Does Business Group Affiliation Affect Cash Holdings? Moderating Role of Political Connection

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Abstract

We investigate whether the business group membership affects corporate cash holdings in an emerging economy. We also examine whether the presence of politicians, being as directors on the board, influences the association between group membership and cash holdings. We use Ordinary Least Squares (OLS) regression to test our conjectures. In addition, we employ Heckman two-stage estimation to address possible endogeneity in our analysis. Using a sample of publicly listed companies in Bangladesh, we find that compared to independent firms, business group member firms hold significantly lower cash which is in line with the notion that internal capital market and brand reputation prevails in business groups. However, we find that compared to non-connected firms, business group firms (politically connected) hold more cash, which is consistent with the hypothesis of money extraction by politicians. This study contributes to the limited studies of the nature of cash holdings in emerging economies where political networks have a strong impact on business operations. This study also directs policymakers' attention to the current business environment, particularly the cash policies of business group member firms where politicians are also on the boards.

Chapter 1: Introduction

1.1 Introduction

The present study investigates the propensity for cash holdings by business group member firms relative to independent firms in an emerging country. We argue that cash holdings will be lower for business group member firms, relative to non-member firms, as group firms use themselves as an internal source of capital at lower costs. In addition, business group member firms are exposed to lower information asymmetry and lower agency costs. However, little is known about the scenario in an emerging country where the number of business groups is increasing significantly, and our study attempts to fill this gap in the current literature. This is because prior research shows that cash holding attitudes tends to be high in countries with lower investor protections and in countries with poor enforcement levels (Dittmar, Mahrt-Smith, & Servaes, 2003; Chung & Zhu, 2021). Moreover, previous research also shows that this cash holding motive is more critical in those developing countries due to the greater levels of agency conflict and because management utilises these greater cash levels for private benefits (Kalcheva & Lins, 2007).

Second, this study also examines whether aforementioned relation between business group membership and corporate cash holdings of the sample is moderated/influenced by the presence of political connection. It is argued that business groups, with their extensive networks, are more likely to be connected with politicians and political parties than standalone firms. Contrasting arguments are available in the extant research on cash holdings and corporate politics in different environments, including in the US context (Caprio, Faccio, & Mc Connell, 2011; Harford, 1999). However, it is unclear whether the cash holdings are greater in business groups and politically connected firms compared to non-connected business groups in Bangladesh.

1.2 Rational of the study

Given this gap in the literature, Bangladesh provides a unique setting for investigating cash holdings and business group affiliation for several reasons. First, Bangladesh's corporate governance system is characterised by lower investor rights, poor disclosure quality, lower implementation of international accounting and auditing standards at the firm level, and a one-tier board system (World Bank, 2009; 2015). On this notion, World Bank recommend regulatory bodies of Bangladesh i) take immediate initiatives to improve accounting and auditing quality; ii) amend the existing Companies Act substantially to improve corporate governance quality; and iii) enhance transparency in both public and private sectors (World Bank, 2009; 2015). Second, prior academic research also consistently identified the crisis in

external audit quality in Bangladesh (Karim, 2010; Karim and Moizer, 1996). Third, unlike in the US and other developed countries, earnings manipulation is higher for firms audited by Big4 affiliated firms than for non-big4 audited clients (Kabir *et al*., 2011). This is because firms recruit audit firms on the basis of their reputation rather than on the basis of their quality, a practise that is inconsistent with that of the rest of the world. Fourth, the agency problem is relatively more acute in Bangladesh due to family control over management (Biswas *et al*., 2019).

1.3 Findings of the study

Our empirical results are as follows. Using a large sample covering the periods of 2011 to 2019, we find that relative to independent business organization business group member firms hold significantly lower cash balances which is in line with the extant literature on business groups membership and cash holdings. In addition, we find that business groups that are politically connected hold larger cash balances compared to non-connected business groups. This suggests that cash holding is significantly higher in firms with political connection that can be expropriated by politicians for diverse activities (e.g., election campaigns, publicity, donations etc.). Moreover, prior research provides evidence that firms with political connection hold larger cash if their corporate governance quality is weak (Dittmar, Mahrt-Smith and Servaes, 2003).

1.4 Robustness of the study

In this study several analyses are conducted to find insights regarding the channels to validate the association between corporate cash holdings and business group membership. First, we examine whether the propensity to hold cash by group member firms varies with the level of the firms' liquidity needs. To ensure robustness in our results and to address endogeneity problems we used two-stage Heckman (1979) regression analysis. Moreover, we use several proxy measures of corporate cash holdings, and our analyses provide consistent results.

1.5 Contributions of the study

This study presents several contributions regarding business group membership and cash holdings related literature, and also has a number of policy implications. For instance, we present an empirical analysis of the association between business group membership and cash holdings in an emerging economy where the business environment is dominated by the presence of these groups. Second, we provide evidence regarding the prevailing influence of politicians in member firms compared to non-member firms. This study will make several

contributions to the existing business group and cash holdings literature. First, this study will provide an empirical analysis of the nature cash holdings in larger business conglomerate in an emerging economy where the business environment is dominated by the presence of these groups. Second, this study will provide evidence regarding the prevailing influence of politicians in a group member firms over non-connected firms. Third, this study will direct policymakers' attention to the current business environment, particularly the cash policies of group member firms, which are controlled by the politician on the boards.

Finally, our findings also direct policymakers' attention to the current business environment, particularly the cash policies of group member firms, which are controlled by the politician on the boards.

Chapter 2: Theories, Literature, and Hypotheses Development

2.1 Business group affiliation and cash holdings

Prior research defines a business group as a gathering of several standalone companies under solo but common managerial and economic control by a family. Unlike parent-subsidiary businesses regulated by the IAS 27 financial statements are not required to be consolidated for business group affiliated companies (IASB, 2006).[2] This is because the parent company, in the case of the parent-subsidiary relationship, is required to have significant control over the subsidiary units in terms of financial and operating policies (IASB, 2006). On the other hand, all units of business groups are separately managed, and their financial statements are also prepared separately. This study focuses on business group affiliation and propensity to hold cash compared to unaffiliated companies in Bangladesh. This study is motivated by the findings of the current literature on cash holdings and business groups, which reports that every unit of a business group treats itself as an internal source of finance as a result of benefits such as lower information asymmetry, lower agency costs and lower accountability when compared to the cost of external debt financing (Hoshi et al., 1990; Khanna and Palepu, 2000). Moreover, business group affiliated firms can use the group's reputation to attract external funds at a lower cost compared to standalone firms. In addition, one unit of a group can be used as collateral to finance another unit of the business group, thereby increasing the possibility of obtaining external funds at easier terms (Chang and Hong, 2000).

Business groups treat their member firms as alternative sources of financing and the group's reputation further enhances its capacity to attract external funds on easier terms. For instance, Cai et al. (2016) show that group member firm hold significantly lower cash in China due to twofold reasons including precautionary motives and lower constraints in the internal capital market. However, another study by He et al. (2013) finds that state-own business group affiliated firms perform better than private firms. Moreover, they document that business group affiliation does not affect firm-level performance, which is unique to China compared to other settings around the globe. Kim et al. (2019) find that Indonesian business group affiliated firms hold larger amounts of cash to minimise future liquidity risk and to ensure long-term stability. Moreover, they conclude that the unique characteristics of the group, and the cash holdings of other related firms increase the propensity to hold more cash compared to unaffiliated firms. Considering above inconclusive findings and arguments we estimate the first hypothesis is follows:

[2] IAS 27 presents Consolidated and Separate Financial Statements.

Hypothesis 1: Compared to standalone firms corporate cash holding is lower in Business group affiliated firms.

2.2 Business group affiliation, political connection and cash holdings

There is substantial research on the impact of political connections on different business avenues. For instance, prior studies document that political connection is positively connected with audit fees (Gul, 2006) and earnings manipulation (Peng, Wei, & Yang, 2011), and negatively associated with accounting information quality (Chaney, Faccio, & Parsley, 2011), firm performance (Ling, Zhou, Liang, Song, & Zeng, 2016), and earnings forecast accuracy (Chen, Ding, & Kim, 2010). However, the literature provides mixed evidence on the impact of political connections on corporate cash holdings (Boubakri, Ghoul, & Saffar, 2013; Caprio et al., 2011; Harford et al., 2008; Kusnadi, 2019). Moreover, little is known about the possible influence of political connection over the business group membership and cash holdings in a group dominated country. Some research argues that connected firms may provide poor disclosures with low quality information, as connected firms are less likely to be penalised. In addition, connected firm have been found to have poor earnings quality. For instance, Chaney et al. (2011) investigate the relationship between political connection and firms' information quality in 19 different countries. They document that connected firms (politically) deceive stakeholders, with the aim of hoarding benefits at the expense of shareholders. These authors claim that politically connected firms are not serious about the quality of information they disclose to their stakeholders.

Similarly, some research argues that politically connected firms hold more cash as they have weak corporate governance compliance relative to non-connected firms (such as, Boubakri et al., 2013; Lin, Chang, Yu, & Kao, 2019). Moreover, firms with political connection hold larger amount of cash to advance their political agendas. For instance, Boubakri et al. (2013) test the connection between political involvement and corporate cash holding in 31 countries around the globe. They document that compared to nonconnected firms connected firms are found with larger cash balances. They attribute these larger cash holdings to the attitudes of company directors or management (acute agency problems). The management/boards of such companies use the channel of political extractions to pursue their political objectives, and thus hold more cash in their firms. Moreover, they claim that politicians use their firms as 'cash cow' to implement their political agendas (legal or illegal political activities) at the expense of shareholders. However, lower cash holdings have been reported in good-governed firms compared to poorly governed firms.

Chen, Li, Xiao, and Zou (2015) conducted a study of cash holdings using a large dataset covering 120 Chinese cities from 2005 to 2007. They find that corporate cash holdings are lower when government quality is higher, which is consistent with the notion that firms can do their business freely and minimise local constraints in a well-governed environment. Moreover, they argue that better quality government can mitigate insider agency problems. However, this explanation is inconsistent with the idea of state expropriation. On the other hand, Caprio et al. (2011) document that firms' cash holdings are lower where the extent of political extraction is higher. This is because firms intentionally structure their assets holdings particularly their liquid assets to reduce the possibility of political extraction. Further, they document a negative association between expenditure on real assets (e.g., PPE and inventories) and political corruption, because these investments are more difficult to convert into liquid assets.

Despite these studies identifying either positive or negative relationships between political connections and corporate cash holdings, some studies document no relationship between the two. For instance, Kusnadi (2019) examines how the value of corporate cash holding is influenced because of politicians in the board taking a sample of 24 countries (including 16 developed and 8 emerging markets). They attribute their results to varied institutional characteristics and country-level corporate governance quality. However, they show an inverse relationship regarding political connection and corporate cash holding in emerging countries but not in developed countries. Given all this evidence, we conjecture that cash holdings will be higher in firms with political connection over non-connected firms and we estimate the following hypothesis:

Hypothesis 2: Cash holdings for group member firms (politically connected) is higher than group member firms (non-connected).

Chapter 3: Research Methodology

3.1 Sample and data collection

The present study consists of publicly listed companies in Bangladesh. This study concentrates on non-financial companies. We begin with initial sample of 1305 firm-years. We exclude 303 firm-year observations due to insufficient financial and governance data. Our final sample comprises 1002 firm-year observations. The data are collected from secondary sources; financial data was collected from COMPUSTAT Global, while we used annual reports to collect corporate governance data, financial data (unavailable in COMPUSTAT), group related information reports, and business segment data. Sample selection process and industry wise breakdown are presented in Table 1. Table 1 (Panel B) shows that the textile industry dominates our sample (18.23%), followed by the engineering sector (17.76%) which is consistent with previous Bangladesh-based studies (Bose, Saha, Khan, & Islam, 2017; Muttakin et al., 2017). However, tannery industry comes with least observations in the present analysis (3.49%).

Table 1: Sample Description

Panel A: Data sample

	Observations (firm-year)
Firm year observations during the sample periods (2011-2019)	1305
Unavailability of data	303
Total	1002

Panel B: Sectoral distribution

Sector Code	Sector name	Firm-year observations	Percentage
1	Ceramics and Cement	97	9.68
2	Engineering	178	17.76
3	Food and Allied	87	8.68
4	Fuel and Power	106	10.58
5	IT and Services	97	9.68
6	Miscellaneous	**70**	**6.99**
7	Pharmaceuticals	149	14.87
8	Tanner	35	3.49
9	Textile	183	18.26
	Total	1002	100

3.2 Model specification and variables definition

The following baseline regression models are estimated following prior research (Anderson and Hamadi, 2016; Hu et al., 2019; Subramaniam, Tang, Yue and Zhou, 2011) to test the hypotheses.

To test first research question (research objective 1) the following model is estimated:

$$CASH_{i,t} = \beta_0 + \beta_1 BGROUP_{i,t} + \beta_2 BIND_{i,t} + \beta_3 CEODU_{i,t} + \beta_4 SIZE\_FIRM_{i,t} + \beta_5 LEV_{i,t} + \beta_6 OCF_{i,t} + \beta_7 ROA_{i,t} + \beta_8 NWC_{i,t} + \beta_9 CAPEX_{i,t} + \beta_{10} DIV_{i,t} + \beta_{11} FAGE_{i,t} + \beta_{12} RND_{i,t} + YEAR\ EFFECTS_t + INDUSTRY\ EFFECTS + \varepsilon_{i,t} \ldots (1)$$

To test second research question (research objective 2) the following research model is estimated:

$$CASH_{i,t} = \beta_0 + \beta_1 BGROUP_{i,t} + \beta_2 BGROUP_{i,t} \times POLCON_{i,t} + \beta_3 POLCON_{i,} + \beta_4 BIND_{i,t} + \beta_5 CEODU_{i,t} + \beta_6 SIZE\_FIRM_{i,t} + \beta_7 LEV_{i,t} + \beta_8 OCF_{i,t} + \beta_9 ROA_{i,t} + \beta_{10} NWC_{i,t} + \beta_{11} CAPEX_{i,t} + \beta_{12} DIV_{i,t} + \beta_{13} FAGE_{i,t} + \beta_{14} RND_{i,t} + \sum YEAR\ EFFECTS_t + INDUSTRY\ EFFECTS_{\ t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots (2)$$

Where, I use three measures of cash holding following prior research of Thakur and Kannadhasan (2019) and Habib *et al.* (2017). LNCASH, CASHNA, & CASHTA, are three measures of cash holdings in the present paper. First measure shows the propensity of cash and marketable securities (Ln form) to the net assets. Second, CASHNA is measured as total cash and investments (short-term) which is divided by net assets. Third, CASHTA which is based on total cash and marketable securities which is scaled to total book assets. Business group membership (*BGROUP)* is a dichotomous/dummy taking a value of 1 if the firm belongs to a business group and 0 otherwise (Muttakin et al., 2017; Hendijani et al. 2021). Following prior research (e.g., Muttakin et al., 2015).

Currently many publicly listed companies are affiliated with business group. Business group means a collection of independent business organizations. We define business group membership based on related study (such as, Muttakin et al. 2017) I have classified a firm either as a standalone/independent company or an affiliated company. I have followed the same procedure starting from 2011 to 2019. Next, we categorize a firm as politically connected when atleast one of its large shareholders controls voting power (directly/indirectly) by at least 10%, or the firm's key person such as CEO/president, chairman or vice-chairman of the board is an active member of the parliament in Bangladesh. I assign 1 for firms affiliated with political connection and 0 for nonconnected firm (Al-Dhamari *et al.,* 2015).

3.3 Control variables

Consistent with previous research, we include several control variables for firm characteristics and firms' corporate governance. *BIND* is defined as the proportion of total independent directors in the board of the sample firm. *CEODU* refers to CEO duality and is assigned 1 if a CEO also holds the chairman position as well and 0 otherwise. We control for company size (*SIZE_FIRM*) based on total assets (LnAssets). Larger firms may have lower information asymmetry compared to smaller firms and greater access to external sources of finance (Clarkson, Gao, & Herbohn, 2020). Therefore, larger firms will have lower cash holding. We define Leverage (*LEV*) is proportion of total long-term debt divided to total assets of the company. We argue that firms with greater debt will have greater cash holdings to mitigate the possibility of bankruptcy risk (e.g., Chen & Chuang, 2009); in contrast, firms consider leverage as an alternative source of financing (e.g., Marwick et al., 2020; Ozkan & Ozkan, 2004), therefore they will be less likely to hold more cash. We include controls for current liquidity level, such as operating cash flow (*OCF*), which is measured by operating cash flows scaled by total assets. Profitable firms may hold higher cash amounts for the future development and expansion of their business (Clarkson, Gao, and Herbonhn, 2020). Therefore, we control for firms' profitability (*ROA*). We expect a positive coefficient with of *ROA* with cash holdings. Similar to related cash holdings research (Clarkson et al., 2020; Marwick, Hasan, and Luo, 2020), we control for net working capital (*NWC*) we expect a negative relation of working capital with firm cash holding levels. Firms that spend more on capital expenditures will have lower cash holdings (Marwick et al., 2020), because capital expenditures generate long-term/real assets. Likewise, we expect a negative coefficient for *CAPEX* in our analysis. However, another study shows that high-tech firms tend to invest more in research and development, and therefore they hold more cash compared to firms in other industries (Chen & Chuang, 2009).

Prior research documents the negative impact of firms' dividend payout policy on their cash holding attitudes (Opler, Pinkowitz, Stulz, and Williamson, 1999). This is because firms paying dividends have alternative fundraising options at easier terms by cutting their dividend payouts. On the other hand, dividend-paying firms may hold greater cash to attenuate the possibility of future cash shortages particularly to settle dividend payments (Opler, Pinkowitz, Stulz and Williamson, 1999). Thus, we consider firm's dividend payout policy using a dummy variable (*DIV*) where we assign 1 for firms paying dividends and 0 for otherwise. Following prior research (Anderson & Hamadi, 2016), we also control for firm age (*FAGE*) and research and

development expenditure (*RND*), where *FAGE* is measured as the natural log of firm's listing age and *RND* is measured taking total research and development expenditure over total assets of the firm. Older firms will hold more cash and therefore we expect a positive coefficient for *FAGE*, while those firms that invest more in research and development are expected to be more likely to hold higher level of cash to strengthen the growth of the company. Hence, we predict a positive relation of cash holding measures with *RND*.

Chapter 4: Empirical results

4.1 Descriptive summary and correlation

Table 2 Panel A displays the summary statistics of all the variables for the full sample. Panel B and Panel C shows the summary statistics for business group member firms and individual firms, respectively. The mean value of business group affiliation (*BGROUP)* is 0.569, indicating that, more than 56% of our sample companies are affiliated with any of business groups in Bangladesh. The mean value of political connection (*POLCON*) is 0.267, which indicates that, overall, more than 26% listed firms are politically connected. The mean (median) value of cash holding (under first measure) (*CASHTA*) is 0.092 (0.034) and 0.131 (0.035) under second measure of cash holding. In sum, sample companies hold cash more than 9% of firm's total assets. The average board independence ration *(BIND*) is 0.24, implying that more than 20 percent directors are independent (who do not possess any shareholding). The average firm size is 8.029 which is measured based on natural log form of total assets.

Table 2: Summary Statistics

	N	Mean	Q1	Median	P75	Std. Dev.
Panel A: Full sample						
CASHTA	1002	0.092	0.009	0.034	0.124	0.125
CASHNA	1002	0.131	0.009	0.035	0.141	0.221
LNCASHNA	1002	0.108	0.009	0.035	0.132	0.162
BGROUP	1002	0.569	0	1	1	0.495
POLCON	1002	0.267	0	0	1	0.443
BIND	1002	0.240	0.182	0.218	0.286	0.110
CEODU	1002	0.023	0	0	0	0.150
SIZE_FIRM	1002	8.029	6.942	7.971	9.115	1.670
LEV	1002	0.084	0	0.023	0.112	0.137
OCF	1002	0.063	0.006	0.048	0.108	0.097
ROA	1002	0.051	0.013	0.036	0.077	0.066
NWC	1002	0.040	-0.076	0.042	0.167	0.216
CAPEX	1002	0.046	0.002	0.021	0.065	0.062
DIV	1002	0.640	0	1	1	0.480
FAGE	1002	2.598	2.079	2.833	3.296	0.899
RND	1002	0.000	0	0	0	0.002
Panel B: Business group affiliated firms						
CASHTA	570	0.06	0.01	0.03	0.09	0.08
CASHNA	570	0.08	0.01	0.03	0.09	0.12
LNCASHNA	570	0.07	0.01	0.03	0.09	0.1
POLCON	570	0.35	0	0	1	0.48
BIND	570	0.23	0.17	0.2	0.29	0.09
CEODU	570	0.03	0	0	0	0.18
SIZE_FIRM	570	7.98	7.09	7.96	9	1.49
LEV	570	0.08	0	0.03	0.12	0.11
OCF	570	0.04	0	0.03	0.09	0.08
ROA	570	0.03	0.01	0.03	0.05	0.05
NWC	570	0.05	-0.06	0.05	0.16	0.19

CAPEX	570	0.04	0	0.02	0.06	0.06
DIV	570	0.64	0	1	1	0.48
FAGE	570	2.59	2.08	2.92	3.22	0.91
Panel C: Standalone firms						
CASHTA	432	0.13	0.01	0.06	0.19	0.16
CASHNA	432	0.2	0.01	0.07	0.23	0.29
LNCASHNA	432	0.16	0.01	0.07	0.21	0.21
POLCON	432	0.15	0	0	0	0.36
BIND	432	0.25	0.19	0.22	0.29	0.14
CEODU	432	0.01	0	0	0	0.11
SIZE_FIRM	432	8.09	6.66	8.03	9.28	1.88
LEV	432	0.09	0	0.01	0.1	0.17
OCF	432	0.09	0.02	0.07	0.15	0.11
ROA	432	0.08	0.02	0.06	0.12	0.08
NWC	432	0.03	-0.11	0.04	0.18	0.24
CAPEX	432	0.05	0	0.02	0.07	0.07
DIV	432	0.63	0	1	1	0.48
FAGE	432	2.61	2.08	2.71	3.37	0.88
RND	432	0	0	0	0	0

Table 3 Panel A presents the univariate test results for both business group affiliated and unaffiliated firms. Foremost observation is that non-member firms hold higher cash (*CASH*) as compared to stand alone companies. The difference is similarly consistent and statistically significant at 1 percent under all three measures of cash holding. Hence, this result supports our baseline hypothesis regarding the relation between business group membership and cash holding.

Regarding control variables, we find that, on average, group member firms have lower levels of board independence (*BIND*), firm size (*SIZE_FIRM*), debt proportion (*LEV*), cash flow from operational activities (*OCF*), net income available to shareholders over their investments (*ROA*), capital expenditure ratio (*CAPEX*), and higher levels of net working capital (*NWC*), CEO duality presence (*CEODU*) than unaffiliated firms. Moreover, we can see that more than 35% group member firms are politically connected over non-member firms (only 15%) which shows unique characteristics of Bangladesh setting and such significant interference/control through political connection strengthen the motivation of the present study. In sum, we find that significance of the differences varies across our sample periods.

Table 3 Panel B presents the correlation statistics of dependent and independent variables used in this study. we find that business group (*BGROUP*) is negatively associated with the level of cash holding which is in line with our conjecture (*H1*), suggesting that group member firms hold lower cash compared to counter unaffiliated/independent firms. We find the similar results under all three different measures of cash holding use in the present study. Further, cash (*CASH*) is positively and significantly associated with firms' size (*SIZE_FIRM*), operating cash flow (*OCF*), firms profitability (*ROA*), dividend payout policy (*DIV*) and negatively associated with CEO duality, leverage *(LEV*), and net working capital (*NWC*).

Following prior study of Gujarati and Porter (2009), we check and found that there is no multicollinearity problem in our analysis ($r < 0.8$). We use VIF to assess the multicollinearity among the variables. The average VIF is 3.49 which indicates that our analyses unlikely suffer from such multicollinearity problems.

Table 3: Panel A: Mean differences

	Business group member firms N=570	Non-member firms N=432		
Variables	Mean	Mean	Differences	Significance (p value)
CASHTA	0.063	0.131	-0.068	0.000***
CASHNA	0.078	0.200	-0.122	0.000***
LNCASHNA	0.069	0.159	-0.09	0.000***
POLCON	0.351	0.157	0.194	0.000***
BIND	0.231	0.251	-0.02	0.007***
CEODU	0.032	0.012	0.02	0.036**
SIZE_FIRM	7.980	8.093	-0.113	0.286
LEV	0.076	0.094	-0.018	0.043**
OCF	0.044	0.089	-0.045	0.000***
ROA	0.032	0.075	-0.043	0.000***
NWC	0.046	0.033	0.013	0.349
CAPEX	0.043	0.050	-0.007	0.063*
DIV	0.644	0.634	0.01	0.754
FAGE	2.591	2.606	-0.015	0.790
RND	0.000	0.000	0	0.524

The above univariate test shows the mean differences between group member firms and non-member firms. Group member firms consist of 570 observations, and non-member firms consist of 432 observations. Appendix A shows the definition of all variables used the present study.

Table 3 Panel B: Correlation summary among variables

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	*CASHTA*	1																
2	*CASHNA*	0.969	1															
3	*LNCASHNA*	0.986	0.994	1														
4	*BGROUP*	-0.271***	-0.276***	-0.273***	1													
5	*POLCON*	-0.052	-0.042	-0.046	0.217***	1												
6	*INT_DIV*	-0.126***	-0.118***	-0.121***	0.192***	0.154***	1											
7	*BIND*	0.014	0.015	0.009	-0.086***	-0.088**	-0.032	1										
8	*CEODU*	-0.056*	-0.053*	-0.055	0.066**	0.013	0.236***	-0.089***	1									
9	*SIZE_FIRM*	0.155***	0.135***	0.151***	-0.034	0.077**	-0.110***	-0.064**	-0.036	1								
10	*LEV*	-0.110***	-0.096***	-0.103***	-0.064**	0.036	0.049	-0.012	0.032	0.051	1							
11	*OCF*	0.345***	0.332***	0.342***	-0.228***	0.005	-0.133***	-0.007	-0.049	0.090***	-0.111***	1						
12	*ROA*	0.389***	0.378***	0.392***	-0.322***	-0.083***	-0.237***	-0.024	-0.068**	0.209***	-0.240***	0.608***	1					
13	*NWC*	-0.294***	-0.300***	-0.293***	0.030	-0.034	-0.074	-0.002	-0.035	-0.080**	0.000	-0.160***	0.038	1				
14	*CAPEX*	0.019	0.001	0.012	-0.059*	-0.077**	-0.071**	0.000	-0.046	0.155***	0.085***	0.143***	0.168***	-0.133***	1			
15	*DIV*	0.248***	0.217***	0.237***	0.010	-0.162***	-0.108***	-0.152***	0.004***	0.262***	-0.108***	0.206***	0.239***	-0.148***	0.201***	1		
16	*FAGE*	0.002	0.021	0.010	-0.008	0.094***	0.010	-0.029	0.040	-0.194***	-0.079	-0.032	-0.060*	-0.075**	-0.204***	0.018	1	
17	*RND*	0.016	-0.002	0.008	0.020	0.093***	-0.058*	0.032	0.056*	0.039	-0.023	0.017	0.040	0.052	0.136***	0.097***	-0.005	1

This table presents Person pair-wise correlations between all variables used in different regression models

4.2 Regression analysis results (business group and corporate cash holdings)

Results of the baseline regression analysis using Equation (1) are presented in Table 4. Cash holding is the dependent variable, and we use three different measures of cash holding such as *CASHTA, CASHNA,* and *LNCASHNA*. We find that the coefficient of *BGROUP* is negative in all three models (-0.038, 0-0.073, -0.050, t = -4.987, -5.488, -5.199) and they are statistically significant, supporting a negative association between business group affiliation and the level of cash holding. When we interpret in economic significance level results show that a one standard deviation increases in business group affiliation results, on average, in more than 5% decrease in corporate cash holding. The result suggests that firms which are affiliated with any of the group have lower cash holding compared to as unaffiliated/standalone companies in Bangladesh, which is consistent with the notion that business group member firms keep lower cash because they utilize themselves as internal source of financing, and, moreover, group's brand reputation put them in advantageous situation to have external funding at lower interest rate with easier terms. All these benefits permit group member firms to hold less cash compared to non-member firms. Overall, the results support our first hypothesis (H1). The adjusted R-squared (R^2) values range from 29.2%-30.3%, indicating that our dependent variable i.e., cash holding effectively captures the independent variables chosen in the present study. Regarding control variables, we find that signs of control variables are consistent with previous research. For instance, we find that firm size (*SIZE_FIRM*) is positively associated with cash holding. We also find that cash holdings are positively associated with the board independence *(BIND*), cash flow from business operation (*OCF*), return on operating assets (*ROA*), dividend payout ratio (*DIV*), and firm investment on research and development expenditure. Firms with same CEO and Chairman (*CEODU* firms) hold lower cash compared to other firms. Leverage is negatively associated with cash holding. Current working capital *(NWC*) has a significant association (negative) with cash holding implying that firms with greater net working capital hold lower cash holdings. Furthermore, firm who spend more on capital expenditure and fixed asset have lower cash holding. *CAPEX* is negative and statistically significant in all specifications of cash holding. Lastly, we document the positive relation between cash holding levels and firms listing age and research and development expenditure, but their association is not statistically significant.

Table 4: Regression of business group membership and cash holdings			
	CASHTA	*CASHNA*	*LNCASHNA*
INTERCEPT	0.081***	0.119**	0.096**
	(2.791)	(2.345)	(2.568)
BGROUP	-0.038***	-0.073***	-0.050***
	(-4.987)	(-5.488)	(-5.199)
BIND	0.027	0.031	0.022
	(0.792)	(0.522)	(0.505)
CEODU	-0.036**	-0.060**	-0.046**
	(-2.093)	(-2.346)	(-2.204)
SIZE_FIRM	0.001	0.001	0.001
	(0.401)	(0.353)	(0.416)
LEV	-0.031	-0.034	-0.030
	(-1.198)	(-0.788)	(-0.948)
OCF	0.103**	0.152*	0.121*
	(2.120)	(1.686)	(1.873)
ROA	0.500***	0.892***	0.673***
	(5.800)	(5.586)	(5.989)
NWC	-0.143***	-0.270***	-0.188***
	(-6.958)	(-7.002)	(-7.022)
CAPEX	-0.248***	-0.494***	-0.342***
	(-4.212)	(-4.865)	(-4.529)
DIV	0.034***	0.048***	0.040***
	(4.757)	(3.802)	(4.339)
FAGE	0.001	0.001	0.001
	(0.128)	(0.198)	(0.138)
RND	1.789	-0.085	1.130
	(1.059)	(-0.031)	(0.536)
Industry dummies	Included	Included	Included
Year dummies	Included	Included	Included
Adjusted R-squared	0.303	0.292	0.302
F-statistic	12.17***	8.61***	10.32***
Observations	1,002	1,002	1,002
This above table displays the baseline regression results of our first hypothesis.			

4.3 Regression analysis results (business group, political connection, and cash holdings)

Table 5 presents the results of the test of second hypothesis (H2). The coefficient of business group membership (*BGROUP)* is negative (β= -0.050, p < 0.0001) at 1 percent and statistically significant in all regression models. The coefficient of *POLCON* is statistically insignificant and found consistent with all three cash holding measures. In contrast, we document that the coefficient of *BGROUP* × *POLCON* (β= 0.054, 0.067, & 0.058, p < 0.001) is positive at 1 percent level in all measures of cash holding, supporting the notion that business groups who are politically connected are more likely to hold higher cash compared to business groups without political connection. This result is consistent with the motives of money extractions by politicians to implement their non-business agenda. Moreover, prior research documents that politically connected firms produce low quality information and poor disclosure results in higher information asymmetry (Chen et al., 2015). Consequently, compared to non-connected firms external fund providers may charge higher for politically affiliated firms. To face future uncertainty or to avoid costly external funding, politically connected firms hold larger cash compared to counter non-connected firms. In sum, connected business groups require to hold smaller cash relative to non-connected business group member firms. Other variables are showing signs consistent with the previous research of politicians' influence over business group membership with corporate cash holding.

Table 5: Regression analysis (business group membership, cash holding and political connections)

	CASHTA	*CASHNA*	*LNCASHNA*
INTERCEPT	0.089***	0.129**	0.105***
	(3.019)	(2.522)	(2.769)
BGROUP	-0.050***	-0.089***	-0.064***
	(-5.765)	(-5.826)	(-5.771)
POLCON	-0.030	-0.030	-0.029
	(-1.641)	(-0.831)	(-1.167)
BGROUP POLCON*	0.054***	0.067*	0.058**
	(2.815)	(1.836)	(2.272)
BIND	0.024	0.031	0.020
	(0.705)	(0.504)	(0.458)
CEODU	-0.035**	-0.059**	-0.045**
	(-2.130)	(-2.400)	(-2.252)
SIZE_FIRM	0.001	0.001	0.001
	(0.411)	(0.279)	(0.376)
LEV	-0.034	-0.039	-0.035
	(-1.332)	(-0.920)	(-1.082)
OCF	0.110**	0.157*	0.127**
	(2.284)	(1.757)	(1.981)
ROA	0.521***	0.921***	0.697***
	(6.066)	(5.770)	(6.207)
NWC	-0.155***	-0.284***	-0.201***
	(-7.531)	(-7.436)	(-7.538)
CAPEX	-0.251***	-0.495***	-0.344***
	(-4.228)	(-4.833)	(-4.517)
DIV	0.035***	0.051***	0.042***
	(4.690)	(3.904)	(4.364)
FAGE	-0.001	-0.000	-0.001
	(-0.138)	(-0.043)	(-0.116)
RND	1.385	-0.801	0.597
	(0.771)	(-0.281)	(0.268)
Industry dummies	Included	Included	Included
Year dummies	Included	Included	Included
Adjusted R-squared	0.309	0.295	0.306
F-statistic	11.54***	8.18***	9.97***
Observations	1,002	1,002	1,002

4.4 Endogeneity tests: Heckman two stage estimation

Given possible endogeneity between business group membership and corporate cash holding due to reverse causality or our assumed conjectured can be biased to unobserved firm level characteristics and due to omission of sufficient variables (Khanna & Palepu, 2000). We conduct two stage Heckman (1979) regression analysis to mitigate those self-selection biasness and endogeneity problems. Our main purpose is to explore the possible factors that influence decision to be a part of business group. To make a finer analysis we include some new variables including fixed asset ratio (*PPE*), quick ratio (*CA_CL*), firms' growth (*GROWTH*), and financial distress measure (*FIN_DISTRESS*) in our first logit model in addition to other control variables used in our main regression model.

$$BGROUPi_{,t} = \beta_0 + \beta_1 SIZE\_FIRM_{i,t} + \beta_2 LEV_{i,t} + \beta_3 ROA_{i,t} + \beta_4 PPE_{i,t} + \beta_5 CA\_CL_{i,t} + \beta_6 GROWTH_{i,t}$$

$$+ \beta_7 FIN\_DISTRESS_{i,t} + \Sigma Year_{i,t} + \Sigma Industry_{i,t} + \varepsilon_{i,t} \ldots\ldots\ldots\ldots\ldots \quad \text{(Eq. 3)}$$

Our results, after incorporating the results from logit model using Eq. (3), are presented Table 6. We results shows that IMR is statistically significant, and it suggests the importance of controlling self-selection biasness. Our results show that the sign of business group membership (*BGROUP*) is statistically negative, and it is consistent with our baseline results. In sum, we can infer that our study does not suffer from self-selection biasness or reverse causality.

Table 6: Business group affiliation and cash holdings - endogeneity tests

Heckman 2 Stage Regression Analysis

	BGROUP	*CASHTA*	*CASHNA*	*LNCASHNA*
	First_stage	*Second_stage*	*Second_stage*	*Second_stage*
CONSTANT	-1.072	0.007	0.007	0.013
	(-1.405)	(0.195)	(0.105)	(0.274)
BGROUP		-0.036***	-0.070***	-0.048***
		(-4.785)	(-5.269)	(-4.982)
BIND		0.024	0.026	0.018
		(0.705)	(0.443)	(0.423)
CEODU		-0.034**	-0.058**	-0.044**
		(-1.990)	(-2.247)	(-2.110)
SIZE_FIRM	0.107***	0.008**	0.011**	0.009**
	(3.460)	(2.333)	(2.031)	(2.106)
LEV	0.015	-0.141***	-0.200**	-0.154**
	(0.015)	(-2.922)	(-2.348)	(-2.537)
OCF		0.092*	0.136	0.109*
		(1.884)	(1.497)	(1.674)
ROA	-8.801***	0.080	0.256	0.200
	(-7.307)	(0.460)	(0.862)	(0.939)
NWC		-0.158***	-0.292***	-0.205***
		(-7.106)	(-7.020)	(-7.106)
CAPEX		-0.217***	-0.448***	-0.308***
		(-3.693)	(-4.390)	(-4.060)
DIV		0.035***	0.050***	0.042***
		(4.991)	(4.011)	(4.549)
FAGE	-0.061	-0.001	-0.001	-0.001
	(-1.005)	(-0.224)	(-0.121)	(-0.175)
RND		2.020	0.265	1.391
		(1.210)	(0.099)	(0.666)
PPE	0.052			
	(0.251)			
CA_CL	-0.052**			

	(-2.469)			
GROWETH	-0.104			
	(-0.702)			
FIN_DISTRESS	-0.309*			
	(-1.936)			
IMR		0.088***	0.133**	0.099**
		(2.789)	(2.425)	(2.500)
Industry dummies	Included	Included	Included	Included
Year dummies	Included	Included	Included	Included
Pseudo R2 /Adjusted R-squared	0.200	0.310	0.296	0.306
F-statistic		11.72***	8.35***	9.97***
Observations	1,002	1,002	1,002	1,002

Chapter 5: Further analyses

5.1 Alternative measure of cash holdings

Several subsequent analyses are conducted to strengthen the validity of our results. Firstly, we construct an alternate proxy measure of cash holding by taking ratio of total cash and marketable securities to total revenues (*CASH_SALE*) of the company in the current period. In this measure, we show what proportion of total revenues are held in cash to meet the future liquidity and uncertainty. We report results in Table 7. In model (1), we run our main baseline regression between business group membership on cash holding and interaction of business group and international diversification in Model (2). We document that *BGROUP*'s coefficient is negative (β = -0.0641, $p < 0.0001$) and statistically significant at 1 percent which is in line with our baseline results. Secondly, we show that the coefficient of interacted variable between business group and political connection (*BGROUP* × *POLCON*) is positive, and results are economically significant which is in line with our main OLS results.

Table 7: Alternative measure of cash holdings

VARIABLES	*CASH_SALE*	*t- statistics*	*CASH_SALE*	*t- statistics*
INTERCEPT	-1.542***	(-4.126)	-1.470***	
BGROUP	-0.641***	(-5.997)	-0.758***	(-5.818)
POLCON			-0.512	(-1.618)
BGROUP POLCON*			0.646**	(1.967)
BIND	1.543*	(1.928)	1.445*	(1.784)
CEODU	-0.218*	(-1.945)	-0.216*	(-1.889)
SIZE_FIRM	0.258***	(6.217)	0.266***	(6.271)
LEV	-2.137***	(-4.708)	-2.159***	(-4.767)
OCF	-0.162	(-0.218)	-0.010	(-0.012)
ROA	-4.932***	(-4.064)	-4.745***	(-4.051)
NWC	-1.144***	(-5.041)	-1.330***	(-5.174)
CAPEX	-4.076***	(-4.836)	-4.179***	(-4.902)
DIV	0.120	(1.562)	0.097	(1.227)
FAGE	0.121*	(1.918)	0.114*	(1.796)
RND	8.149	(0.712)	7.779	(0.696)
Industry dummies	Included		Included	
Year dummies	Included		Included	
Adjusted R-squared	0.340		0.344	
F-statistic	2.35***		2.32***	
Observations	1,002		1,002	

Chapter 6: Conclusion

6.1 Limitations of the study

Given the importance of the present study and its several contributions, some potential caveats should be mentioned. First, we do not explore the causal relation between the group membership and corporate cash holding. Instead, we rely on the relation between business group membership and cash holding. Moreover, we don't have access to information whether politicians use business money in non-business activities or implementing political agenda. Second, readers should be cautious in generalising our findings because we test our research questions only on one country. It is possible that the different institutional characteristics may differently affect corporate cash holding particularly in other developing countries which warrant further research. Finally, we acknowledge the possibility of other factors, not covered int the present study, that can influence our empirical results.

6.2 Future research scope

Future researchers could explore the potential influence of related party transactions on the above tie between group membership and liquidity. A second avenue of future research may be checking the relation between CSR and business group affiliation in developing countries, because groups are more likely to be involved in philanthropic activities than standalone companies.

6.3 Concluding remarks

Given predominant control by larger business conglomerate over the economy of Bangladesh this study attempts to see whether their such dominating control also affects firms' liquidity policy or financing policy. This study primarily focuses on such group membership and how such membership can affect cash holding decisions. We believe that cash holding is one of the important policy domains for any business organization irrespective of the jurisdictions.

This study aims to test the consequences of business group membership on cash holdings in Bangladesh where most of the business groups are also politically connected. Our results indicate that business group member firms are less likely to hold greater cash which relative to non-member firms that is in line with the notion that group firms utilise internal sources. Other plausible reasons for the lower cash holdings of business group affiliated firms are their better reputation, which they can use to obtain external funding on easier terms, and the fact that they can utilise one business segment as collateral for funding another business segment.

We find that group member firms hold larger cash reserves when they are politically connected compared to non-connected business group firms. This is consistent with notion that these firms may be sources for direct or indirect money expropriation. Politicians may extract money from businesses for many non-business activities (campaigns, political donations etc.), and thus connected firms (politically) are inclined to hold greater cash than non-connected firms.

Our inferences are robust to all endogeneity tests such as Heckman's (1979) two-stage test and propensity score matching (PSM) and our conclusions regarding business group affiliation and cash holding remains the same. Our results do not vary with the level of financial constraints and liquidity needs that provides unique evidence particularly from the perspective of an emerging country. Our results are also consistent with the alterative measures of both the dependent variable (cash holdings) and the instrumental variables.

In summary, our study offers multiple contributions to the literature. First, it provides an example of business group membership and cash holding from an emerging country where investor protection is lower and political connection is significant. Second, our study highlights the moderating role of the presence politicians in the board and the degree of cash holdings in member firms over non-member firms.

APPENDIX A. Variable Definitions

Variables	Definition
CASHTA	$\frac{\text{Cash and marketable securities}}{Total\ assets\ (AT)}$
CASHNA	$\frac{\text{Cash and marketable securities}}{Total\ assets\ (AT) - Cash\ and\ marketable\ securities}$
LNCASHNA	$\frac{\text{Ln (1 + Cash and marketable securities)}}{Total\ assets\ (AT) - Cash\ and\ marketable\ securities}$
CASH_SALE	$\frac{\text{Cash and marketable securities}}{Total\ Sales}$
BIND	$\frac{Total\ independent\ directors\ in\ the\ board}{Total\ number\ of\ directors\ in\ the\ board}$
CEODU	1 when firm's CEO and Chairman is the same person, and 0 otherwise.
SIZE_FIRM	Ln (Total assets)
LEV	$\frac{Total\ long - term\ debt}{Total\ assets\ (AT)}$
OCF	$\frac{\text{Cash flows from operational activities}}{Total\ assets\ (AT)}$
ROA	$\frac{Net\ income\ before\ tax}{Total\ assets\ (AT)}$
NWC	$\frac{\text{Current assets} - \text{current liabilities} - \text{cash and marketable securities}}{Total\ assets\ (AT)}$
CAPEX	$\frac{\text{Captial expendutre}}{Total\ assets\ (AT)}$
DIV	1 if the paid dividend in the current year, and 0 otherwise.
FAGE	Ln (Current year-listing year)
RND	$\frac{Research\ and\ developoment\ expenditure}{Total\ assets\ (AT)}$
PPE	$\frac{\text{Total property and plant equipment}}{Total\ assets\ (AT)}$
CA_CL	$\frac{\text{Current assets} - \text{current liabilities}}{Total\ assets\ (AT)}$
GROWTH	Percentage change in annual revenues.
FIN_DISTRESS	We use Zmijewski (1984) score to measure financial distress level of the sample firm.
BGROUP	1 if the sample firm is a member of a group, and 0 for otherwise.
POLCON	Equals 1 for politically connected firms and 0 otherwise.

Notes

1. World Bank conducted a country wise assessment report on the corporate governance quality of Bangladesh in 2009 and later in 2015. The World Bank conducted another assessment on the accounting and audit quality of Bangladesh.

References

Al-dhamari, R. and Ku Ismail, K.N.I. (2015). "Cash holdings, political connections, and earnings quality: Some evidence from Malaysia", *International Journal of Managerial Finance*, Vol. 11 No. 2, pp. 215-231. https://doi.org/10.1108/IJMF-02-2014-0016

Anderson, R. W., & Hamadi, M. (2016). Cash holding and control-oriented finance. Journal of Corporate Finance, 41, 410-425.

Biswas, P. K., Roberts, H., & Whiting, R. H. (2019). "The impact of family vs non-family governance contingencies on csr reporting in bangladesh". *Management Decision*, 57(10), 2758-2781.

Bose, S., Saha, A., Khan, H. Z., & Islam, S. (2017). "Non-financial disclosure and market-based firm performance: The initiation of financial inclusion". *Journal of Contemporary Accounting & Economics*, 13(3), 263-281.

Boubakri, N., Ghoul, S. E., & Saffar, W. (2013). "Cash holdings of politically connected firms. *Journal of Multinational Financial Management, 23*(4), 338-355

Cai, W., Zeng, C., Lee, E., & Ozkan, N. (2016). "Do business groups affect corporate cash holdings? Evidence from a transition economy". *China Journal of Accounting Research, 9*(1), 1-24.

Caprio, L., Faccio, M., & McConnell, J. J. (2011). "Sheltering corporate assets from political extraction". *Journal of Law, Economics, and Organization, 29*(2), 332-354.

Chaney, P. K., Faccio, M., & Parsley, D. (2011). "The quality of accounting information in politically connected firms". *Journal of Accounting and Economics, 51*(1-2), 58-76.

Chang, S. J., & Hong, J. (2000). "Economic performance of group-affiliated companies in korea: Intragroup resource sharing and internal business transactions". *Academy of Management Journal, 43*(3), 429-448.

Chen, C. J., Ding, Y., & Kim, C. F. (2010). "High-level politically connected firms, corruption, and analyst forecast accuracy around the world". *Journal of international business studies, 41*(9), 1505-1524.

Chen, D., Li, S., Xiao, J. Z., & Zou, H. (2014). The effect of government quality on corporate cash holdings. *Journal of Corporate Finance*, 27, 384-400.

Chen, Y. R., & Chuang, W. T. (2009). Alignment or entrenchment? Corporate governance and cash holdings in growing firms. *Journal of Business Research*, 62(11), 1200-1206.

Chung, R., Firth, M., & Kim, J.-B. (2005). "Earnings management, surplus free cash flow, and external monitoring". *Journal of Business Research, 58*(6), 766-776.

Clarkson, P., Gao, R., & Herbohn, K. (2020). The relationship between a firm's information environment and its cash holding decision. *Journal of Contemporary Accounting & Economics,* 16(2), 100201.

Dittmar, A., Mahrt-Smith, J., & Servaes, H. (2003). "International corporate governance and corporate cash holdings". *Journal of Financial and Quantitative Analysis*, 111-133.

GujaratiN. Domador, and Porter C. Dawn, (2009),"Basic Econometrics",The McGraw-Hill, New York, USA

Habib, A., Hasan, M. M., & Al-Hadi, A. (2017). "Financial statement comparability and corporate cash holdings". *Journal of Contemporary Accounting & Economics, 13*(3), 304-321.

Harford, J. (1999). "Corporate cash reserves and acquisitions". *The Journal of Finance, 54*(6), 1969-1997.

He, J., Mao, X., Rui, O. M., & Zha, X. (2013). "Business groups in china". *Journal of Corporate Finance, 22*, 166-192.

Heckman, J. J. (1979). Sample selection bias as a specification error. Econometrica: *Journal of the Econometric Society*, 153-161.

Hendijani, Z. M., Magnan, M., Cormier, D. and Hammami, A. (2021), "Does corporate social responsibility transparency mitigate corporate cash holdings?", *International Journal of Managerial Finance*, https://doi.org/10.1108/IJMF-07-2021-0339

Hoshi, T., Kashyap, A., & Scharfstein, D. (1990). "The role of banks in reducing the costs of financial distress in Japan". *Journal of Financial Economics, 27*(1), 67-88.

Hu, J., Li, A., & Luo, Y. (2019). CEO early life experiences and cash holding: Evidence from China's great famine. *Pacific-Basin Finance Journal*, 57, 101184.

IASB. (2006). "IAS 27–consolidated and separate financial statements". In: IASCF Publications Department, International Accounting Standards Board London.

Kabir, M. H., Sharma, D., Islam, A., & Salat, A. (2011). "Big 4 auditor affiliation and accruals quality in Bangladesh". *Managerial Auditing Journal*, 26(2), 161-181

Kalcheva, I., & Lins, K. V. (2007). International evidence on cash holdings and expected managerial agency problems. *The Review of Financial Studies*, 20(4), 1087-1112.

Karim, A. W. (2010). "Audit pricing, audit concentration, and big-four premium in Bangladesh". *working paper*. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1613454

Karim, A. W., & Moizer, P. (1996). "Determinants of audit fees in Bangladesh". *The International Journal of Accounting, 31*(4), 497-509.

Khanna, T., & Palepu, K. (2000). "Is group affiliation profitable in emerging markets analysis of divrsified Indian business group". *The Journal of Finance, 55*(2), 867-891.

Kusnadi, Y. (2019). Political connections and the value of cash holdings. Finance Research Letters, 30, 96-102.

Kim, S. S., Haryanto, M., & Purba, J. T. (2019). "Cash holdings of business group-affiliated firms in Indonesia". *DLSU Business & Economics Review, 29*(1), 40-57.

Lin, T.-J., Chang, H.-Y., Yu, H.-F., & Kao, C.-P. (2019). "The impact of political connections and business groups on cash holdings: Evidence from chinese listed firms". *Global Finance Journal, 40*, 65-73.

Ling, L., Zhou, X., Liang, Q., Song, P., & Zeng, H. (2016). Political connections, overinvestments and firm performance: Evidence from Chinese listed real estate firms. *Finance Research Letters*, 18, 328-333.

Marwick, A., Hasan, M. M., & Luo, T. (2020). Organization capital and corporate cash holdings. *International Review of Financial Analysis*, 68, 101458.

Muttakin, M. B., Khan, A., & Mihret, D. G. (2017). "Business group affiliation, earnings management and audit quality: Evidence from Bangladesh". *Managerial Auditing Journal, 32*(4/5), 427-444.

Muttakin, M. B., Monem, R. M., Khan, A., & Subramaniam, N. (2015). "Family firms, firm performance and political connections: Evidence from Bangladesh". *Journal of Contemporary Accounting & Economics*, *11*(3), 215-230.

Opler, T., Pinkowitz, L., Stulz, R., & Williamson, R. (1999). The determinants and implications of corporate cash holdings. *Journal of Financial Economics*, 52(1), 3-46.

Peng, W. Q., Wei, K. J., & Yang, Z. (2011). "Tunneling or propping: Evidence from connected transactions in China". *Journal of Corporate Finance, 17*(2), 306-325.

Subramaniam, V., Tang, T. T., Yue, H., & Zhou, X. (2011). Firm structure and corporate cash holdings. *Journal of Corporate Finance*, 17(3), 759-773.

Thakur, B. P., & Kannadhasan, M. (2019). “Corruption and cash holdings: Evidence from emerging market economies”. *Emerging Market Review*, 38(1), 1–17.

World Bank. (2009). Report on the observance of standards and codes (rosc): corporate governance country assessment-Bangladesh.

World Bank. (2015). Report on the observance of standards and codes (rosc): accounting and auditing-Bangladesh.