and Exchange Commission (SEC) and the Membership and Listing Regulations of the Ghana Stock Exchange (GSE, 1990). It is supported by the Ghana National Accounting Standards and the codes of professional conduct imposed by the Institute of Chartered Accountants (Ghana) on its members. A score of 1 is assigned to an item if it is disclosed (disclosure index), and a score of 0 otherwise.

The total score of a company is obtained as:

\[
TDS = \sum_{i=1}^{m} di
\]

Where \( di \) is 1 if item \( i \) is disclosed, and 0 if otherwise; \( m \) is the maximum number of items (\( m=106 \)).

Paper mirrors the Fama and French (1998) valuation model by relating firm level variables to firm value. The basic regression model is specified as

\[
Y_{it} = B'nX_{it} + ni + \epsilon_{it}
\]

where \( Y_{it} \) is the dependent variable for firm \( i \) at time \( t \), \( B'n \) is a vector of independent variable and coefficients, \( X_{it} \) includes a
Proceeding from the above, we estimate the following specific model:

\[ LIQRAT_{it} = \xi TDS_{it} + \delta SIZE_{it} + \gamma ROA_{it} + \lambda FINLEV_{it} + \zeta ASSTANG_{it} + \phi DIVBIN_{it} + \sigma RISK_{it} + \epsilon_{it} \]  (2)

\[ LOGLIQ_{it} = \partial TDS_{it} + \varphi SIZE_{it} + \int ROA_{it} + \varphi FINLEV_{it} + \int ASSTANG_{it} + \lambda DIVBIN_{it} + \sigma RISK_{it} + \epsilon_{it} \]  (3)

\[ TOBIN'SQ_{it} = \int TDS_{it} + \chi SIZE_{it} + \alpha ROA_{it} + \nu FINLEV_{it} + \delta ASSTANG_{it} + \eta DIVBIN_{it} + \sigma RISK_{it} + \epsilon_{it} \]  (4)

Our main liquidity variable (\textit{LIQRAT} in model 1) is cash ratio defined as the ratio of cash and cash equivalents to net assets, which are total assets net of cash and cash equivalents expressed mathematically as \[ \frac{\text{Cash} + \text{Cash Equivalent}}{\text{Net Assets}} \]. \textit{LOGLIQ} measured as the logarithm of cash and marketable securities (model 2) is included for robustness test. Consistent with La Porta et al. (2002), the paper employs Tobin's Q to measure market valuation of the firm, measured as the ratio of the book value of total assets less the book value of equity plus the market value of equity to the book value of total assets (Nohel and Tarhan, 1998 as in model 3).

In the case of the explanatory variables, disclosure and transparency index is as explained above, Firm size is measured by the logarithm of total sales. This is also included to test for the transactional demand on firms and economies of scale rather than as a measure of antitakeover deterrent as the market or firms in general are subject to little or no takeover threat in Ghana compared to the case of Huang and Zhang (2008). Cash flow is measured as as earnings before interest, taxes, depreciation, and amortization less interest, taxes, and common dividends scaled by net assets. Financial leverage is measured as the ratio of total debts to total assets to gauge the level of external monitoring and a test of financial and interest commitment of firms as firms are still largely reliant on financial institutions, asset tangibility is included to test for the investment demand of firms. The dividend binary variable is included to assess the presence of financial constraints and it takes the value of 1 if the company pays dividend and 0 if otherwise. The seemingly unrelated regression approach was adopted.

RESULTS AND DISCUSSION

This section presents the descriptive summary statistics (Table 2) and the results and discussion of the regression (Table 3).

Liquidity ratio records overall mean of 5.8058 but varies both between and within firms over the sample. Using the logarithms of cash and cash equivalent, we record average mean of 0.1539 but shows overall variation of 1.0876 over the sample period across the firms. Inferring this at the international level though with different time period and institutional differences and different samples, firms in Ghana maintain slightly higher (15.39%) cash level than Germany (11.6%) and minimally below US (16.4%) and Japan (19.0%) (Pinkowitz and Williamson, 2001 for other country statistics). Dittmar et al. (2003) contend that corporations in countries where shareholders rights are not well protected hold up to twice as much cash as corporations in countries with good shareholder protection. Though, the level of corporate disclosure and transparency is low in Ghana as compared to developed markets (Tsamenyi et al., 2007) we did not confirm their evidence in the Ghanaian case as the level of cash holdings is slightly above that of Germany and below US and Japan reputed to have higher investor protection compared to Ghana. Given the level of the financial market development including the
Table 2. Descriptive statistics.

| Variable  | Obs | Mean  | Std. Dev. | Min.  | Max.  |
|-----------|-----|-------|-----------|-------|-------|
| LIQRAT    | 138 | 5.8058| 1.0876    | 1.2006| 8.2985|
| LOGLIQ    | 138 | 0.1539| 0.1772    | 0.0001| 0.9353|
| TOBIN’SQ  | 138 | 0.1876| 0.2041    | 0.0008| 0.9502|
| TDS       | 138 | 0.4835| 0.9278    | 0.3333| 0.6889|
| SIZE      | 138 | 4.4243| 0.7796    | 3.0410| 6.3610|
| ROA       | 138 | 0.0694| 0.0832    | -0.1676| 0.2965|
| FINLEV    | 138 | 0.7785| 0.4915    | 0.0063| 2.5064|
| ASSTANG   | 138 | 0.4328| 0.2149    | 0.0000| 0.8551|
| DIVBIN    | 138 | 0.5579| 0.4984    | 0.0000| 1.0000|
| RISK      | 138 | 0.1070| 0.1509    | 0.0013| 0.9468|

Source: Author’s Compilation, 2011.

Table 3. Regression results of cash holding on disclosure.

| Variable  | Model 1 | Model 2 | Model 3 |
|-----------|---------|---------|---------|
| TDS       | -0.0338(0.0201)| -0.1259(0.1660)| -0.0522(0.1837)|
| SIZE      | -0.2994(0.1115)| -0.0578(0.0188)| 0.0401(0.0208)|
| ROA       | 0.2385(1.0769)| -0.0597(0.1816)| -0.0666(0.2010)|
| FINLEV    | -0.4424(0.1737)| 0.0305(0.0293)| -0.0996(0.0324)|
| ASSTANG   | -0.9957(0.3881)| -0.2465(0.0655)| 0.2701(0.0724)|
| DIVBIN    | -0.4519(0.1757)| 0.0163(0.0296)| -0.7103(0.0328)|
| RISK      | -1.2050(0.5566)| -0.0462(0.0939)| 0.1607(0.1039)|
| CONSTANT  | 8.2668(0.6903)| 0.5453(0.1164)| 0.0188(0.1288)|

Obs 138 138 138
Parms 7 7 7
RMSE 0.9495 0.1602 0.1772
“R-sq” 0.2322 0.1773 0.2403
Chi2 41.74 29.75 43.64
P 0 0.0001 0

Consistent with Fama and French (1998), we report the coefficients and the standard errors as we are more interested in the marginal contribution of the explanatory variables. Standard errors are in parenthesis.

stock market (GSE) as well the level of corporate governance, it is expected that firms will hold more cash to compensate for the deficiencies in the system but that is not the case perhaps due to firms’ inability to generate more cash hence the low level of cash holdings. Tobin’s Q registers overall mean of 0.1876 and ranges from 0.0008 to 0.9502. Disclosure and transparency index registers overall mean of 0.4835 and ranges from as low as 0.3333 to 0.6889. The standard deviation reveals considerable variation over the period across the firms and over the sample period. The level of information disclosure on the GSE is low. Size registers overall mean of 4.4243 indicating majority of the companies are not large companies and are perhaps in the range of small to medium size companies. Averagely firm profitability hovers around 0.0694 and ranges from a negative of -0.1676 to 0.2965. Financial leverage (debt ratio) records 0.7785 suggesting firms relay heavily on the financial institutions for financing. Investment in fixed assets changes minimally over the period see standard deviation whilst only 56% of the firms on the average pay dividend with some level of exposure to operating uncertainties.

Empirically, Pinkowitz et al. (2006) document that the relationship between cash holdings and firm value is much weaker in countries with poor investor protection than in other countries and Fresard and Salva (2008) report that governance environment that requires stricter disclosure requirements save to limit managers ability to squander liquid balances. We mirrored their findings with majority of disclosure items from the S&P disclosure and transparency index instead of their investor rights index (Pinkowitz et al., 2006). In economically significant manner, we document a negative relationship between cash holdings and TDS suggesting that the level of cash...
the transactional motive, cash holdings respond inversely to the measures of cash holdings. More profitable firms hold more cash than less profitable firms. But, we found negative relationship between profitability and cash holdings (log of cash and cash equivalent) and the market value of the firms perhaps the direction and magnitude of profitability is sensitive to the measures of cash holdings. Huang and Zhang (2008) find that the level of leverage is negatively related to cash balances at the 1% significance level, which according to them supports the agency theories that highly levered firms retain less cash because they are more subject to capital market monitoring. We mirrored their findings in the Ghana’s case reporting that 1% increase in the debt level of firms, decreases cash holdings by 0.4424 and such firms suffer a mark down in their market value by 0.0996. Borrowing brings other financial commitment on the firm by way of interest payment (demand on liquidity to service interest payment) and the repayment of the principal and this decreases cash available to managers. Firms carrying high debt levels also suffer from downward valuation. We further document a negative and statistically significant relationship between investment demands (fixed assets) and levels of cash holdings. Increase in the investment opportunities of firms in fixed assets reduces the cash available for hoarding. Also commitment to dividend payment reduces cash available to firms perhaps for hoarding. Huang and Zhang (2008) report that coefficient on the dividend indicator variable is negative and significant at the 5% level, suggesting that commitment to dividend payout forces firms to disgorge cash, we mirrored this evidence in Ghana. Uncertainties in earnings forces firms to hold less cash though economically insignificant.

Conclusions and Implications

Reasons for holding cash dates back to Keynes (1936) and since then many researchers have looked at the demands on the cash holdings of corporations (Opler et al., 1999) from different angles. Empirical, the agency theory has been used extensively in investigating the susceptibility of cash to expropriation (Dittmar et al., 2003; Pinkowitz et al., 2006). Holding cash exacerbates the agency problem because according to Dittmar et al. (2003), agency costs and information asymmetries are expected to have a significant impact on the value of cash resources because according to Myers and Rajan (1999), liquid assets can be turned into private benefits at lower cost than other assets and therefore it is easier to make cash disappear than to make plant disappear. With improved governance leading to enhanced disclosure and transparency, holding cash should significantly add to shareholder value. Corporate disclosure and transparency impacts firms through its disciplinary (reduction in information asymmetry (Botosan and Plumlee, 2002)) and monitoring effect (Huang and Zhang, 2008). But, Huang and Zhang (2008) contend that the former (information effect) of corporate disclosure and transparency has received its place in the literature much to the neglect of the monitoring effect. According to them, no research to date has unambiguously isolated the monitoring effect from the information effect of corporate disclosure activity and therefore there is the need to examine the monitoring
effect of corporate disclosure and transparency on cash holdings. Our paper builds on the premises of Huang and Zhang (2008) by providing first hand empirical evidence on the monitoring effect of corporate disclosure and transparency on cash holdings from a developing country perspective. Though, the Ghana Stock Exchange (GSE) has been around for just a little over two decades, the paper posits that the level of corporate disclosure and transparency of firms listed on the GSE ought to be examined as well as its monitoring effect on cash holdings. Whilst employing the Seemingly Unrelated Regression approach for 23 non-financial firms, we provide that a 1% increase in the composite disclosure and transparency index decreases cash holding by 0.0338 in economically significant level. We further report that though the direction of the impact of corporate disclosure and transparency is the same, the magnitude of the reduction in the level of cash holdings is sensitive to the measurement of cash holdings: slightly higher for logged liquidity (0.1259) than when scaled by net assets (0.0338). But firms with low disclosure and transparency do not suffer from a lower valuation by the market with 1% increase in the composite disclosure and transparency index recording a mark down of 0.0522. Consistent with the transaction motive, cash holdings respond inversely with firms’ transactions and are at statistically significant levels. There is a statically significant positive relationship between profitability and cash holdings. More profitable firms hold more cash than less profitable firms. Mirroring Huang and Zhang (2008) in the Ghanaian case we report that 1% increase in the debt level of firms, decreases cash holdings by 0.4424 and such firms suffer a mark down in the market by 0.0996. Huang and Zhang (2008) find that, the level of leverage is negatively related to cash balances at the 1% significance level, which according to them supports agency theories that highly levered firms retain less cash because they are more subject to capital market monitoring.

The findings of the paper present implications to managers of firms on the GSE and regulators. Corporate managers should look at the results with the understanding that adjusting their corporate disclosure will be rewarded by the market though a negative relationship is reported in the case of market valuation. Running an opaque company will not only be discounted by the market but it significantly destroys firm value. Agreeing with the preposition that Shareholder wealth maximization is not a simple task and the fact that management cannot directly influence or control the firm’s stock price but can only act in a way that is consistent with the desires of shareholders, corporate disclosure and transparency remains one of the viable option of maximizing shareholder wealth and other stakeholder concerns. Further studies are needed to investigate the negative relationship between corporate disclosure and market valuation, perhaps the characteristics (timeliness, reliability, its predictability, value relevance) of the information being provided ought to be looked at together with other factors.

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