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CORPORATE CASH HOLDINGS AND CORPORATE GOVERNANCE QUALITY IN TURKEY

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ABSTRACT

This paper investigates the role of corporate governance quality on corporate cash holdings of the firms listed in Borsa Istanbul 100 Index for the period 2009-2013. System- GMM panel regressions are used in order to test the hypothesis. It is found that as the corporate governance quality decreases, cash holding ratios of the firms increase. Therefore, in case of poor investor protection, the managers use the firms' resources for their own interests at the expense of shareholders. This conflict can be solved with the increased corporate governance quality.

Keywords: *Corporate Cash Holdings, Corporate Governance Quality, Panel Data, System-GMM, Borsa Istanbul*

TÜRKİYE'DE KURUMSAL NAKİT MEVCUDU VE KURUMSAL YÖNETİM KALİTESİ ARASINDAKİ İLİŞKİ

ÖZET

Bu çalışma, kurumsal yönetim kalitesinin 2009-2013 yılları arasında Borsa İstanbul-100 endeksinde listelenen firmaların nakit mevcutları üzerindeki etkisini incelemektedir. Sistem-GMM panel regresyonları kullanılarak hipotez test edilmiştir. Kurumsal yönetim kalitesinin düşüşüyle, kurumsal nakit mevcudunun arttığı sonucuna varılmıştır. Öyleyse, yatırımcı korumasının zayıf olduğu durumlarda, yöneticiler firma kaynaklarını kendi çıkarları için kullanırken, hissedarların çıkarlarını gözönüne almamaktadırlar. Bu çatışma kurumsal yönetim kalitesinin artışı ile çözülebilir.

Anahtar Kelimeler: *Nakit Mevcudu, Kurumsal Yönetim Kalitesi, Panel Data, Sistem GMM, Borsa Istanbul*

1.Introduction

An important strand of the literature focuses on the role of corporate governance on corporate cash holding decisions. The main idea in this relation is explained by free cash flow theory of Jensen (1986) that is rooted in conflicts of interests between shareholders and managers. The misuse of free cash flow, which is defined as the remaining cash flows after funding positive net present value projects, causes agency conflicts between managers and shareholders (Al-Najjar and Belghitar, 2011). If the firms

with entrenched managers have high cash holdings, the managers might use cash reserves in negative net present value projects that would harm shareholders. Put it differently, poor investor protection results in the use of company resources for the managers' own benefits at the expense of shareholders' (Lee and Lee, 2009). Therefore, corporate governance quality is an effective tool on the cash holding management. According to Jensen (1986) and Stulz (1990), shareholders prefer to limit managers' access to free cash flow to mitigate agency costs (Harford et al., 2008). Hence, empowered shareholder rights are associated with lower cash holdings.

In this study, board characteristics are used as proxies for corporate governance quality and the impact of them on corporate cash holding decisions is investigated. The following research question is investigated: Is weak corporate governance quality causes higher corporate cash holdings? Board size, independent directors, CEO and chairman duality, interlocked directors are the board characteristics that are taken into account. These variables are chosen following Bushee et al. (2010). Combined CEO and chairman positions, interlocked directors who are directors that serve in each other's board, large boards and dependent directors are the indicators of weak governance quality. The impact of each board characteristic on corporate cash holding is investigated for the firms that are listed in Borsa Istanbul-100 index for the period 2009-2013. According to System-GMM results, among the board characteristics only the existence of interlocked directors is effective on corporate cash holdings. If there are interlocked directors in the sample firms, these firms hold higher cash. Thus, existence of weak governance quality results in higher cash holding ratio which is consistent with the literature.

The rest of the paper is organised as follows: Section 2 documents the literature review. Section 3 explains the data and methodology used in this study. Section 4 reports the empirical findings. Finally, Section 4 concludes.

2. Literature Review

Cash holding literature take into consideration several characteristics of the firms or the countries that impact the cash holding levels of the corporations. Certain part of the literature examine the impact of board components on the cash holding decisions of the firms. Kusnadi (2003) shows board size and non-management blockholder ownership as determinants of corporate cash holding. Firms in Singapore which have larger boards and smaller non-management blockholder ownership hold higher cash balances. Lee and Lee (2009) report lower level of cash holdings in the firms which have smaller boards and higher board independence. They also find that the firms which have lower managerial entrenchment have lower level of cash holdings. Boubaker et al (2015) investigate the role of board of directors on cash holdings of French firms. They find that boards with independent directors and boards that split CEO and chair positions hold less cash than the firms which have less effective boards. Thus, according to their results agency conflicts influence cash management policy. Hsu et al. (2015) investigate the role of independent board members and independent finance committee members on insurers' cash holdings. They report that the insurers which include higher proportion of outsiders on their boards and finance committees have more cash holdings. Independent board and finance committee members allow managers to hold excess cash to avoid underinvestment problem resulting from insufficient cash holdings (Hsu et al., 2015, p.744). Gill and Shah (2012) find a positive relation between CEO duality and cash

holdings for Canadian firms. Drobetz and Grüninger (2007) also find similar results for Swiss firms. Chen and Chuang (2009) find that CEO ownership, independent directors and venture capitalist directors positively affect the cash holdings of high-tech firms. Lee and Lee (2009) find that firms with smaller boards and higher board independence have lower level of cash holdings.

Another part of the literature uses managerial ownership as a determinant of cash management in order to measure the impact of agency conflicts on cash holding levels of the companies. Kalcheva and Lins (2007) find a positive relation between managerial entrenchment and cash holding levels. If country level shareholder protection is poor, the positive relation between managerial entrenchment and cash holding level is more pronounced. Chen and Chuang (2009) find consistent results with interest alignment hypothesis by finding a positive relation between CEO ownership, venture capitalist directors and independent directors and cash holding. Paskelian et al. (2010) examine the impact of concentrated ownership on the level of cash holdings and cash valuation for Chinese and Indian firms. They accept family firms as lower agency cost firms and government owned firms as the firms with higher agency cost. They find higher valuation of cash in family owned firms rather than government owned firms. They also report higher firm value in family owned firms. Finally, value of dividends is higher in government owned firms. Ku et al. (2013) report a positive relation between foreign shareholders' ownership and cash holding ratio. However, management shareholdings, board members shareholdings and state shareholdings do not affect cash holdings in general. Basheer (2014) reports a nonlinear relation between managerial ownership and cash holdings. Thus, interest alignment effect of managerial ownership is seen at lower level of managerial ownership and entrenchment effect is seen at higher level of managerial ownership. And the impact of managerial ownership on cash holdings do not change with board composition variables.

The role of country level governance quality and firm level governance quality are also attractive in cash holding literature. Ferreira and Vilela (2004) find that firms in higher investor protection countries and firms with concentrated ownership hold less cash. Dittmar et al. (2003) show corporate governance as an important tool that impacts the cash holdings of 45 countries. They report that as the shareholder protection in a country decreases, the cash holding levels increases. If shareholder protection is poor in a country, information asymmetry and investment opportunities become less important. Aoyagi and Ganelli (2014) show that the weak governance quality in Japan contributes to high cash holdings. They report that good corporate governance puts pressure on managers to act on shareholders' interests and as a result governance quality is a determinant of shareholding. Ginglinger and Saddour (2007) find a positive relation between strong shareholding rights and cash holdings in financially constrained firms, particularly family firms. In cross-country studies, firms in developing countries, characterised by severe financial constraints and weak shareholder rights, hold large amounts of cash (Ginglinger and Saddour, 2007:19). Pinkowitz et al. (2003), Harford et al. (2008) and Guney et al. (2007) also find a negative relation between shareholder protection and company shareholding. Harford et al. (2008) report that the firms which have higher governance quality hold higher cash. They also find a positive relation between corporate governance quality and dividend payments. In addition, firms which have lower governance quality hold lower level of cash. Ammann et al. (2011) report that

firms which have lower level of governance quality hold more cash than the firms with better governance quality. They show Jensen's (1986) free cash flow theory as an explanation for this relation. According to Ammann et al. (2011), a firm needs to have comparatively good firm-level corporate governance to be able to benefit from increased cash holdings. If a firm has weak firm-level governance, increased cash holdings might be exploited by management and invested in negative-NPV projects (Ammann et al., 2011:16). However, Harford (1999) and Opler et al. (1999) do not find any relation between cash holdings and firm-level corporate governance.

3. Data and Methodology

This study examines the impact of corporate governance characteristics on corporate cash holdings levels of firms listed in Borsa Istanbul 100 Index for the period 2009-2013. Corporate governance data is obtained from Public Disclosure Platform of Turkey. Finnet database, Public Disclosure Platform of Turkey and Borsa Istanbul website are used to collect data on accounting variables. Following models are used in order to test the hypothesis:

$$CASH_{f,t} = a_0 + a_1 LNDIRdummy_{f,t} + X_{f,t} + YD + \varepsilon \quad (1)$$

$$CASH_{f,t} = a_0 + a_1 PNIDdummy_{f,t} + X_{f,t} + YD + \varepsilon \quad (2)$$

$$CASH_{f,t} = a_0 + a_1 CEO_{f,t} + X_{f,t} + YD + \varepsilon \quad (3)$$

$$CASH_{f,t} = a_0 + a_1 DLOCK_{f,t} + X_{f,t} + YD + \varepsilon \quad (4)$$

The dependent variable in all the models is cash holding level in a firm at time t which is defined as the ratio of cash and equivalents to total assets. The definitions of board characteristics are done following Bushee et al. (2010). LNDIR is natural logarithm of number of directors on the board. LNDIR is then splitted into high and low groups by using k-means cluster analysis. LNDIR dummy variable is created which is equal to one if they are in the high group and zero otherwise. It is expected that large boards have problems such as decision making, communication and coordination. Thus, as size of the board increases, the governance quality decreases. PNID is the percentage of directors that are dependent. By using k-means cluster analysis PNID variable is splitted into high and low group. PNID dummy is created which is equal to one if they are in the high group and zero otherwise. Dependent directors on the board is a measure of weak governance quality. Independent directors are accepted as effective monitors since their carrier do not depend on management team. Thus, persistence of more dependent directors on the board results in weaker governance quality. CEO is equal to one if the CEO and chairman positions are combined and zero otherwise. Combined CEO and chairman position is a proxy for weak governance quality. Less monitoring on the actions of CEO is the reason of this weak governance quality. DLOCK dummy is equal to one if a director serves on another board and zero otherwise. Interlocked directors are defined as directors who serve

on each other's boards and their presence on a board is considered as an indicator of weaker governance (Abdioglu et al., 2013:925).

$X_{f,t}$ represents the control variables that are used in the models. These control variables are firm size, dividend payment, market to book ratio, leverage, return on equity, cash flow, financial debt ratio and tangibility. Firm size is the natural logarithm of total assets. Dividend payment is the ratio of dividend payments to total assets. Market to book ratio is the market value of equity divided by book value of equity. The ratio of total debt to total assets is used as a proxy of leverage. Return on equity is the ratio of net income to common equity. Pre-tax profit plus depreciation divided by total assets is used as a proxy of cash flow. Financial debt ratio is the ratio of total financial debt to total debt. Fixed asset divided by total assets is defined as tangibility. YD is year dummies.

Generalized Method of Moments (GMM) method of estimation is used in this study. Since lagged value of cash holdings might affect the cash holding level in the current year, an endogeneity problem might occurs. In order to solve this endogeneity problem GMM estimation method is used. Specifically, system-GMM estimation method is used which is developed by Arellano and Bover (1995) and Blundell and Bond (1998). The Arellano–Bover/Blundell–Bond estimator augments Arellano–Bond by making an additional assumption that first differences of instrument variables are uncorrelated with the fixed effects. This allows the introduction of more instruments and can dramatically improve efficiency. It builds a system of two equations—the original equation and the transformed one—and is known as system GMM. (Roodman, 2009: 86).

4. Empirical Findings

Table 1 reports the descriptive statistics of the variables used in this study. According to Table 1, average firm in the sample has 14% cash holdings ratio and 11% cash flow ratio. On average dividend payments to total assets is 2%, market-to-book value is 1.96, leverage is 0.49, financial debt ratio is 0.39 and tangibility is 0.33. Average firm has a size of 9.39 and return on equity of 13.97. Table 1 also reports the descriptive statistics of the corporate governance variables. Average of CEO-chairman duality dummy is 0.45, interlocked directors dummy is 0.47, board size dummy is 0.49 and dependent directors dummy is 0.58.

Table 1-Descriptive Statistics

Variable	N	Mean	SD	P25	P50	P75
Cash	205	0.14	0.12	0.05	0.11	0.19
Div	205	0.02	0.03	0.00	0.01	0.03
Size	205	9.39	0.64	8.86	9.40	9.77
Mb	204	1.96	2.21	0.91	1.31	2.09
Lev	205	0.49	0.22	0.33	0.50	0.66
Cflow	205	0.11	0.12	0.04	0.10	0.14
Findebt	205	0.39	0.25	0.18	0.35	0.58

Roe	205	13.97	14.10	4.89	11.64	17.83
Tang	205	0.33	0.18	0.18	0.29	0.47
Ceo	205	0.45	0.50	0	0	1
Dlock	205	0.68	0.47	0	1	1
Lndirdummy	205	0.49	0.50	0	0	1
Pniddummy	205	0.58	0.50	0	1	1

Table 2 reports the System-GMM results. Lagged dependent variable ($Cash_{t-1}$) is used as an endogenous variable in all of the regressions. $Size_{t-2}$, cash $_{t-2}$, mb_{t-2} and lev_{t-2} are used as instrumental variables in coloumn 1,2 and 3. $Size_{t-2}$ and mb_{t-2} are used as instruments in coloumn 4. Arellano-Bond test is used to check for higher order serial correlation. According to the results of this test, the second order serial correlation is absent. Validity of the instrumental variables is tested by Sargan test and it is found that instruments are valid and are not correlated with the error term.

Column 1 of Table 2 uses LNDIR dummy as a corporate governance variable. An insignificant coefficient is found for this variable. Thus, board size is not effective on the cash holdings of the firms. A positive relation between cash flow ratio and cash holdings ratio is found. In addition, firms which have lower profit have higher cash holding ratio. Tangibility is another firm level variable which has negative relation with cash holdings. Thus, firms with more fixed assets hold less cash.

Column 2 of Table 2 includes PNID dummy as a corporate governance variable. According to coloumn 2, percentage of dependent directors on the board does not have any impact on the cash holding ratio of the firms. Significant coefficients are found for return on equity and cash flow.

In column 3 DLOCK is used as a dummy variable and a positive significant coefficient is found for this variable. Therefore, if a firm has interlocked directors, the cash holding ratio is higher for that firm. Interlocked directors are considered indicative of weaker governance because such directors have reciprocating relationships that create incentives to vote in ways that benefit their counterparts and, hence, themselves (Bushee et al., 2010:11). Thus a negative relation between corporate governance quality and cash holding ratio is found. Lagged value of cash holding has a positive relation with cash holding ratio in the current year. Thus, if the companies have higher cash holding ratio in the previous year, they hold more cash in the current year. Since a positive coefficient for market to book ratio is reported, it can be concluded that the firms which have higher growth opportunities hold more cash. Negative coefficients for ROE and tangibility are reported as well.

Finally, column 4 does not show any significant coefficient for CEO dummy. Therefore, if there is CEO-chairman duality in a firm, this is not effective on cash holding ratio of the firm. Cash flow ratio positively affects cash holding ratio according to column 4. On the other hand, ROE and tangibility negatively affect cash holding ratio.

Table 2- System GMM Estimation Results

	Cash	Cash	Cash	Cash
LNDIRdummy	0.102			
	[0.216]			
PNIDdummy		0.258		
		[0.212]		
DLOCK			0.153*	
			[0.077]	
CEO				-0.083
				[0.383]
$Cash_{t-1}$	0.225	0.312	0.408*	0.138
	[0.465]	[0.222]	[0.068]	[0.554]
Div	-0.389	1.829	1.058	1.219
	[0.820]	[0.162]	[0.378]	[0.368]
Size	-0.066	-0.056	-0.04	-0.053
	[0.177]	[0.191]	[0.294]	[0.425]
Mb	0.055*	0.001	0.051**	0.021
	[0.069]	[0.972]	[0.028]	[0.390]
Lev	0.048	0.408	-0.142	0.17
	[0.816]	[0.325]	[0.453]	[0.732]
Cflow	1.547*	1.642*	0.804	1.739**
	[0.068]	[0.064]	[0.145]	[0.015]
Findebt	0.056	-0.036	0.106	0.161
	[0.866]	[0.918]	[0.729]	[0.498]
Roe	-0.014*	-0.010*	-0.011**	-0.011**
	[0.070]	[0.063]	[0.042]	[0.035]
Tang	-1.414**	-0.563	-1.067***	-1.110***
	[0.016]	[0.208]	[0.008]	[0.002]
Constant	1.027*	0.338	0.694	0.796
	[0.098]	[0.481]	[0.144]	[0.120]
N	194	194	194	194
Sargan	3.88(4)	4.41(4)	2.50(4)	1.76(2)
AR(1)	0.02	0.001	0.002	0.076
AR(2)	0.75	0.425	0.709	0.835

Note: The numbers in brackets are p-values. ***, **, and * denote significance at the 1%, 5% and 10% levels, respectively. N is the number of observations. Correlation 1 and 2 are test statistics for first and second order autocorrelations in residuals, respectively. Sargan Test is asymptotically distributed as $\chi 2(df)$ under the null of instruments' validity.

5. Conclusions

This study examines the impact of corporate governance quality on the cash holdings ratios. In case of weaker corporate governance quality agency conflicts increase and managers can use the free cash flows of the firms for their own interests at the expense of shareholders. The main arguments is that the improved board characteristics increases the governance quality of the firms and increased governance quality causes reduction in the corporate cash holdings.

According to the empirical findings, if there are interlocked directors in the sample firms, the firms hold more cash. The existence of interlocked directors on the board is a proxy for weak governance quality. Hence, weak governance quality results in higher cash holdings. This result is in line with the main argument of the paper. Although a significant coefficient is found for interlocked directors variable, insignificant coefficients are found for the other board characteristics which are board size, ceo-chairman duality and dependent directors on the board. In addition, cash flow and market to book ratio positively affect cash holding ratios. Thus, the firms with higher cash flows prefer to hold higher cash and the firms with higher investment opportunities prefer to hold higher cash. Firms with high cash flow have more growth opportunities and they avoid giving up profitable investment opportunities. As a result, they hold more cash (Ozkan and Ozkan, 2004). Similar to this argument, firms with growth opportunities hold more cash in order to not to pass up investment opportunities. In addition, since the tangible assets can be sold in case of cash shortage, firms with tangible assets hold less cash (Drobetz and Grüninger, 2007).

This paper contributes to the cash holding literature by showing the impact of corporate governance quality on the cash holdings for the firms listed in Borsa Istanbul. The findings of the paper might be important for the investors who plan to invest in Turkish market. Governance quality is an important determinant for the companies' cash holding decisions. Therefore, these governance characteristics might be examined before the investment decisions.

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