THE RELATIONSHIP BETWEEN CHARACTERISTICS OF CORPORATE GOVERNANCE AND CASH HOLDING IN INFORMATION TECHNOLOGY AND COMPUTER LISTED COMPANIES ON THE TEHRAN STOCK EXCHANGE

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ABSTRACT

The purpose of the present study is to investigate the role of corporate governance and cash resources of the Information technology and Computer listed companies on the Tehran Stock Exchange (TSE). The population includes 94 firms selected through systematic sampling. The data is collected from the audited financial statements of the firms provided by TSE's website from 2008 to 2015. In this study the variables, debt reliance, ownership concentration, board independence, CEO duality and institutional ownership, has been used to investigate corporate governance. The results of multiple linear regression analysis show that there is a significant relationship between institutional ownership, Ownership concentration, debt reliance and board in dependence with cash holding. According to findings, that there is no a significant relationship between CEO duality with cash holding.

JEL Classification: G3; G32

KEYWORDS: Debt Reliance, Ownership Concentration, Board Independence, Ceoduality, Institutional Ownership

INTRODUCTION

Currently decision to determine the amount of cash reserves in the company in one of the significant issues in the finance literature has become. Although the cash held on the balance sheet, the asset is considered important for the company, keeping too much of it can be a sign of inefficiency in resource allocation and impose large costs on companies[5]. Two assumptions that have a significant impact on cash holdings discussion, Trade off theory and Pecking order theory. Based on the Tradeoff theory, participating optimal level of liquidity on the balance between benefits and costs of holding cash are set [9]. Due to agency problems, managers may not use cash resources firms to enhance shareholder value.Currently one of the main factors improving resource management and economic efficiency of companies, corporate governance mechanisms that involves a set of relationships between the company's management, board, shareholders and other interest groups is. Mechanisms of corporate governance provides the structure through which company objectives are set and supervising the performance is adversely achieve these goals is provided. The system by establishing the necessary motivation in management, and also provides effective monitoring, so companies will utilize resources more efficiently. In this study, the role of corporate governance in relation to the cash holding as an effective factor in improving economic performance are discussed. The aim of this study is to answer to questions such as: What is the relationship between cash holding and corporate governance criteria? This study attempts to elucidate this subject,

effective solution to provide efficient management of company resources and, consequently, increase the value of the company.

Trade-Off Theory

Trade off theory argues that firms maximize their values by considering the marginal costs and marginal benefits of holding cash. Under the assumption that managers aim to maximize shareholder wealth, holding cash will bear the ''cost-of carry''. This cost is related to the difference between the earnings from holding cash and the interest that firms will pay to fund additional cash [8]. The benefits of holding cash are based on two motives: transaction minimization and precautionary motives. In relation to the former, it is suggested that firms stockpile cash when the rising-costs and the opportunity costs (related to cash deficits) are higher [8, 16, 19] The precautionary motive, based on the effect of asymmetric information on raising funds, suggests that even if firms are able to raise funds from capital markets, they might be reluctant to do so because of market issues (for example if the market is under pricing the planned securities to be issued).[17]Ascertain the prevalence of an optimal level of cash where the marginal costs of cash shortage match the marginal costs of holding cash. [12]Argue that holding cash serves to reduce the probability of financial distress due to unexpected losses. Such firms stockpile cash levels as they are in a better position to direct these resources to investment plans, even if it is hard to obtain funds. Market imperfections are more severe in emerging markets compared to developed markets as well as bankruptcy related costs are significant in such markets, and hence trade-off theory can explain cash holding decisions in these markets. For example, the findings of [3] and Booth [1] support this argument in emerging market context.

The Pecking Order Theory

This theory suggests that there is no optimal level of cash holdings for a firm. Based on asymmetric information, [14, 15] suggest that firms follow a pecking order of financing to minimize costs related to information asymmetry. The order starts with internal sources and firms will use external sources, after the internal sources are exhausted. [14]Proposes that firms favors external funding by debt compared to equity issuance, since debt has lower information costs than equity financing Cash can be seen as an outcome of the different financing and investment decisions proposed by the hierarchal pattern of financing [8, 12] claim that cash can be used for financing investments to pay firm's debt and in turn stockpile cash. [8] Also detect that firms with high level of cash flows are those to distribute dividends, apply for debt financing, and as a result hoard cash. The previous literature we argue that information asymmetry is also important, and might be more severe in developing countries (see among others, [3]. [4] Different financial factors, as determinants of cash holdings, have been used by empirical studies to reflect this theory. Recently, [3] employ leverage and profitability as financial variables that determine the decision to hold cash. In addition, [12] use size and cash flow to empirically analyses this theory

REVIEW OF LITERATURE

[18]Investigated the empirical determinants of corporate cash holdings for a sample of UK firms over the period 1984-1999 They presented evidence of the significant relation between managerial ownership and cash holdings The results also showed that the way in which managerial ownership exerts influence on cash holding decisions differs between firms with ultimate controllers and those that are widely-held. Growth options of firms, cash flows, liquid assets, and leverage and bank debt are important in determining cash holdings. In contrast, there was much less evidence that larger

firms hold less cash. Their analysis also suggested that unobserved firm heterogeneity and endogeneity are crucial in analyzing the cash structure of firms [6] examined CEOs' risk of termination, its determinants and its effect on firm value. Using survival analysis, they found that the risk of termination increases for about thirteen years before decreasing slightly with CEO tenure; 82% of CEOs have tenure of less than thirteen years. They also found that tenure increases with performance and compensation and decreases with monitoring by the board. Changes in the risk of termination did not have a significant effect on firm value. [5]Examined the role of this governing body in the accumulation of cash reserves. Using a sample of 597 French listed firms during 2001–2007, they found that firms with boards deemed to be effective in mitigating agency problems that is, those appointing independent directors and splitting chief executive officer and chair positions accumulate less cash reserves than those with less effective boards. Moreover, two-tier boards were more efficient in mitigating the agency costs of free cash flow, leading to less corporate cash hoarding. These findings supported the idea that agency conflicts influence cash management policy and that effective boards of directors play an important disciplinary role in a concentrated ownership setting.[7] Examined the relationship between corporate governance mechanisms and tax gap. Independence of the Board, duality role of the CEO, institutional shareholders, state ownership, existence of the internal audit, audit opinion, changing of the auditor and the transaction with related parties were considered as corporate governance mechanisms proxies. In addition, firm size and the financial leverage are entered to the model as control variables. The final sample of analysis includes 110 firms for a period of 6 years from 2007 to 2012 and the multiple regression method based on panel data was used to test the proposed research hypotheses. The results indicated that despite the existence of negative relationship of board independence, state ownership, audit opinion, auditor change and leverage had negative impact with the tax gap; internal audit and size had positive impact on the tax gap. In addition, there was no significant relationship among the duality role of CEO, institutional shareholders and transactions of related parties with the tax gap. [3]They investigated corporate cash holdings in developing countries In particular, they looked into the effect of capital structure and dividend policy on cash holdings in Brazil, Russia, India, and China and compared their results with a control sample from the US and the UK. Their sample contains 1992 firms across these countries for the period 2002–2008. They employed Instrumental Variables analysis to control for the endogeneity of the financial policies (cash holdings, capital structure, and dividend policy). Their results showed some evidence that capital structure and dividend policy affect cash holdings. There are similarities between developed and developing countries on the factors determining corporate cash holdings. The results of their cross-country model provided evidence thatcapital structure, dividend policy, and firm size are important factors in determining cash holdings. Finally, their showed that firms operating in countries with low shareholder protection hold more cash.[13]Using governance metrics based on antitakeover provisions and inside ownership, he found that firms with weaker corporate governance structures actually have smaller cash reserves. He found that there is only limited evidence that the presence of excess cash alters the overall relation between governance and profitability. In the US, weakly controlled managers choose to spend cash quickly on acquisitions and capital expenditures, rather than hoard it.[11] Investigated the determinants of corporate cash holdings using panel data for firms listed in Tehran stock exchange from 2001 to 2007 to analyze the effect of financial reporting quality on cash holdings and used accrual quality as a proxy of financial reporting quality. Their results suggest that cash holdings are negatively affected by financial reporting quality. This finding suggested firms with good accrual quality hold lower cash levels than firms with poor accrual quality. The results also showed that cash holdings are positively affected by the growth opportunity, cash flows and liquid assets and negatively affected by size, debt maturity and opportunity cost.

Hypotheses

First hypothesis: There is a significant relationship between Institutional ownership and cash holdings**.**

Second hypothesis: there is a significant relationship between ownership concentration and Cash holdings.

Third hypothesis: there is a significant relationship between debt reliance and cash holdings.

Fourth hypothesis: there is a significant relationship between CEO duality and cash holdings.

Fifth hypothesis: there is a significant relationship between Board independence and cash holdings.

DATA AND METHODOLOGY

Population and Sample

The present research studies two types of industries; the Information technology and Computer listed companies on the TSE. The sample comprises firms that meet the following conditions:

- Firms that have been listed in the stock exchange before 2015;

- Firms whose financial year ends at the end of the Iranian calendar;

- Firms that have no financial year changes;

- Firms that have been operating in TSE during the period of interest;

- Firms that have data available for the period of interest;

- Investment companies are excluded.

Given these conditions, 94 firms were selected as sample.

$$1)\ LNCASH_{i,t} = \beta_0 + \beta_1 \text{INSOWN}_{i,t} + \beta_2 OWNCON_{i,t} + \beta_3 DEBTRL_{i,t} + \beta_4 BD - INDEP_{i,t} + \beta_5 DUALITY_{i,t} + \beta_6 SIZE_{i,t} + \beta_7 OPCFL_{i,t} + \beta_8 DIV_{i,t} + \beta_9 MTBR_{i,t} + \varepsilon$$

VARIABLES

Independent Variables

In this study, the independent variables are debt reliance, ownership concentration, board independence, CEO duality and institutional ownership.

CEO DUALITY: CEO duality leadership. This is a dichotomous variable that equals 1 if the CEO is also the chair of the board, and 0 otherwise.

BD_INDEP: Board independence. It is the number of independent directors divided by the total number of directors on the board.

INSOWN: institutional ownership.

OWNCON: ownership concentration

DEBTRL: debt reliance

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Dependent Variable

In this study, the dependent variable is Cash holdings

CASH: cash holdings. It is the natural logarithm of cash-to-net assets ratio; net assets are total assets less cash and marketable securities.

Control Variables

In this study, the dependent variables are firm size, dividend, operating cash flow and Market-to-book ratio (MTBR).

DIV: dividends. It is measured as the ratio of dividends to total assets.

SIZE: firm size. It is the natural logarithm of total sales (in thousands of euros).

MTBR: market-to-book ratio. It is the ratio of (market value of equity plus book value of liabilities) divided by the book value of total assets.

OPCFL: operating cash flow.

Data Analysis

Multivariate regression analysis was applied at the 5% significance level for testing the hypotheses.

Findings

Descriptive and inferential (multivariate regression analyses) analyses are used for testing the hypotheses of the research.

Descriptive Statistics

The data is collected from 94 samples information technology and Computer firms listed in Tehran Stock Exchange for the period from 2010 to 2015. Table 1 provides mean, median, standard deviation, maximum, and minimum values for the research variables.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LNCASH	470	.0000	8.1200	.405723	.4673825
INSOWN	470	.0080	.9000	.229330	.1646565
OWNCON	470	.0000	.9999	.320356	.3120553
DEBTRL	470	-.7225	.7048	.052731	.1018858
BDINDEP	470	.2000	.8000	.655334	.1556337
CEODUAL	470	.0000	1.0000	.046809	.2114536
SIZE	470	9.9859	18.8173	12.999092	1.3721095
OPCFL	470	-.4085	.5793	.107977	.1330818
DIV	470	.0000	1.6192	.135597	.1663967
MTBR	470	-9882.4129	53210.4520	797.973342	2793.1324114

Inferential Statistics

In the regression model, the effect of the independent variables (CEO DUALITY, BD_INDEP, INSOWN,

DEBTRL, OWNCON) on the Cash holdings of the sample firms is examined. A multivariate linear regression model is used at the 5% significance level for testing the hypotheses. If there is no relationship between the independent variables and the dependent variable, all the coefficients in the regression model must be equal to zero. Thus, we can test the significance of the regression model, which is often done using F test. If the obtained F-statistic is less than the Table value of F at the 95% confidence level, the regression model will be significant. The results of F-test are provided in Table 2 (P<0.05).

Table 2: Analysis of Variance

	Model	Sum of Squares	DF	Mean Square	F	Sig.
	Regression	30.720	9	3.413	21.890	.000[b]
1	Residual	71.731	460	.156		
	Total	**102.451**	**469**			
a. Dependent Variable: LNCASH						
b. Predictors: (Constant), MTBR, DEBTRL, OWNCON, INSOWN, DIV, OPCFL, CEODUAL, BDINDEP, SIZE						

The results of estimating the regression model at the 5% significance level are provided in Table 3.

Table 3: The Results of Estimating the Regression Model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	.290	.206		1.409	.160
	INSOWN	.679	.114	.239	5.947	.000
	OWNCON	.759	.061	.506	12.480	.000
	DEBTRL	.135	.184	.029	.731	.465
1	BDINDEP	-.349	.125	-.116	-2.795	.005
	CEODUAL	.028	.093	.013	.302	.763
	SIZE	-.004	.014	-.011	-.271	.786
	OPCFL	.130	.140	.037	.929	.354
	DIV	-.179	.112	-.064	-1.604	.109
	MTBR	-2.675E-6	.000	-.016	-.399	.690
a. Dependent Variable: LNCASH						

Hypothesis 1

According to the first hypothesis, Institutional ownership (INSOWN) is significantly associated with cash holdings (LNCASH). Based on the results of multivariate regression model Table 4, INSOWN has a beta coefficient of 0.679and p-value of 0.000. Therefore, there is significant relationship between INSOWN and cash holdings (LNCASH) at 5% significance level.

Table 4: Results of Testing the First Hypothesis with Multivariate Regression Analysis

Variable	Beta	Sig	Result
INSOWN	0.679	0.000	Accepted

Hypothesis 2

According to the second hypothesis, ownership concentration (OWNCON) is significantly associated with LNCASH. Based on the results of multivariate regression model Table 5, OWNCON has a beta coefficient of 0.759 and p-value of 0.000. Therefore, there is a significant relationship between OWNCON and LNCASH at 5% significance level.

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Table 5: Testing the Second Hypothesis with Multivariate Regression Analysis

Variable	Beta	Sig	Result
OWNCON	0.759	0.000	Accepted

Hypothesis 3

According to the third hypothesis, debt Reliance (DEBTRL) is significantly associated with LNCASH. Based on the results of multivariate regression model Table 6, DEBTRL has a beta coefficient of 0.135and p-value of 0.465. Therefore, there is a significant relationship between DEBTRL and Management bonuses (LNCASH) at 5% significance level.

Table 6: Testing the Third Hypothesis with Multivariate Regression Analysis

Variable	Beta	Sig	Result
DEBTRL	0.135	0.465	Accepted

Hypothesis 4

According to the fourth hypothesis, CEO duality is significantly associated with LNCASH. Based on the results of multivariate regression model Table 7, CEO duality has a beta coefficient of 0.028 and p-value of 0.763. Therefore; there is no significant relationship between CEO duality and LNCASH at 5% significance level.

Table 7: Testing the Fourth Hypothesis with Multivariate Regression Analysis

Variable	Beta	Sig	Result
CEO duality	0.028	0.763	Rejected

Hypothesis 5

According to the fourth hypothesis, Board independence (BDINDEP) is significantly associated with LNCASH. Based on the results of multivariate regression model Table 7, BDINDEP has a beta coefficient of -0.349and p-value of 0.005. Therefore; there is significant relationship between BDINDEP and LNCASH at 5% significance level.

Table 8: Testing the Fifth Hypothesis with Multivariate Regression Analysis

Variable	Beta	Sig	Result
BDINDEP	-0.349	0.005	Accepted

Table 9: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.548[a]	.300	.286	.3948882	1.649
a. Predictors: (Constant), MTBR, DEBTRL, OWNCON, INSOWN, DIV, OPCFL, CEODUAL, BDINDEP, SIZE					
b. Dependent Variable: LNCASH					

Table 10: One-Sample Kolmogorov-Smirnov Test

		LNCASH
N		470
Normal Parameters[a,b]	Mean	.405723
	Std. Deviation	.4673825
Most Extreme Differences	Absolute	.193
	Positive	.135

	Negative	-.193
Test Statistic		.193
Asymp. Sig. (2-tailed)		.000^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

DISCUSSIONS

The present research examined the relationship between five variables (debt ratio, firm size, Earnings stability and accruals quality) and management bonuses of the chemical and pharmaceutical firms listed in Tehran Stock Exchange. The results of multivariate regression rejected one the hypotheses of the research. The results of multiple linear regression analysis show that there is a significant relationship between institutional ownership, Ownership concentration, debt reliance and board independence with cash holding. According to findings, that there is no a significant relationship between CEO duality with cash holding. But positive coefficient obtained from this variable, the consistency of these findings indicates the theoretical foundations. This property is also expected to highlight the role that corporate governance is to reduce CEO behaviors opportunistic. This finding is consistent with results [5] does not match.

LIMITATION

The first limitation is related to the lack of classified data in the database of TSE. Therefore, the researchers were forced to use the audited reports of the firms and data collection became a very time consuming process.

REFERENCES

1. Aivazian, V., & Booth, L. (2003). Do emerging market firms follow different dividend policies from US firms? Journal of Financial Research, 26(3), 371–387.

2. Al-Najjar, B. (2012). The financial determinants of corporate cash holding: Evidence from some emerging markets, Journal of International Business Review, 22(1): 77-88.

3. Al-Najjar, B., & Belghitar, Y. (2011). Corporate cash holdings and dividend payments: Evidence from simultaneous analysis. Managerial and Decision Economics, 32(4), 231–241.

4. Booth, L., Aivazian, V., Demirgu¨ c¸-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. Journal of Finance, 56, 87–130

5. Boubaker, S., Derouiche, I. & Nguyen, D. (2013). Does the board of directors affect cash holdings? A study of French listed firms, Journal of Management &Governance, 19(2): 341-370.

6. Brookman, J. & Thistle, P.D. (2009). CEO tenure, the risk of termination and firm value. Journal of Corporate Finance, 15 (3): 331– 344.

7. Didar, H., Mansoorfar, GH. & Kafami, M. (2015). The impact of corporate governance mechanisms on the tax gap of listed companies in Tehran Stock Exchange. The Iranian Accounting and Auditing Review, 21(4): 409-430.(in Persian).

8. Dittmar, A., Mahrt-Smith, J., & Servaes, H. (2003). International corporate governance and corporate cash holdings. Journal of Financial and Quantitative Analysis,38(1), 111–133.

9. Drobetz, W. & Grüninger, M.C. (2007). Corporate cash holdings: Evidence from Switzerland. Financial Markets and Portfolio Management, 21 (3): 293-324.

10. Drobetz, W., Grüninger, M.C. & Hirschvogl, S. (2010). Information asymmetry and the value of cash. Journal of Banking & Finance, 34(9): 2168–2184.

11. Fakhkhari, H. & Taghavi, R. (2009). Accruals Quality and Corporate Cash Holdings. The Iranian Accounting and Auditing Review, 16(57): 69-84.(in Persian).

12. Ferreira, A., & Vilela, S. (2004). Why do firms hold cash? Evidence from EMU Countries. European Financial Management, 10(2), 295–319

13. Harford, J., Mansi, S. A. & Maxwell, W.F. (2008). Corporate Governance and Firm Cash Holdings. Journal of Financial Economics, 87(3): 535-555.

14. Myers, S. C. (1984). The capital structure puzzle. Journal of Finance, 39(3), 575–592.

15. Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13, 187–221.

16. Miller, M. H., & Orr, D. (1966). A model of the demand for money by firms. Quarterly Journal of Economics, 80(3), 413–435.

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

18. Ozkan, A. & Ozkan, N. (2004). Corporate cash holding: An empirical investigation of UK companies. Journal of Banking & Finance, 28 (9): 2103-2134.

19. Tobin, J. (1956). The interest elasticity of transactions demand for cash Review of Economics and Statistics, 38(3), 241–247.