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The Impact of Block Ownership on Cash Holdings in Companies Listed on the Tehran Stock Exchange

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Abstract

This study aims to investigate the impact of block ownership on cash holding in companies listed on the Tehran Stock Exchange (TSE). To achieve this objective, the effect of block ownership (BOWN), institutional block ownership (IBOWN) and strategic block ownership (SBOWN) on cash holding (CASH) of companies was examined in three separate models. Additionally, the effects of financial and market variables such as institutional ownership (IOWN), firm size (SIZE), market-to-book ratio (MB), net working capital (NWC), operating cash flows (OCF), standard deviation of operating cash flows (OCFV), dividend payout (DIV), research and development expenses (RD), capital expenditures (CAPEX) and asset acquisition (ACQ) were controlled for in regression models. Overall, this study is positioned as applied in terms of objective and descriptive-post-event in terms of data collection method. The statistical population of this study includes all active companies on the TSE over a seven-year period from 2016 to 2022. A systematic elimination sampling method (screening method) was used to select a sample of 157 companies, totaling 1099 firm-years as the selected sample and examined using a multivariate linear regression model and Eviews8 software (panel data method - fixed effects). The results of this study indicate that BOWN and SBOWN influence CASH of companies, but the effect of IBOWN on CASH of companies was not confirmed.

Keywords: Block Ownership (IOWN), Institutional Block Ownership (IBOWN), Strategic Block Ownership (SBOWN), Cash Holding (CASH)

Introduction

For a variety of reasons, the most important of which is the separation of ownership from management, companies have not only the duty to conduct economic activities but also the responsibility to respond to individuals outside the company and preserve public interests, respect shareholders' rights and promote transparency of information. These ideals have been emphasized by various supervisory and executive authorities over the past decade. Achieving these ideals requires the presence of strong regulations and appropriate executive mechanisms, the most important of which is the ownership structure system. Among these, one of the most influential factors in controlling and managing a company is the ownership

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structure especially the concentration of stock ownership in the hands of major shareholders. Shareholders holding a large portion of the company's stocks can exert control over the company. High ownership concentration facilitates better monitoring and control of management performance. Companies believe that establishing proper relationships between managers, shareholders and other stakeholders enables efficient business unit management and control. This, in turn, enables them to provide optimal returns for all stakeholders (Rezaei Dolatabadi et al., 2014). Contrary to the promoted perspective in recent research, corporate ownership is generally concentrated in the hands of a few shareholders. The results of these studies are potentially importance because shareholders with significant ownership have the power to influence corporate decisions. One perspective is that large shareholders advocate better governance. Due to their considerable ownership percentage, they have the motivation to exert control over management decisions to the extent possible, unlike dispersed shareholders. This oversight ensures that better management decisions are made. Moreover, large shareholders can prevent overinvestment by management and if corporate assets are not effectively utilized, they can express dissatisfaction. It is argued that large shareholders are more connected with divestiture which should be considered as creating agency issues (Ravanmehr, 2011). Other perspectives suggest that stock ownership by company managers will impact shareholders' benefits from delegation in several ways: Other perspectives believe that divestiture of ownership shares by company managers will impact shareholders' benefits in several ways. Firstly, higher ownership levels compel managers to bear the costs associated with negative synergies; thus, they provide incentives to sell assets that decrease company value and improve post-sale operations. Secondly, lower ownership levels may be less costly for managers to deviating from value-maximizing strategies by acquiring unrelated assets or assets with higher value than shareholders. Ultimately, ownership incentivizes managers to negotiate better when bargaining over prices. Hence, it is expected that there exists a positive correlation between the synergy of the divested company and stock ownership by managers (Ghafourian Shagerdi et al., 2020). On the other hand, a significant portion of companies' assets is usually held in the form of cash or marketable securities with this ratio varying between 8 to 22 percent in most cases (Ozkan et al., 2017; Dittmar and Mahrt Smith, 2017). The motivation for surplus CASH within the framework of agency and transaction theories is justified with transaction theory having the most empirical evidence in this regard. Managers strive to maximize the company's stock value and manage resources properly by making decisions about the company CASH through selecting an appropriate mix of assets and liabilities. All companies have precautionary and transactional motives for CASH. The transactional motivation is for companies to hold cash in a straightforward manner for their daily transactions (Apler et al., 2006). The amount of company cash varies depending on the type of activity, technological complexity and lost

opportunity cost. Regarding precautionary motivation, in periods when external financing is expensive, companies hold cash to continue investing in projects with positive net present value (Sanchez et al., 2013). Furthermore, according to Keynes theory (1936), companies hold cash for precautionary, speculative and transactional motives. The transactional motive refers to cash held for daily transactions such as purchasing goods and services. The precautionary motive relates to holding cash for security issues such as company protection against unforeseen fluctuations. The speculative motive also refers to companies' inclination to balance cash for the benefits of buying at low prices (Gill et al., 2013).

Considering the above, this study seeks to answer the question of whether BOWN affects the CASH in companies listed on the TSE.

Theoretical Foundations of Research

In recent years, the prevalence of BOWN structure and its impact on various dimensions of companies has emerged as an important issue in corporate governance literature particularly among growing economies and emerging markets in Europe and Asia (Edhami et al., 2012). Acquiring ownership rights by managers and oversight by major shareholders is a potential way to reduce agency problems and increase the institution's value. Fundamental ownership by managers aligns their interests with those of other shareholders. This ensures that management has incentives to pursue value-maximizing activities. Moreover, the presence of major shareholders with shareholder institutions can enhance monitoring and thereby improve performance (Khalifeh-Soltani et al., 2018). On the one hand, cash is now regarded as an unavoidable necessity for all companies and institutions. Cash is akin to blood for the human body; without it, companies cannot sustain their economic livelihoods. In other words, cash flows through all economic units of companies and any economic activity, whether voluntary or involuntary, will have a direct or indirect impact on cash flow. Managing cash flows can lead to significant successes in companies while mismanagement can lead to bankruptcy. Currently, decision-making to determine the level of cash reserves in companies has become one of the significant factors in financial literature. The major advantage of CASH in inefficient capital markets is the increase in a company's ability to capitalize on valuable investment opportunities and the avoidance of expensive external financing. Hence, CASH also incurs costs. For example, controlling managers and shareholders may have motives for CASH that do not align with company goals (Guney et al., 2007).

Research Background

In this research and in domestic studies, Ansari et al. (2023) explored the impact of accounting information quality on the correlation between cash sensitivity and its holding level in family-owned enterprises. The analysis and findings indicated that there was no significant relationship between cash sensitivity and CASH level, but there was a positive and significant relationship between accounting

information quality and CASH level. In addition, accounting information quality does not moderate the relationship between cash sensitivity and CASH level. Additionally, Ashrafi et al. (2023) examined the moderating role of specific factors of corporate ownership structure in the relationship between CASH and company performance among members of the TSE. The hypothesis testing suggested that the specific factors of corporate ownership structure could influence the relationship between CASH and company performance. However, only the moderating role of ownership concentration in this relationship is confirmed. Based on the hypothesis confirmation, the weakening of the relationship between CASH and company performance by ownership concentration suggests that concentrated ownership creates a conflict of interest between minority and majority shareholders which leads to a deterioration in company performance. Moreover, it is important to protect shareholders' rights through appropriate laws. Karamnia et al. (2022) conducted a study examining business groups, ownership structure and the CASH level. The findings from the hypothesis test of the research reveal a significant negative correlation between membership in group companies and the CASH in companies accepted on the TSE. Moreover, the results indicate that neither IOWN nor government ownership exert a significant influence on the relationship between membership in group companies and the CASH in companies listed in the TSE. Choghan et al. (2020) conducted a study examining the impact of ownership structure, CASH and investment inefficiency on dividend distribution policies. The results indicate that CASH, investment inefficiency, high ownership concentration, managerial ownership and IOWN by shareholders have a positive impact on the dividend distribution policies of companies accepted on the TSE. Conversely, government ownership does not positively affect the dividend distribution policies of companies accepted on the TSE. Moreover, in international research, Alomran et al. (2023) conducted a study on BOWN and CASH in European companies. This study primarily investigates heterogeneity in the relationship between shareholder ownership and corporate cash reserves and examines companies actively trading on the stock exchanges of 22 European countries during the period from 2006 to 2015 utilizing precautionary motives and corporate cash and inventory indicators. The study employs ordinary least squares regression models and multiple fixed effects and documents a positive correlation between BOWN and corporate cash reserves which indicates the influence of shareholders on the CASH policies of companies. However, further analyses reveal that the impact of BOWN on CASH depends on the type of shareholder. While there is a positive correlation between cash holdings and ownership by strategic shareholders, this correlation becomes negative when considering ownership by institutional shareholders. Ahmad Abdoh et al. (2016) conducted a study examining the effect of market competition on the sensitivity of investment to cash. Their research findings indicate a significant negative impact of market competition on the sensitivity of investment to cash. In addition, the research

suggests that the impact of market competition on the sensitivity of investment to cash is higher in companies without financial constraints compared to those with financial constraints. Lin et al. (2022) conducted a study examining the relationship between corporate social responsibility (CSR) and the quality of financial reporting using evidence from restated financial statements. Their results show that the literature concerning the quality of CSR enhances the quality of financial reporting and underscores the necessity for further investigation into the factors contributing to the attenuation of this relationship. Dong et al. (2022) explored the correlation between strategic diversion and cash reserves. They concluded that there exists a positive association between CASH and strategic diversion. Furthermore, companies exhibiting high levels of strategic diversion tend to possess lower cash market value while those with high agency costs demonstrate a stronger linkage between strategic diversion and CASH. Based on the theoretical framework provided, research hypotheses are formulated as follows:

1- BOWN influences a company's CASH.
2- IBOWN influences a company's CASH.
3- SBOWN influences a company's CASH.

Method and Material

This study is applied in nature. The aim of applied research is to develop practical knowledge in a specific area, and from the perspective of its nature and method, it is considered descriptive and correlational research. Additionally, in terms of data collection, it is an ex-post facto study. Furthermore, the statistical population of this research includes all companies listed on the TSE that have been active from 2016 to 2022. For testing the hypotheses of this section, the research sample was selected based on the following criteria, ultimately analyzing 157 companies, totaling 1099 company-years:

- The company is not in the financial intermediation industry as the capital structure of these institutions differs.
- The company has been listed on the TSE since the beginning of 2016.
- The company's symbol has not had significant interruptions during the research period (not stopped on the stock exchange board for more than 3 months).
- The company's data is accessible.
- The company's fiscal year ends on 12/29.
- The company has not changed its fiscal year between 2016 and 2022.

Development of Regression Models and Measurement of Variables

Dependent Variable: Cash Holding (CASH)

The primary dependent variable in this analysis is the company's CASH. Consistent with the CASH literature, this study utilizes the ratio of cash and short-term investments to the book value of assets as the measure for the company's CASH (Ozkan and Ozkan, 2004; Bates et al., 2009; Farinha et al., 2018; Alomran and Al-Sabai, 2022; Alomran et al., 2023).

Independent Variable: Block Ownership (BOWN)

The independent variable in this study is BOWN of companies which is measured as per Alomran et al. (2023) in the following way:

- Block Ownership (BOWN): Defined as the percentage of stocks owned by shareholders who hold at least 5% of the company's stocks.
- Institutional Block Ownership (IBOWN): Defined as the percentage of stocks owned by shareholders who hold at least 5% of the company's stocks and are considered institutional owners (including investment funds, pension funds and hedge funds).
- Strategic Block Ownership (SBOWN): Defined as the percentage of stocks owned by shareholders who hold at least 5% of the company's stocks and are considered strategic owners (including internal ownership such as managers and family ownership).

Control Variables

In accordance with prior research in this area (e.g., Apler et al., 1999; Bates et al., 2009; Alomran and Al-Sabai, 2022; Alomran et al., 2023), the following variables are controlled in the regression models:

- Institutional Ownership (IOWN): Defined as the percentage of stocks held by institutions and public companies out of the total stock capital. These institutions include insurance companies, pension funds, investment funds, financial institutions, banks, government companies, foundations and other government entities with a long-term view and serve as an inverse measure of agency costs (Pantzalis and Park, 2013).
- Company Size (SIZE): Equal to the natural logarithm of the company's total assets at the end of the fiscal year.
- Financial Leverage (LEV): Equal to the ratio of total book debt to the company's total assets at the end of the fiscal year.
- Market-to-Book Ratio (MB): Equal to the ratio of stock market value (the number of stocks multiplied by the stock price) to the book value of equity at the end of the fiscal year.
- Net Working Capital (NWC): Equal to the ratio of (current assets minus current liabilities minus cash and short-term investments) to the company's total assets at the end of the fiscal year.
- Operating Cash Flow (OCF): Equal to the ratio of OCF to the company's total assets at the end of the fiscal year.
- Standard Deviation of Operating Cash Flow (OCFV): Equal to the ratio of OCF to the total assets of the past three years of the company at the end of the fiscal year.
- Dividend Payment (DIV): A dummy variable that is one if the company pays dividends and zero otherwise.
- Research and Development Expenses (RD): Equal to the ratio of RD expenses to the company's total sales at the end of the fiscal year.
- Capital Expenditures (CAPEX): Equal to the ratio of CAPEX to the company's total assets at the end of the fiscal year.
- Asset Acquisition (ACQ): A dummy variable that is one if the company has ACQ during the current period and zero otherwise.

Development of Regression Models

This study investigates the impact of BOWN, IBOWN, and SBOWN on the CASH of companies listed on the TSE. Following Alomran et al. (2023), the following multivariate linear regression models are employed. If the coefficient of the independent variable (β_1) in these models is significant, it is indicated that the research hypotheses are confirmed.

(1)

$$CASH_{it} = \beta_0 + \beta_1 BOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it} + \varepsilon_{it}$$

(2)

$$CASH_{it} = \beta_0 + \beta_1 IBOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it} + \varepsilon_{it}$$

(3)

$$CASH_{it} = \beta_0 + \beta_1 SBOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it}$$

Results

Descriptive Statistics

The results obtained in the descriptive statistics section indicate that companies on average hold 6% of their total assets in cash and short-term investments with a maximum of 49%. Furthermore, the average ownership types are 48% BOWN, 7% IBOWN and 24% SBOWN. Additionally, the findings related to control variables indicate that institutional owners hold an average of 38% of company stocks. The SIZE has an average of 14.7, with the largest SIZE having 20.7 and the smallest size having 11.1. The LEV shows that companies on average have 54% of their total assets in debt with a maximum of 96%, indicating high company risk. The average stock market value is 3.5 times their book value of equity with the highest MB being 8.18 which suggests significant growth opportunities for the company. NWC is 11% of total assets on average with a maximum of 81% and a minimum of -92%. OCF also average at 11% of total assets with a maximum of 72% and a minimum of -46%. In addition, OCFV for companies is 6%. Furthermore, over 80% of sample companies distributed DIV during the research period. RD expenses average at 0.0004% of total sales, reaching over 6% of total sales revenue. CAPEX for companies shows an average growth rate of 4% with a maximum increase of 59% and a minimum decrease of 55% relative to total assets. Finally, over 66% of sample companies had ACQ during the research period.

Table 1. Descriptive statistics of research variables

Variable	Symbol	Average	Median	Maximum	Minimum	Standard Deviation
Cash Holding	CASH	0.062718	0.051478	0.494311	0.000225	0.154159
Block Ownership	BOWN	0.489146	0.508000	0.954400	0.000000	0.209615
Institutional Block Ownership	IBOWN	0.079732	0.066100	0.278000	0.000000	0.056221
Strategic Block Ownership	SBOWN	0.240876	0.233800	0.472500	0.000000	0.102985
Institutional Ownership	IOWN	0.389921	0.335700	0.989000	0.000000	0.328171
Company Size	SIZE	14.71221	14.49263	20.76869	11.11602	1.599781
Financial Leverage	LEV	0.546965	0.548581	0.965111	0.031431	0.208865
Market-to-Book Ratio	MB	3.552087	3.103588	18.87762	0.100263	13.21034
Net Working Capital	NWC	0.113892	0.105888	0.819353	-0.923131	0.229584
Operating Cash Flow	OCF	0.115144	0.100401	0.726654	-0.460088	0.142220
Standard Deviation of Operating Cash Flow	OCFV	0.069115	0.056858	0.649633	0.000554	0.056659
Dividend Payment	DIV	0.805278	1.000000	1.000000	0.000000	0.396167
Research and Development Expenses	RD	0.000429	0.000000	0.065736	0.000000	0.003453
Capital Expenditures	CAPEX	0.040201	0.038452	0.595858	-0.552630	0.115423
Asset Acquisition	ACQ	0.661510	1.000000	1.000000	0.000000	0.473411

Inferential Statistics

Results of Hypothesis Testing: Model 1

In this section, the necessary pattern for estimating the model is first established, followed by the estimation of the research model and the interpretation of its results. Prior to fitting the regression model, the Chow or F-test was utilized to determine the suitability or adequacy of the model, whether it be panel or pooled. The null hypothesis in the Chow test suggests the appropriateness of the pooled model while the alternative hypothesis suggests the appropriateness of the panel model. The results of this test are presented in Table (2).

Table 2. Results of the Chow test

Test	Statistic Value	Degrees of Freedom	Significance Level	Result
Chow test	5.781966	167,828	0.0000	Panel (Pooled)

Considering the significance level of the Chow test, the null hypothesis is rejected at a confidence level of 95%. This shows that the panel data method is a more suitable approach for fitting the research model. Hence, the research regression model is fitted using panel data method. Table (3) presents the results of the Hausman test for the research regression model.

Table 3. Results of the Hausman test

Description	Statistic Value	Degrees of Freedom	Significance Level	Result
Hausman test	126.120781	12	0.0000	Fixed Effects

Since the probability obtained for the Hausman test is less than 5%, the fixed effects model is selected for estimation.

Findings Related to Research Hypotheses

Table 4. Results of regression model testing

$CASH_{it} = \beta_0 + \beta_1 BOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it} + \varepsilon_{it}$					
Variable	**Coefficient**	**T-Statistic**	**Standard Deviation**	**Significance Level**	**Collinearity**
Constant Coefficient	C	0.107076	14.44741	0.0000	-
Block Ownership	BOWN	0.267689	3.047970	0.0024	1.066512
Institutional Block Ownership	IOWN	-0.009122	-3.878666	0.0001	1.169631
Company Size	SIZE	-0.000595	-1.266078	0.2055	1.192968
Financial Leverage	LEV	-0.128632	-36.08605	0.0000	2.626232
Market-to-Book Ratio	MB	0.000430	9.754787	0.0000	1.041246
Net Working Capital	NWC	-0.103051	-26.77307	0.0000	2.462057
Operating Cash Flow	OCF	0.219751	41.95371	0.0000	1.178860
Standard Deviation of Operating Cash Flow	OCFV	0.414721	32.29855	0.0000	1.069565
Dividend Payment	DIV	0.003375	1.794191	0.0728	1.271775
Research and Development Expenses	RD	-0.031996	-0.756829	0.4492	1.014809
Capital Expenditures	CAPEX	-0.170846	-24.56994	0.0000	1.320465
Asset Acquisition	ACQ	0.018580	11.38820	0.0000	1.231562
Adjusted R-Squared		0.607232	**Durbin-Watson**		1.947631
F-Statistic		9.697518	**Breusch-Pagan Statistic**		16.03389
Significance Level		0.000000	**Significance Level**		0.1897

- Given that the probability value of the F statistic is less than 0.05 (p-value < 0.000) with 95% confidence, the overall significance of the model is confirmed. The R-squared also indicates that 60.72% of the variations in CASH of companies are explained by the variables included in the model.
- Among the most critical classical assumptions, investigating the absence of autocorrelation and the absence of variance heterogeneity in the residuals of the model is of particular importance. To detect the presence of autocorrelation among residuals, the Durbin-Watson (DW) test is employed. If the value of this statistic for the research model falls between 1.5 to 2.5, it confirms the absence of autocorrelation among the error components of the model.
- Furthermore, to examine the heterogeneity of the error variance components in the regression model,

the Breusch-Pagan test is utilized. If the significance level of this test is less than 5%, the null hypothesis of heterogeneity of residuals is not accepted, indicating the presence of heterogeneity among the segments (and vice versa).

Findings Related to Research Model 1

Based on the results shown in Table 4 and with reference to the significance levels derived from the t-student test for determining the significance of the effects of independent variables, the hypothesis test results are as follows:

Considering the significance level of the t-student test for determining the significance of the effect of the independent variable 'BOWN' which is smaller than the type I error of 0.05 (P-Value=0.0024), it can be accepted that this variable has a significant effect on the CASH of companies. Hence, the first hypothesis of the research is confirmed at the type I error level of 0.05. Additionally, with a regression coefficient (Beta) of 0.267, the effect of this variable on the dependent variable is positive.

Results of Hypothesis Testing: Model 2

In this section, the necessary pattern for estimating the research model is first determined, followed by the estimation of the research model and the interpretation of the results. Consequently, the results of the research hypotheses are presented based on the fitting. Prior to fitting the regression model, the Chow or F test is used to determine whether the model should be panel or pooled. The null hypothesis in the Chow test is based on the appropriateness of the pooled model, while the alternative hypothesis is based on the appropriateness of the panel model. The results of this test are illustrated in Table 5.

Table 5. Results of the Chow test

Test	Statistic Value	Degrees of Freedom	Significance Level	Result
Chow test	5.856638	156,828	0.0000	Panel (Pooled)

Considering the significance level of the Chow test, the null hypothesis is rejected at a confidence level of 95%. This shows that the panel data method is a more suitable approach for fitting the research model. Thus, the research regression model is fitted using panel data method. Table (6) presents the results of the Hausman test for the research regression model.

Table 6. Results of the Hausman test

Description	Statistic Value	Degrees of Freedom	Significance Level	Result
Hausman test	123.866893	12	0.0000	Fixed Effects

Since the probability obtained for the Hausman test is less than 5%, the fixed effects model is selected for estimation.

Findings Related to Research Hypotheses

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Table 7. Results of regression model testing

$CASH_{it} = \beta_0 + \beta_1 IBOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it} + \varepsilon_{it}$					
Variable	**Coefficient**	**T-Statistic**	**Standard Deviation**	**Significance Level**	**Collinearity**
Constant Coefficient	C	0.108312	15.15438	0.0000	-
Institutional Block Ownership	IBOWN	0.030835	0.924528	0.3552	1.070524
Institutional Block Ownership	IOWN	-0.007991	-3.446795	0.0006	1.138781
Company Size	SIZE	-0.000429	-0.917116	0.3591	1.182102
Financial Leverage	LEV	-0.127387	-35.92311	0.0000	2.604224
Market-to-Book Ratio	MB	0.000425	9.655079	0.0000	1.040893
Net Working Capital	NWC	-0.104095	-27.16683	0.0000	2.444766
Operating Cash Flow	OCF	0.220475	42.20818	0.0000	1.174708
Standard Deviation of Operating Cash Flow	OCFV	0.416042	32.44817	0.0000	1.068611
Dividend Payment	DIV	0.004043	2.146487	0.0319	1.277645
Research and Development Expenses	RD	-0.027807	-0.658260	0.5104	1.015187
Capital Expenditures	CAPEX	-0.170185	-24.54741	0.0000	1.315293
Asset Acquisition	ACQ	0.017651	10.78055	0.0000	1.242770
Adjusted R-Squared		0.610719	**Durbin-Watson**		1.913664
F-Statistic		9.825818	**Breusch-Pagan Statistic**		16.93611
Significance Level		0.000000	**Significance Level**		0.1520

- Given that the probability value of the F statistic is less than 0.05 (p-value < 0.000) with 95% confidence, the overall significance of the model is confirmed. The R-squared also indicates that 61.07% of the variations in CASH of companies are explained by the variables included in the model.
- Among the most critical classical assumptions, investigating the absence of autocorrelation and the absence of variance heterogeneity in the residuals of the model is of particular importance. To detect the presence of autocorrelation among residuals, the Durbin-Watson (DW) test is employed. If the value of this statistic for the research model falls between 1.5 to 2.5, it confirms the absence of autocorrelation among the error components of the model.
- Furthermore, to examine the heterogeneity of the error variance components in the regression model, the Breusch-Pagan test is utilized. If the significance level of this test is less than 5%, the null hypothesis of heterogeneity of residuals is not accepted, indicating the presence of heterogeneity among the segments (and vice versa).

Findings Related to Research Model 2

Based on the results shown in Table 7 and with reference to the significance levels derived from the t-student test for

determining the significance of the effects of independent variables, the hypothesis test results are as follows:

Considering the significance level of the t-student test for determining the significance of the effect of the independent variable 'IBOWN' which is greater than the type I error of 0.05 (P-Value=0.3552), it can be accepted that this variable does not have a significant effect on the CASH of companies.

Results of Hypothesis Testing: Model 3

In this section, the necessary pattern for estimating the research model is first determined, followed by the estimation of the research model and the interpretation of the results. Consequently, the results of the research hypotheses are presented based on the fitting. Prior to fitting the regression model, the Chow or F test is used to determine whether the model should be panel or pooled. The null hypothesis in the Chow test is based on the appropriateness of the pooled model, while the alternative hypothesis is based on the appropriateness of the panel model. The results of this test are shown in Table 8.

Table 8. Results of the Chow test

Test	Statistic Value	Degrees of Freedom	Significance Level	Result
Chow test (F)	5.786461	156,828	0.0000	Panel (Pooled)

Considering the significance level of the Chow test, the null hypothesis is rejected at a confidence level of 95%. This shows that the panel data method is a more suitable approach for fitting the research model.

Thus, the research regression model is fitted using panel data method. Table (9) presents the results of the Hausman test for the research regression model.

Table 9. Results of the Hausman test

Description	Statistic Value	Degrees of Freedom	Significance Level	Result
Hausman test	126.663525	12	0.0000	Fixed Effects

Since the probability obtained for the Hausman test is less than 5%, the fixed effects model is selected for estimation.

Findings Related to Research Hypotheses

Table 10. Results of regression model testing

$$CASH_{it} = \beta_0 + \beta_1 IBOWN_{it} + \beta_2 IOWN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 MB + \beta_6 NWC_{it} + \beta_7 OCF_{it} + \beta_8 OCFV_{it} + \beta_9 DIV_{it} + \beta_{10} RD_{it} + \beta_{11} CAPEX_{it} + \beta_{12} ACQ_{it} + \varepsilon_{it}$$

Variable	Coefficient	T-Statistic	Standard Deviation	Significance Level	Collinearity
Constant Coefficient	C	0.107361	14.97631	0.0000	-

Strategic Block Ownership	SBOWN	-0.035945	-5.106438	0.0000	1.051955
Institutional Block Ownership	IOWN	-0.009132	-3.954341	0.0001	1.127838
Company Size	SIZE	-0.000659	-1.393296	0.1636	1.207434
Financial Leverage	LEV	-0.128406	-36.14423	0.0000	2.608757
Market-to-Book Ratio	MB	0.000429	9.744471	0.0000	1.040697
Net Working Capital	NWC	-0.102945	-26.85306	0.0000	2.442538
Operating Cash Flow	OCF	0.219433	41.91422	0.0000	1.177733
Standard Deviation of Operating Cash Flow	OCFV	0.414846	32.32916	0.0000	1.068250
Dividend Payment	DIV	0.003360	1.786597	0.0740	1.271474
Research and Development Expenses	RD	-0.030558	-0.722341	0.4701	1.016165
Capital Expenditures	CAPEX	-0.170468	-24.51491	0.0000	1.320616
Asset Acquisition	ACQ	0.018532	11.37328	0.0000	1.228527
Adjusted R-Squared		0.607422	**Durbin-Watson**		1.941327
F-Statistic		9.704435	**Breusch-Pagan Statistic**		12.86641
Significance Level		0.000000	**Significance Level**		0.3788

- Given that the probability value of the F statistic is less than 0.05 (p-value < 0.000) with 95% confidence, the overall significance of the model is confirmed. The R-squared also indicates that 60.72% of the variations in CASH of companies are explained by the variables included in the model.
- Among the most critical classical assumptions, investigating the absence of autocorrelation and the absence of variance heterogeneity in the residuals of the model is of particular importance. To detect the presence of autocorrelation among residuals, the Durbin-Watson (DW) test is employed. If the value of this statistic for the research model falls between 1.5 to 2.5, it confirms the absence of autocorrelation among the error components of the model.
- Furthermore, to examine the heterogeneity of the error variance components in the regression model, the Breusch-Pagan test is utilized. If the significance level of this test is less than 5%, the null hypothesis of heterogeneity of residuals is not accepted, indicating the presence of heterogeneity among the segments (and vice versa).

Findings Related to Research Model 3

Based on the results shown in Table 10 and with reference to the significance levels derived from the t-student test for determining the significance of the effects of independent variables, the hypothesis test results are as follows:

Considering the significance level of the t-student test for determining the significance of the effect of the independent variable 'SBOWN' which is smaller than the type I error of 0.05 (P-Value=0.000), it can be accepted that this variable has a significant effect on the DIV policy of companies. Hence, the first hypothesis of the research is confirmed at the type I error level of 0.05. Additionally, with a regression coefficient

(Beta) of 0.359, the effect of this variable on the dependent variable is positive.

Conclusion

In the first research hypothesis, the effect of BOWN on the CASH of companies listed on the TES was examined. Based on the significance level of the t-student test for determining the significance of the BOWN independent variable which is estimated to be smaller than the Type I error of 0.05 (P-Value = 0.0024), it can be accepted that this variable has a significant impact on the CASH of companies. Hence, the first research hypothesis is confirmed at the Type I error level of 0.05. Additionally, considering the regression coefficient of the model (Beta = 0.267), the impact of this variable on the dependent variable is positive. The results of the first research hypothesis align with the findings of the study by Alomran et al. (2023). In the second research hypothesis, the effect of IBOWN on the CASH of companies listed on the TSE was examined. Based on the significance level of the t-student test for determining the significance of the IBOWN independent variable which is estimated to be greater than the Type I error of 0.05 (P-Value = 0.3552), it can be accepted that this variable does not have a significant impact on the CASH of companies. The results of the second research hypothesis align with the findings of the study by Alomran et al. (2023). In the third research hypothesis, the effect of SBOWN on the CASH of companies listed on the TSE was examined. Based on the significance level of the t-student test for determining the significance of the SBOWN independent variable which is estimated to be smaller than the Type I error of 0.05 (P-Value = 0.000), it can be accepted that this variable has a significant impact on the DIV policy of the company. As a result, the third research hypothesis is confirmed at the Type I error level of 0.05. In addition, the impact of this variable on the dependent variable is positive considering the regression coefficient of the model (Beta = -0.0359). The results of the third research hypothesis align with the findings of the study by Alomran et al. (2023).

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