Cash Holdings and Corporate Governance: An Empirical Study of Publicly Listed Moroccan Companies

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Abstract

Previous studies show that corporate governance is an essential determinant affecting cash holdings. This paper aims at examining the impact of corporate governance on firm cash holdings within the framework of the agency theory. Using a sample of 42 non-financial Moroccan companies publicly listed in the Casablanca Stock Exchange from 2007 to 2018, this study shows the relationship between several governance mechanisms and corporate cash holdings in Morocco. Several studies have already been carried out on the relationship between the corporate governance mechanism and the level of liquidity holdings by companies, but research on this subject is very limited in the context of developing countries, and almost non-existent to our knowledge in Morocco. This research should help boards of directors, shareholders, and creditors to take the necessary measures to limit managerial latitude in the allocation of available liquidity. We perform the analyses using the panel data methodology. The results of our research are relatively conclusive; they show that the level of cash holdings is significantly related to the shareholder structure, the degree of efficiency of the board of directors, and the company's debt policy, which is in line with agency theory. These insights support the view that governance mechanisms influence companies' liquidity holding policies.

Keywords:

Morocco, cash holdings, corporate governance mechanisms, agency theory.

Introduction

Liquidity[1] levels of companies around the world have increased significantly in recent years. The cash buffer available to non-financial companies in the EMEA[2] region amounted to 1,085 billion euros at the end of 2018, reaching a record level of cash holdings for this region[3], while US companies were close to 1,690 billion dollars in the same year. The concept of "holding" was first explained by pecking order theory and trade-off theory which argue that companies hold liquidity in an inefficient market in order to gain financial flexibility when they face unanticipated difficulties, or unexpected investment opportunities, and to also avoid the costs associated with external financing (Opler et al., 1999; Bates et al., 2009; Almeida et al., 2014, Guariglia and Yang, 2016). However, excessively high levels of cash have grown steadily over the last 35 years and have subsequently raised several questions, one of the main questions being: is this large level of cash holdings the result of the agency conflict between managers and shareholders? A wave of studies has followed these studies which have revealed the tight knit relationship between cash positions and the agency problem. More specifically, these studies have shown that the existence of liquidity often leads to an increase in conflicts of interest between management and shareholders regarding the use of these available funds. The discretionary behavior of managers encourages them to use liquidity in a way which advances their own interests and promotes their roots within the company at the expense of shareholder interest and company value. (Jensen and Meckling, 1976; Jensen, 1986; Harford et al., 2008). The agency theory literature shows that the magnitude of this conflict of interest can be attenuated by implementing appropriate governance structures (Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983). Corporate governance provides the most effective disciplinary mechanisms for shareholders to motivate management to maximize shareholder returns (Fama and Jensen, 1983; Donaldson and Davis, 1991; A. Demirguc-Kunt and V. Maksimovic, 2014).

The results of previous studies identify a large number of determinants affecting the holding of liquidity. Corporate governance is one of the key factors (Kusnadi, 2011 and Megginson et al., 2014). In Morocco in particular, the impact of governance mechanisms on liquidity holding has been the subject of a very limited number of studies. Moreover, the characteristics of the economic environment where Moroccan firms operate, namely weak creditor and shareholder protection, ineffective law enforcement, and high shareholder concentration, makes the country an ideal setting to study this issue. In this article, we document the cash position of 42 Moroccan companies listed on the Casablanca Stock Exchange over a 12-year period (from 2007 to 2018), and we revisit the theme of corporate cash holdings within the framework of agency theory and corporate governance. To achieve this objective, seven hypotheses are formulated in this paper. After testing the hypotheses, our study demonstrated that the cash holdings of these firms are significantly positively affected by family ownership, CEO duality,

[1] Liquidity is defined as cash and cash equivalents. When we refer to liquidity in this paper, the terms "cash", "liquid assets", and "treasury" are used interchangeably.

[2] EMEA, is a designation used to refer to the economic region that includes the countries of Europe, the Middle East and Africa.

[3] "Moody's: 'EMEA companies' cash reserves leap 15% to nearly EUR1.1 trillion" Moody's Investors Service, September 05, 2019, https://www.moodys.com/research/Rebond-de-15-des-rserves-financires-des-entreprises-en-EMEA--PR_409592

and board size. It is also found that there is a strong negative relationship between cash holdings and both debt leverage and the existence of a second large shareholder. These findings are in line with the agency theory.
The rest of this article is organized as follows. First, we briefly review the literature on the corporate cash holdings within the agency theory framework (1), we then present theories and empirical hypotheses on the impact of governance mechanisms on corporate treasury (2). Next, we present the methodology and the construction of our sample (3), and then we present the results and analysis (4). Finally, we summarize the main results in our conclusion.

1 Literature Review

Agency theory is often considered the central component of corporate governance and related research. It is extensively used to explore the impact of separating ownership and control in organizations. In fact, agency theory is rooted in the conflicts of interest that typify agency relationships. This relationship is established when the actions of one person affect both their own and someone else's concerns as a result of explicit or implicit contractual collaboration. For Jensen and Meckling (1976), the relationship between firm owners and non-owner managers is a perfect illustration of this given the divergent interests between them. Owners become principals as soon as they hire managers to manage their business on their behalf, and the managers become morally responsible agents to act in the interests of the principal. Nevertheless, the agents accept their position while keeping in mind the option of using their managerial latitude to enhance their own personal interests (Jensen & Meckling, 1976). A conflict of interest in the contractual relationship between owners and managers ensues, which is when important disciplinary mechanisms from corporate governance are used to address this divergence of interest (Davis et al., 1997). Agency theory considers the presence of available cash in the company to be the main source of this conflict of interest, and therefore of agency costs. The holding of cash creates conflicts of interest among shareholders and management, or between majority and minority shareholders, since each of the stakeholders could try to use the available funds for personal purposes. Considering that they are not the sole owners of the companies they manage, managers could act against the interests of shareholders, but also to satisfy their own interests. In such situations, managers seek to increase the amount of liquid assets themselves for several reasons (Shleifer and Vishny, 1997). A high level of cash would increase the power of managers because of the existence of "uncontrolled" resources at their disposal (Jensen, 1986). Unlike internal funds, external sources of funding are controlled by market players and therefore lessens the probability of managers being able to use external funds to finance projects with negative net present values (NPV) (G. Charreaux, 1997). These projects typically belong to business sectors they are familiar with in order for managers to extend their discretionary power (G. Charreaux, 1997). As a result, managers have an incentive to accumulate cash in order to preserve their flexibility not only to deal with unfavorable eventualities, but also to avoid capital market discipline and thus facilitate the achievement of their personal objectives at the expense of shareholder interests (Jensen and Meckling, 1976; N. Couderc, 2006; A. Dittmar and Marth-Smith, 2007; J. Harford and Al, 2008). This issue is related to corporate governance mechanisms. As a matter of fact, good corporate governance implies the resolution of agency conflicts between managers and shareholders (Jensen and

Meckling, 1976; Fama, 1980; Fama and Jensen, 1983; Shleifer and Vishny, 1997) which would have a considerable impact on the level of cash holdings.

2 The impact of corporate governance mechanisms on cash holdings

Literature on the agency theory reveals that one way to reduce agency conflicts between shareholders and managers is to monitor managers so as to encourage them to act in the interest of shareholders (Shafique & Ali 2020). Conscious of the costly expense involved, shareholders often look for another way to effectively restrict the discretionary space of managers, notably corporate governance mechanisms. In fact, in a world shaped by informational asymmetry and conflicts of interest, corporate governance represents one of the most effective mechanisms for reducing the power of managers (Booth, L., V. Aivazian, A. Demirguc-Kunt, and V. Maksimovic, 2014 and Ali & Shafique, 2020). Its ultimate objective is to provide shareholders with systematic control mechanisms to keep under control the manager's area of power that is outside their reach[4]. As liquid assets are probably the most exposed to opportunistic agents (Pinkowitz et al., 2006), the way in which they are allocated profitably for shareholders is central to any analysis of governance effectiveness. This section focuses on corporate governance's impact on liquidity holding through its direct actions, including the shareholder structure and the board of directors, and through its indirect actions, in particular the financing and distribution policy.

2.1.Ownership structure

The role of the ownership structure is fundamentally important in understanding cash holdings and is the focus of most corporate governance research and analysis. The main question is what type of ownership structure affects and motivates managers to seek performance and thus efficiency in the firm (Tandelilin et al., 2007). It is clearly established that the ownership structure can significantly influence the overall financial performance of the firm through its impact on the incentive mechanism, decision-making procedures, and performance monitoring system. More specifically, it influences the decision to hold cash in several ways depending on the following aspects; the degree of shareholder concentration, the presence of one or more controlling shareholders, and the identity of the majority shareholder.

2.1.1. Larger shareholder

The control of managers is essential in reducing agency conflicts between shareholders and managers. However, for a minority shareholder, the cost of supervision is greater than the benefit it can derive from it, so it is not in their interest to effectively control the managers. On the other hand, the benefits a major shareholder derives from the supervision of managers exceed the costs it incurs, and therefore it is in their interest to effectively supervise them. Concentration[5] of ownership is therefore associated with more effective control of managers (Shleiferr and Vishny, 1986). However, several authors have shown the existence of a special agency relationship between controlling shareholders and company management, which gives them a privileged position relative to other shareholders (Couret and De la Bruslerie, 2002; La Porta Et Al. 2000). This would create a risk of common ground between management and

[4] OECD Principles of Corporate Governance, 2004. Paris OECD (www. OECD.org/ dataoecd/ 32/18/ 315577724.pdf)

[5] Shleifer and Vishny (1997) consider that shareholding is concentrated when a single person holds at least 10% of the capital.

majority shareholders, since they would share the same interests and utility functions (Porta et al., 1997). This collusion could lead to the implementation of a strategic vision aiming at satisfying the interests of managers and majority shareholders at the detriment of corporate performance and minority shareholder interest. This is exemplified by holding excess cash beyond the level necessary to maximize the value of the business. A large liquidity holding is a perfect illustration of such a situation. Liquidity would allow managers and majority shareholders to emancipate themselves from the control of the financial market and increase their discretionary power (Opler et al., 1999; Johnson, La Porta, Lopez-De-Silanes, & Shleifer, 2000). Numerous empirical results have demonstrated the positive and significant impact of the presence of a major shareholder in the firm on cash holdings (Rebello, Sonza, Ceretta, and Galli, 2018). From these findings, we can make the following hypothesis:

H1: The percentage of capital held by the majority shareholder has a positive impact on cash holdings.

2.1.2. Second shareholder

We have just studied the conflict of interest between the majority shareholder and minority shareholder that would result from the majority shareholder maintaining control of management. What about the existence of multiple majority shareholders?

The existence of several block holders is very common. For example, 34% of companies in 13 European countries have several majority shareholders who hold more than 10% of the voting rights (Laeven and Levine, 2006). In France, for example, the first shareholder holds an average 38.8% of the capital and the second shareholder holds an average 9.9% (Marda, Marsat, and Roux 2014). Several empirical studies show that the existence of a second shareholder has a positive effect on corporate profitability and plays a positive role in protecting minority shareholders (Gomes and Novaes, 2001; Mard, Marsat and Roux, 2014). Lehman and Weignand (2000) highlight the disciplinary role of a second shareholder, which can be seen as a counterweight to the first shareholder. Moreover, the more power the second shareholder has, the more important his role in protecting minority shareholders is. Therefore, in the presence of several majority shareholders, the abusive holding of liquidity by managers would be much more complicated. From this, we can advance the following hypothesis:

H2: The presence of a second major shareholder has a negative impact on cash holdings.

2.1.3. Family ownership

In addition to the existence of several majority shareholders, another component of the shareholding structure can influence the financial structure of companies. It concerns the identity of the majority shareholder, and more specifically the family shareholding. Family firms are reputed to perform better than other firms (Villalonga and Amit, 2006; Tang, Lu and Wu, 2017; Amin and Hamdan, 2018). According to the agency theory, this is partly due to less exposure to agency problems. The involvement of family shareholders in the day-to-day management of the business, as well as the altruistic behavior of the owners towards each other, who are often both owners and managers of these business, constitute factors that limit agency conflicts between family shareholders and managers (La Porta et al. 1999; Anderson, Mansi, and Reeb, 2003; Schmid, et al., 2010). However, family businesses are also exposed to other agency costs related to the conflict of interest between family majority shareholders and minority shareholders. Family shareholders may pursue non-economic objectives, such as preserving the harmony and social status of the founding family (Chrisman et al., 2012), or their desire to retain control of the company, even at the expense of the firm's value, all of

which would be a source of internal friction and conflict of interest between the majority family shareholders and the rest of the shareholders (La Porta et al., 1999). These agency conflicts would imply that family members benefit more by holding cash in the company rather than distributing it to other shareholders. This finding is consistent with several empirical works (Ozkan and Ozkan, 2004; Kuan and Li & Chu, 2011; Caprio, Alfonso and Signori, 2020). Therefore, we can make the following hypothesis:

H3: Family ownership has a positive impact on cash holdings.

2.2.The board of directors

The board of directors is an internal governing body whose mission is to supervise the decisions of the management team and thus protect the interests of minority shareholders. It is responsible for resolving conflicts of interest between shareholders and management (Fama & Jensen, 1983). Consequently, a board of directors that effectively fulfils its duties would imply a decrease in agency conflicts between managers and shareholders, and thus better company performance. It should be noted, however, that the effectiveness of the board of directors depends on meeting certain requirements regarding its structure (Fama, 1980). We discuss below two of the most important requirements identified by corporate governance studies, namely the size of the board and the separation of the functions between the chairman of the board and the chief executive officer.

2.2.1. The board size

The literature suggests that the number of directors on the board is supposed to shape the quality of the board's supervisory activities. The ability of a board to better control managerial behavior depends primarily on the ease of communication and cooperation in the meeting room, which in turn depends on the number of directors. Jensen (1993) and Lipton and Lorsch (1992) argue that large boards of directors are less effective and easier for a CEO to dominate, as many directors tend to be "polite and courteous" rather than critical of management decisions. While large boards probably offer greater potential for knowledge and skills, their organizational deficiencies, increased potential for conflict, and the risk of the existence of stowaways appears to be much greater (Yermack 1996). This conclusion is supported by several empirical studies that demonstrate the negative impact of board size on firm performance on one hand, and the positive relationship between board size and cash holdings on the other (Gill & Shah, 2012; Jamil, Anwar, Afzaal , Tariq, Asif, 2016). This allows us to make the following hypothesis:

H4: The size of the board of directors has a negative impact on cash holdings.

2.2.2. CEO duality

The structure of the board of directors also has a direct impact on the quality of control exercised by directors (Brickley et al., 1997). Agency theory holds that the combination of the positions of chairman and chief executive officer adversely affects the effectiveness of board members (Fama and Jensen, 1983; Jensen, 1993). In fact, the accumulation of functions would give the CEO a privileged position, allowing him to have access to more information than the rest of the directors (Daily and Dalton, 1997). As a result, the desire of CEOs to entrench and strengthen their discretionary power may lead them to withhold information. This would limit the scope of control by the board of directors and therefore lead to undetected actions resulting from managerial opportunism (Lipton and Lorsch, 1992; Goyal and Park, 2002; Zona, 2012). Therefore, boards of directors chaired by a CEO are oftentimes less effective in limiting the discretionary behavior of managers over the resources of the firm, especially with regard to the cash held by the firm. Numerous empirical studies related to the duality of CEOs indicate that

the combination of the CEO and chairman functions undermines the supervisory function of the board (Kim et al., 2009; Gul and Leung, 2004; Nihat, Panayiotis, Isabella and Dennis, 2018). Other studies document the direct link between holding multiple positions and holding high levels of cash (Boubaker, Derouiche , and Nguyen, 2013). Thus, we can make the following hypothesis:

H5: Combining the functions of president and chief executive officer would have a positive impact on the holding of treasurer positions.

2.3. Financial policy

Agency theory presents financial policy as an indirect mechanism of governance, which allows a constraint to be imposed on managers to indirectly incite them to act in the company's interest. Two aspects of financial policy will be addressed: debt policy and dividend distribution.

2.3.2. Debt leverage

Debt is a governance mechanism that reduces the discretionary latitude of managers and forces them to draw down excess cash (Jensen, 1986). It plays an important role in reducing conflicts of interest and aligning management investment policy with shareholders' objectives of maximizing company value (Jensen 1986; Harris and Raviv, 1990; Witz, 2002). In fact, to prevent managers from expropriating resources and making personal gains at the expense of shareholders, the use of debt can be a very good solution, as it limits the availability of excess cash thus reducing the liquidity managed by managers. In addition, it allows the partial transfer of the control responsibilities to the external partner of the firm (Biddle, Hilary and Verdi, 2009; Easterbrook, 1984; Jensen, 1986). The agency theory also points out that increasing firm indebtedness increases the risk of default and bankruptcy, alerting managers to the excessive holding and inefficient use of cash that would expose them to the risk of losing their own position in the company. This would influence managers to more carefully choose profitable projects in order to repay creditors and guarantee the company's survival. The research of Maheshwari and Rao (2017) confirms this negative relationship by demonstrating that companies with debt as their main source of financing are less confronted with agency costs. From this analysis, we can make the following hypothesis:

H6: Debt has a negative impact on cash holdings.

2.3.3. Dividend

The significant effect of dividend distribution on managers' opportunistic behavior makes it an effective mechanism for reducing agency costs and an important indicator of corporate governance (Rozeff, 1982; Easterbrook, 1984; Jensen, 1986). According to agency theory, maintaining a regular dividend distribution policy reduces the risk of overinvestment (Grossman and Hart, 1980; DeAngelo, DeAngelo and Stulz, 2006). In order to honor their commitment to shareholders, managers are obliged to make more profits, which of course requires optimal investment choices. Moreover, the payment of dividends can be seen as a device to reduce the discretionary power of managers by reducing the liquidity available under their control, and by forcing them to turn to bank loans to finance new investments (Couderc, 2006). A recent study conducted by Nghĩa, Khang, and Thành, (2018) demonstrates the tendency of overinvestment that deteriorates the company's profitability, and then confirms the hypothesis that the dividend policy mitigates the risk of overinvestment. Therefore, we are justified in making the following hypothesis:

H7: Dividends have a negative impact on cash holdings.

3 Methodology

We conducted an empirical econometric study using a positivist approach based on a hypothetico-deductive method advocated by Gill and Johnson (2010). We used data extracted from the financial statements and reports of 42 companies listed on the Casablanca Stock Exchange during the period 2007-2018. These companies were selected for two main reasons. First, listed companies have access to both financing markets, namely the banking and capital markets, which gives them the capacity to have a comprehensive financing policy and strategy. The second reason lies in the characteristics of accounting and financial data of listed Moroccan firms, which can be considered accessible, exhaustive, and reliable, unlike unlisted companies. We use panel regression analysis in our study for the advantages it confers compared to time series data, notably a larger sample size, less collinearity, consideration of section heterogeneity, and better efficiency. Our dependent variable, which is the level of cash, will be measured by the ratio of cash as well as by the level of cash equivalents on net assets.

As for the choice of sampling, the target population includes companies listed on the Moroccan market between 2007 and 2018, derived from data available on the Casablanca Stock Exchange website. However, for the purpose of this study, companies in the financial sector are excluded given the specificity of their liquidity needs. Firms in which data are missing or are not listed continuously over the entire period of the study are also eliminated.

Analysis of the data for all the firms in the sample reveals the presence of outliers. The existence of these outliers may alter the regression results by masking existing relationships or by artificially revealing them. These points are removed.

Table 1 Variables Definition Summary

Variables	Operational Definition
Cash holdings (Cash)	Cash and cash equivalent/Total net assets
Largest shareholder (1st Share)	% of the capital held by the largest shareholder
Second shareholder (2nd Share)	% of the capital held by the second largest shareholder
Family ownership (Fam Own)	Dichotomous value that takes 1 when more than 20% of the capital is owned by a family
Board size (BD-Size)	Number of directors
CEO duality (CEO-dual)	Dichotomous variable that takes the value 1 if the Chief Executive Officer is also the Chairman of the Board of Directors
Debt leverage (Debt)	Total of long and short-term debt/Total assets
Dividends (Divid)	Total distributed dividends/Total assets

4 Results and Discussion

This section is dedicated to the presentation of the empirical results obtained from our study sample. We first present a descriptive analysis to describe the characteristics of our sample, followed by the results of the regression model results.

The data for our variables were collected from the reports and financial statements published by the companies. In what follows, we will present descriptive statistics for the sample. On average, the firms in the total sample hold 10.1% of their net assets as liquid cash, although the median level of cash holdings is 4.4%, which shows that some firms hold relatively large amounts of cash relative to the median value. The first two shareholders have been identified and the variables "1st Share" and "2nd Share" measure the percentage held by each of them. The first shareholder holds on average 47% of the capital and the second 14%. The category of shareholders most represented in the sample turns out to be family shareholders, representing

60% of the companies in our sample. Statistics show that, on average, the CEO is also chairman of the board of directors in 62% of cases. The average board size is eight members. They have an average and median debt ratio of about 36%. On average, they pay out about 6% of their assets in the form of dividends (the median is 4%).

Table 2 Descriptive Statistics of companies in our sample over the period 2007-2018

Variable	Mean	Median	SD	Minimum	Maximum
Cash	10.10%	4.40%	14.30%	0.00%	83.60%
1st Share	47%	51%	21%	7%	97%
2nd Share	14%	13%	11%	0%	42%
Fam Own	60%	0		0	1
BD-Size	8	8	3	3	17.00
CEO-dual		0		0	1
Debt	36%	36%	18%	0%	98%
Divid	6%	4%	7%	0%	76%

We now categorize our sample into two groups of companies according to their cash level: either lower or higher than the median. This is done in order to obtain two sub-samples with a low or high level of liquidity. In order to carry out the tests to compare the means, we create two sub-samples. The first sub-sample titled “low-cash” has a level of availability below the median, the second sub-sample titled “high-cash” has a level of availability higher than the median.

Table 3 and 4 below summarize the results of our tests, which show that firms with a high level of liquidity display significantly different characteristics from those with a lower level of liquidity with a risk of error of less than 1% for four of our variables. The tests comparing the averages show that companies in the "high-cash" group have, on average, a more concentrated structure than companies in the "low-cash" group, a smaller board of directors, a higher level of debt, and distribute more dividends. From these descriptive statistics, we note that there are no statistically significant differences in several variables (second shareholder, CEO duality, and family ownership) between our two sub-samples.

Table 3: Result of Model Specification Tests of the continue variables over the period 2007-2018

Variable	High-Cash		Low-Cash		T-student
	Mean	SD	Mean	SD	
1st Share	51%	20%	44%	21%	3.920***
2nd Share	13%	9%	15%	12%	1.806
BD-Size	7.96	8.92	8.25	2.49	94.874***
Debt	32%	19%	40%	16%	5.124***
Divid	7%	4%	8%	5%	5.258***

Table 4: Result of Model Specification Tests of the discrete variables over the period 2007-2018

Variable	High-Cash		Low-Cash		T-CHI-2
	0	1	0	1	
CEO-dual	156	96	144	108	1.186
Fam Own	108	144	108	144	-

Table 5 below presents the correlation coefficients between the variables in our study. This matrix shows that all the explanatory variables are correlated with the explained variable with a risk of error below 1% with the exception of the "1st share" and “CEO-dual” variable, both having a positive but insignificant correlation coefficient. The strongest positive correlation coefficient shows a correlation between cash and dividend of 0.235, while the largest negative correlation coefficient concerns debt leverage and the holding of liquidity to the value of -0.249. As for the other significant coefficients, it varies between -0.182 and 0.125. The correlation coefficients between the explained variable "cash position" and the explanatory variables: family ownership, board size, and dividend distribution are all significant and positive; whereas the variables second shareholder and debt leverage are negative and significant. Furthermore, no correlation coefficient reaches the threshold of 0.6. We can then conclude that our study is not affected by the risk of multicollinearity.

Table 5: Correlation Matrix

Variable	Cash	1ST Share	2nd Share	Fam Own	CEO-dual	BD-size	Debt	DIVID
Cash	1							
1ST Share	0.046	1						
2nd Share	-0.182**	-0.277**	1					
Fam Own	0.125**	-0.028	0.159**	1				
CEO-Dual	0.064	-0.334**	0.192**	-0.07	1			
BD-size	0.125**	-0.118**	0.105*	-0.213**	0.205**	1		
Debt	-0.249**	0.066	0.166**	0.249**	-0.085	-0.027	1	
DIVID	0.235**	0.12**	-0.054	-0.024	0.117**	0.11**	-0.294**	1

** The correlation is significant at the 0.01 level (two-tailed)
* The correlation is significant at the 0.05 level

Certain assumptions must be made in order to draw conclusions based on regression analysis. These assumptions should be checked before starting the regression model. It is assumed that the independence of all dependent variables is assumed by each economic sector (Berry, 1993). Table 6 shows the results of the normality test. To verify data normality, the normal distribution does not follow if the probability value of the Jarqua-Bera test is less than 0.05 of the received data. Table 6 shows that the Jarqua-Bera test probability value denies that data follows a normal distribution. Kurtosis and skewness values are also not within the range of a normal distribution. The Kurtosis scores are all greater than 3.00 and the skewness scores were also not within the -0.8 to 0.8 range (Jondeau & Rockinger, 2003). Non normal distribution of data can be transformed into normal distribution after taking log from the values. This means that the presence of extreme value points or outliers have been removed. Deletion of such extreme values may result in inefficient or misleading conclusions (Cook & Weisberg, 1982). Furthermore, the normal residual probability graph confirms that there is no serious violation of the normal assumptions.

Table 6: Test of Normality

Variables	Skewness	Kurtosis	Jarque Bera	Prob Value
Cash	-1.25	4.01	2.31	0.00
1st Share	-0.16	5.29	3.38	0.00
2nd Share	-2.56	3.30	43.45	0.00
Fam Own	-0.48	3.51	13.57	0.00
CEO-Dual	4.36	1.90	2.31	0.00
BD-Size	1.52	2.47	1.56	0.00
Debt	1.25	4.82	2.55	0.00
Divid	-2.95	3.72	1453.2	0.00

The correlation between the independent variables is a big problem. This can be checked by looking at the correlation matrix between the independent variables. So, values remained between -0.294 to 0.249. Tabachnick and Fidell (1996) explained that the correlation of two variants between the independent variables of 0.90 or more indicates multicollinearity. In addition, multicollinearity can be checked using variations in the inflation factor.

The Inflation Factor (VIF) technique is used to find multicollinearity between independent variables. VIF values range from 1.21 to 1.86. This means that there is no multicollinearity between the independent variables, because these values are below the threshold of 9.00 in all cases. In addition, this also shows that none of the independent variables can be explained by other independent variables. As noted by Myer (1990), values below 10 do not pose a risk of multicollinearity.

A white test for heteroscedasticity (non-crosslinked product) is used. The LM statistic (Breusch-Pagan/Cook-Weisberg test for heteroscedasticity) remained below its critical value in almost all cases. This shows that the deviation of the independent variables is uniform at each level. Thus, there is no evidence of heteroscedasticity. In this way we can rely on the regression results and do not need to look for generalized or weighted least squares for further analysis.

4.1 Unit Root Test

The purpose of the root test is to determine whether all variables have stationary (fixed) values or non-stationary values. Stationary data means that the mean, variance, and covariance or autocorrelation remain the same over time. To check whether the data is stationary or non-stationary, we first look at the intercept and trend of values. The figure shows interception but does not show a trend. The unit root test is now applied to all dependent and independent variables at individual intercept. The Table 7 shows that (panel unit root test) only one variable (cash holdings) is stationary at level, while independent variables (1st shareholder, 2nd shareholder, family ownership, CEO duality, board Size, debt and dividend) are stationary at 1st difference.

Table 7: Unit Root Test

Variables	Levin, Lin & Chu t*		ADF - Fisher Chi-square		PP - Fisher Chi-square		Unit at
	Statistic	Prob.	Statistic	Prob.	Statistic	Prob.	
Cash Holdings	-11.35	0.00	321.12	0.00	325.41	0.00	Level
1st Share	-34.59	0.00	534.15	0.00	628.75	0.00	1st Difference
2nd Share	-2.67	0.00	1.77	0.18	4.56	0.07	1st Difference
Fam Own	-18.3	0.00	86.87	0.00	88.45	0.00	1st Difference
CEO-Dual	-1.67	0.00	5.44	0.78	5.04	0.00	1st Difference
BD-Size	-14.66	0.00	85.62	0.00	81.38	0.00	1st Difference
Debt	-38.26	0.00	133.34	0.00	512.78	0.00	1st Difference
Divid	-1.25	0.03	90.27	0.00	28.27	0.00	1st Difference

4.2 Co-integration Test

The co-integration test is intended to check whether all variables are in the same order and if they have a long-term relationship. Before starting panel co-integration, we need to make sure that the variables are not stationary at level and become stationary at the first difference. Table 6 shows the same conditions. The co-integration test says that Hº without co-integration will be rejected. The reason is that the t statistic is -13.05 at the significance level of 0.00, given by Kao Residual Co-integration Test. Therefore, we can conclude that all variables have a long-term relationship with each other and are integrated in the same order.

4.3 Regression results and interpretation

This section presents the results of the following two regression models that we estimated to examine the impact of governance mechanisms on liquidity levels for our total sample by estimating the following equation:

$$Cash_{it} = \alpha + \beta\ 1^{st}\ Share_{it} + \beta 2\ 2^{nd}\ Share_{it} + \beta 3\ FamOwn_{it} + \beta 4\ Board\ size_{it} + \beta 5\ CEO\text{-}Dual_{it} + \beta 6\ Debt_{it} + \beta 7\ Divid_{it} + \varepsilon$$

Table 8: Regression Results

VARIABLE	OLS	RANDOM EFFECTS
Constant	0.56	0.23
	**	*
1ST Share	-0.013	-0.05
2nd Share	-0.23	-0.123
	***	
Fam Own	0.056	0.085
	***	*
BD-size	0,005	0.001
	**	
CEO-Dual	0.029	0.019
	**	
Debt	-0.173	-0.102
	***	**
Divid	0.319	-0.003
Constant	***	
	0.169	0.156
Observation	***	**
	501	501
R2	0.1665	0.104
F (Statistics)/Wald Chi2 (16)	225.85	658.15
	***	****
Housman Test (Chi-sq. Statistics)		1056.56

Prob (Housman Test)	0.17

***The correlation is significant at the 0.01 level.
**The correlation is significant at the 0.05 level.
* The correlation is significant at the 0.1 level.

Here is a combination of all 504 observations together after running the OLS regression model and ignoring the characteristics of panel data. Table 8 shows the estimated statistical values required for the model. The Hausman test received Hº. This means that the random effect model is placed on the panel data because the Hausman test guideline is that H^0 is accepted and H^1 is rejected if the test statistical value is not significant (p-value > 0.05). The term βo interception is positive in column (01) and column (02) and is significant in this model. The coefficient βº (0.56**, 0.23*) indicates that if all explanatory variables have values of zero, cash holding will represent Bº. In many cases, this doesn't make economic sense. It only has a mechanical interpretation. This represents the average effect of all the variables not included in this model. The remaining coefficients are considered as partial slope coefficients. This partial slope coefficient represents the variation in the dependent variable (due to the percentage change in the explanatory variable) while all other variables remain constant. Our estimation models show that, apart from the dividend distribution, the significant variables are consistent with our expectations. The results for the implications of large shareholders on corporate liquidity give a non-significant positive coefficient for this variable. In other words, the share of capital held by the major shareholder does not seem to have an impact on the level of cash holdings of Moroccan companies. Consequently, we cannot draw any conclusions on hypothesis H1, which assumes that companies with a larger shareholder suffer from a significant conflict of interest between majority and minority shareholders, leading to a higher level of cash holdings.

On the other hand, the presence of a second majority shareholder in the company's shareholding structure has a significant negative effect on the level of cash held at the 1% threshold. This result confirms the disciplinary role of the second shareholder which acts as a counterweight to the first shareholder, and thus improves the protection of minority shareholders by leading to a lower level of cash holdings. It can also be concluded that the more power the second shareholder has, the more important its role is in protecting minority shareholders, which confirms hypothesis H2. The relationship between family shareholding and cash holdings is positive and significant at the 1% threshold. This positive relationship is explained by the importance of agency conflicts between majority family shareholders and minority shareholders, since family shareholders tend to be more involved in management and do not necessarily share the same objectives as other shareholders. Cash holdings therefore tend to be higher in family-owned firms, which supports hypothesis H3, the characteristics of the board of directors also have an impact on the cash position of the company, specifically the size of the board and the duality of the CEO. The size of the board is positiely related to the company's cash position at the 1 % threshold, which means that the larger the size of the director's board, the higher the cash position is. In fact, a large board tends to increase agency costs (Yemack 1996). In addition, the lack of harmony between the ideas of board members gives managers room to maneuver and increase their discretionary power (Forbes and Milliken, 1999). This finding supports hypothesis H4, large boards of directors do not provide effective control over management, thereby increasing cash resources.

Regarding CEO duality, we find that companies whose CEO is also the chairman of the board have more cash than when the two functions are held by two different people, given that its coefficient is positive and statistically significant at the 1% threshold. The combination of control and decision-making positions allow the CEO to control the board of directors (Jensen, 1993) and spend the liquidity in a discretionary way. This result confirms hypothesis H5, which assumes that combining the functions of president and chief executive officer would have a positive impact on the holding of treasurer positions. The debt ratio is significantly negative at the 1% level. This negative sign confirms the effectiveness of debt as a disciplinary measure to align managers' deviant behavior. These results are in line with our hypothesis H6, justified by the agency theory, which states that debt is a governance mechanism that reduces managers' discretionary latitude and forces them to spend excess cash (Jensen, 1986). The only variable that shows a result contrary to our predictions is the dividend distribution variable, with a significant positive impact on cash holdings at the 1% threshold. However, our result is similar to that of Zhang and Ka-lay (2016) which explains this positive relationship by the mistrust of companies towards the negative signal that cancelling or reducing the distribution could send, which could push them to hold more cash in order to ensure that the dividend distribution policy is maintained.

Conclusion

This paper analyzes the impact of governance mechanisms on the liquidity holding of non-financial firms listed on the Casablanca Stock Exchange over the period 2007-2018 in light of the agency theory.

Our main results show that Moroccan firms differ in terms of liquidity holding according to the specificity of their corporate governance. In line with the predictions of agency theory, our results indicate that firms with a second majority shareholder and those with a smaller board of directors accumulate significantly lower cash reserves compared to other firms. We were also able to show that both family-controlled firms and firms with chief executive officer and chairman role duality hold the highest levels of liquidity. Finally, we were able to see the important role played by debt in reducing the liquidity available to management. Thus, we see that certain corporate governance mechanisms have a direct effect on the level of cash, while others act indirectly, notably through financing policy. However, our study found no evidence of a significant impact of the majority shareholder on liquidity levels. In summary, our results seem to show that corporate governance has an important explanatory power on the behavior of Moroccan companies in terms of cash holdings.

References

Ali, H., & Shafique, O. (2020). «Board Committee's Characteristics and Selling, General and Administrative Cost Behavior: Evidence from Pakistan». International Journal of Management Research and Emerging Sciences, 10(2), 187-203.

Anderson, R., Mansi, S., and Reeb, D. (2003). «Founding family ownership and the agency cost of debt», Journal of Financial Economics, Vol 68, Pp 263-285.

Anisa Abdulrahman Amin,A., and Hamdan,A. (2018).«Evaluating the Effect of Ownership Structure on Firm Performance: Evidence from Saudi Arabian Listed Companies»,Journal of Economic Cooperation and Development,Vol 39, Pp 65-92.

Bates, T. W., Kahle, K. M., & Stulz, R. M. (2009). « Why do U.S. firms hold so much more cash than they used to? », Journal of Finance, Vol LXIV, Pp 1985-2021.

Berry, W. D. (1993). Understanding regression assumptions (Vol. 92). Sage Publications.

Biddle, Gary C., Hilary,G, and Rodrigo S. Verdi. (2009) «How Does Financial Reporting Quality Relate to Investment Efficiency? », Journal of Accounting and Economics,Vol 48,Pp 112-131.

Booth, L., V. Aivazian, A. Demirguc-Kunt, and V. Maksimovic (2001). «Capital structures in developing countries», Journal of Finance,Vol 56,Pp 87–130.

Boubaker, S., Derouiche,I., and Nguyen,D. (2013). «Does the board of directors affect cash holdings? A study of French listed firms », Journal of Management and Governance, Vol 17, (2).

Brickley, J. A., Coles, J. and Jarrell, G. (1997), «Leadership Structure: Separating the CEO and Chairman of the Board », Journal of Corporate Finance,Vol 3,Pp 189-220.

Caprio, L, Giudice, A. and Signori,A. (2020). « Cash holdings in family firms: CEO identity and implications for firm value », The journal of the European financial management, Vol 26 (2), , Pp 386-415.

Chrisman, J. J., Chua, J. H., Pearson, A. W. and Barnett, T. (2012). «Family involvement, family influence, and family-centered non-economic goals in small firms», Entrepreneurship Theory and Practice, Vol 36 (2), Pp. 267-93.

Cook, R. D., & Weisberg, S. (1982). Residuals and influence in regression. New York: Chapman and Hall.

Couderc, N. (2006). «La détention d'actifs liquides par les entreprises: Quelles explications? » Revue économique, Vol 57, Pp 485-496

Couret,A., et Hubert de La Bruslerie (2002) . «Analyse économique de l'appropriation de la richesse dans l'entreprise et évolutions récentes du droit français», Revue internationale de droit économique, Vol XVI (4), Pp 575-601

Daily, C. M., & Dalton, D. R. (1997). «Separate, but not independent: Board leadership structure in large corporations. Corporate Governance»,An International Review , Vol 5, Pp 126-136.

Davis, J., Schoorman, F., & Donaldson, L. (1997). « Toward a Stewardship Theory of Management», Academy of Management Review, Vol 22, Pp 20-47.

DeAngelo, H., DeAngelo,L. Stulz.M (2006) . « Dividend policy and the earned/contributed capital mix: a test of the life-cycle theory », Journal of Financial Economics, Vol 81(2), Pp 227-254.

Dittmar and Mahrt-Smith. (2007). «Corporate governance and the value of cash holdings»,Journal of Financial economies ,Vol 83, Pp 599 -634.

Donaldson, L. Davis,J. (1991) .«Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns» , Australian Journal of Management, Vol 16,Pp 49-64.

Easterbrook, F. H. (1984).« Two agency-cost explanations of dividends », The American Economic Review, Vol 74, Pp 650-659.

Fama, E. F. (1980). «Agency problems and the theory of the firm», The Journal of Political Economy, Vol 88, Pp 288-307.

Fama, E. F., & Jensen, M. C. (1983). «Separation of ownership and control», Journal of Law and Economics, Vol 26, Pp 301-325.

Forbes, D. P., and F. J. Milliken (1999). «Cognition and Corporate Governance: Understanding Boards of Directors as Strategic Decision-Making Groups», Academy of Management Review, Vol 24(3), Pp 489-505.

Gill, J. and P. Johnson, (2010). « Research Methods for Managers », Sage Publications 4th Edition. London.

Gill,A, and Shah,C, (2012). «Determinants of Corporate Cash Holdings: Evidence from Canada », International Journal of Economics and Finance, Vol 4(1), Pp 70.

Gomes, A. and Novaes, W. (2001) "Sharing of Control as a Corporate Governance Mechanism, Penn CARESS Working Paper, Economic Department, University of Pennsylvania.

Grossman, S. J., & Hart, O. D. (1980). « Takeover bids, the free-rider problem, and the theory of the corporation», Bell Journal of Economics, Vol 11, Pp 42-54.

Guariglia, A. and Yang, J. (2016) : «A balancing act: Managing financial constraints and agency costs to minimize investment inefficiency in the Chinese market», Journal of Corporate Finance , Vol 36, Pp 111-130.

Gul, F.A., Leung S., 2004. «Board leadership, outside directors' expertise and voluntary corporate disclosures», Journal of Accounting and Public Policy, Vol 23, Pp 351-379.

Harford, J., S. Mansi and W. Maxwell, (2008): « Corporate Governance and Firm Cash Holdings », Journal of Financial Economics, Vol 87, Pp 535-555.

Harris, M., & Raviv, A. (1991). «The Theory of Capital Structure», Journal of Finance, Vol 46, Pp 297-352.

Jamil, S., Anwar,A. , Afzaal,N. , Tariq,A , Asif,M. (2016) : « Determinants of Corporate Cash Holdings: Empirical Analysis of Pakistani Firms » , Journal of Economics and Finance ,p-ISSN: 2321-5925.Vol 7, Pp 29-35.

Jensen,M. (1986). « Agency cost of free cash-flow, corporate finance and takeovers», the American Economic Review, Vol 76, Pp 323-329.

Jensen,M., and meckling,W. (1976) : « Theory of the firm : managerial behaviour , agency costs and ownership structure », Journal of Financial Economics ,Vol 3, Pp 305-360.

Jondeau, E., & Rockinger, M. (2003). Conditional volatility, skewness, and kurtosis: existence, persistence, and comovements. Journal of Economic dynamics and Control, 27(10), 1699-1737.

Kim, K.-H., Al-Shammari, H. A., Kim, B., and Lee, S.-H. (2009). «CEO duality leadership and corporate diversification behavior», Journal of Business Research, Vol 62 (11), Pp 1173-1180

Kuan, T.-H., Li, C.-S. and Chu, S.-H., (2011). « Cash holdings and corporate governance in family-controlled firms», Journal of Business Research, Vol 64 (7), Pp. 757-64.

Kusnadi.Y. (2011). « Do corporate governance mechanisms matter for cash holdings and firm value? », Pacific-Basin Finance Journal, vol 19 (5), Pp 554-570.

La Porta, R., Johnson, S., Lopez-de-Silanes, F., & Shleifer, A. (2000). «Tunneling», American Economic Association, Vol 90, Pp 22-27.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1997). «Legal determinants of external finance», Journal of Finance, Vol 52, Pp 1131-1150.

La Porta, Rafael, Lopez-de-Silanes,F., Shleifer,A., and Vishny.R, (2000).«Investor protection and corporate governance» , Journal of Financial Economics, Vol 58, Pp 3-27

Laeven, L., and Levine, R. (2008). «Complex ownership structures and corporate valuations», The Review of Financial Studies, Vol 21(2), Pp 579–604.

Lehman, E. and Weigand,J.(2000). « Does the governed corporation perform better? Governance structures and corporate performance in germany », The European Finance Review,Vol 4,Pp 157-195.

Lipton, M. and Lorsch, J.W. (1992). « A modest proposal for improved corporate governance», Business Lawyer, Vol 48(1), Pp 59–77.

Maheshwari, Y., and Rao, KTV. (2017). « Determinants of Corporate Cash Holdings », Global Business Review, Vol 18, Pp 416–427.

Mard,y., Marsat,S., et Roux,F. (2014). « Structure de l'actionnariat et performance financière de l'entreprise : le cas français », Finance Contrôle Stratégie , Pp 17-4 .

Megginson, William,L., Ullah.B., and WEI.,Z,. (2014). «State ownership, soft-budget constraints, and cash holdings: Evidence from China's privatized firms», Journal of Banking & Finance, Vol 48, Pp 276-291.

Myers, R. H. (1990). Classical and modern regression with applications. Boston: PWS and Kent Publishing Company.

Nguyễn Trọng Nghĩa, Trần Lê Khang, Nguyễn Công Thành (2018). «How debt and dividend policy moderate the impact of overinvestment on firm performance? » , The 5th IBSM International Conference on Business, Management and Accounting, Paper Code : F5 – 72

Nihat,A and Panayiotis,A and Isabella,K and Dennis,P. (2018). «CEO Duality, Agency Costs, and Internal Capital Allocation Efficiency», British Journal of Management,Vol 30(4).

Opler, T., Pinkowitz, L., Stulz, R. M., and Williamson, R. (1999). « The Determinants and Implications of Corporate Cash Holdings », Journal of Financial Economics, Vol 52, Pp 3-46,.

Ozkan, A., & Ozkan, N. (2004). « Corporate Cash Holdings: An Empirical Investigation of Uk Companies », Journal of Banking & Finance, Vol 28, Pp 2013-2134.

P Goyal, C W Park. (2002). « Board leadership structure and CEO turnover », Journal of Corporate Finance, Vol 8 (1), Pp. 49 – 66.

Pinkowitz, L., Stulz, R., & Williamson, R. (2006). «Does the contribution of corporate cash holdings and dividends to firm Value depend on governance? A cross-country analysis»,Journal of Finance ,Vol 61, Pp 2725-2751.

Rabelo,V., Sonza,I., Ceretta,P., and Galli,O. (2018). « Determinants of Cash Retention in Brazilian Companies: An Analysis After the 2008 Crisis», Journal of Education and Research in Accounting, Vol 12, n. 3, art. 5, Pp 349-363.

Rozeff, M. S. (1982). «Growth, beta and agency costs as determinants of dividend payout ratios», The Journal of Financial Research, Vol 5,Pp 249-259.

Schmid, T., Ampenberger, M., Kaserer, C., & Achleitner, A.-K. (2010). «Controlling shareholders and payout policy: do founding families have a special 'taste for dividends'? » CEFS Working Paper No. 2010-1. 2010

Shafique, O., & Ali, H. (2020). Impact of overlapping membership on audit and compensation committee on cost behaviour: Evidence from Pakistan. Paradigms, 14(1), 225-233.

Shleifer, A., & Vishny, R. (1986). «Large shareholders and corporate control», Journal of Political Economy, Vol 94, Pp 461–488.

Shleifer, A., & Vishny, R. (1997). « A Survey of Corporate Governance », Journal of Finance, Vol 52, Pp 737-783.

Tabachnick, B. G., & Fidell, L. S. (1996). Analysis of covariance. Using multivariate statistics, 8(1), 321-374.

Tandelilin, E., Kaaro, H., Mahadwartha, P. A., & Supriyatna. (2007). «Corporate governance, risk management and bank performance: Does Type of Ownership matter? », EADN individual research grant project,No 34, 115-118

Tang, L., Lu,K and Wu,W. (2017).«Comparison of family ownership and non-family ownership private firm performance» ,Transformations in Business & Economics 2017, Vol 16 (3), Pp 381-396. 16p.

Villalonga, B., & Amit, R. (2006). « How do family ownership, control and management affect firm value? », Journal of Financial Economics , Vol 80, Pp 385–417.

Yermack, D., 1996. «Higher market valuation of companies with a small board of directors»,Journal of Financial Economics, Vol 40, Pp 185–212.

Zhang, F., and Kalay,A (2016) : « Vanishing stock dividends », SSRN Electronic Journal.

Zona, F. (2012). «Corporate investing as a response to economic downturn: Prospect theory, the behavioural agency model and the role of financial slack», British Journal of Management, Vol 23, Pp.42-57