

RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND CASH HOLDING REGARDING THE MODERATING EFFECT OF OPERATIONAL CYCLE

RELAÇÃO ENTRE ESTRUTURA DE CAPITAL E CAPITAIS DE DINHEIRO COM RELAÇÃO AO EFEITO MODERADOR DO CICLO OPERACIONAL

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Abstract: *The aim of this study is to investigate the relationship between capital structure and cash holding regarding the moderating effect of the operational cycle at companies listed in Tehran Stock Exchange. The regression analysis was employed to analyze information and test hypotheses. The statistical sample includes 100 companies listed on Tehran Stock Exchange from 2008 to 2014. In a descriptive study, the correlation of relationships is investigated to provide investors and creditors with information for making decisions on cash holding at companies. The research results indicated that there was a positive and significant relationship between capital structure and cash holding. Moreover, the operational cycle moderated this relationship. It is suggested that company executives consider capital structure and operational cycle when they are making decisions on cash holding.*

Keywords: *Cash Holding. Capital Structure. Operational Cycle.*

Resumo: *O objetivo deste estudo é investigar a relação entre estrutura de capital e caixa em relação ao efeito moderador do ciclo operacional em empresas listadas na Bolsa de Teerã. A análise de regressão foi empregada para analisar informações e testar hipóteses. A amostra estatística inclui 100 empresas listadas na Bolsa de Valores de Teerã de 2008 a 2014. Em um estudo descritivo, a correlação de relacionamentos é investigada para fornecer aos investidores e credores informações para tomar decisões sobre a retenção de caixa nas empresas. Os resultados da pesquisa indicaram que havia uma relação positiva e significativa entre estrutura de capital e caixa. Além disso, o ciclo operacional moderou esse relacionamento. Sugere-se que os executivos da empresa considerem a estrutura de capital e o ciclo operacional quando tomam decisões sobre a retenção de caixa.*

Palavras-chave: *Retenção de dinheiro. Estrutura Capital. Ciclo Operacional.*

Introduction

Companies have been more careful to determine the strategies for managing cashflow because of the important effect of cash holding on investment opportunities as well as its significant role in many financial decisions and cash flows. Given the fact that cash holdings are influenced by factors such as company capital structure, it can be inferred that a major challenge of business at stock exchange companies is to hold cash at appropriate and balanced levels because any inappropriate and unfavorable decisions on holding levels can make companies face bankruptcy (Al-Najjar, 2013). Therefore, investigating the factors influencing cash holdings is regarded as a priority by many managers. One of such factors is the capital structure of a company. In a study, Modigliani and Miller (1958) investigated the relationship between capital structure and cash holding level. Their research results indicated a positive and significant relationship between these two variables. One of the factors influencing the relationships between capital structure and cash holding is the company operational cycle. Dechavet *et al.* (2000) defined the operational cycle as the timespan between the funds spent on productions and the funds received from the sales. It is expected that the operational cycle can be used to moderate the relationships between capital structure and cash holding levels. Every positive or negative change made in the capital structure can change cash holdings; however, the operational cycle moderates such changes.

Generally, a considerable part of assets is preserved saved as cash or tradable securities. The motive for preserving extra cash can be justified in the framework of trade (exchange) theories and agencies. In this regard, there are most pieces of empirical evidence for the trade theory (Opler *et al.*, 1999). Companies with large amounts of cash are often under the pressure by institutional investors to return the capital to shareholders because the accumulation of cash may encourage executives to take value-eliminating actions (Harford, 1999). Executives may also use the cash savings for their personal benefits (Jensen, 1996). On the other hand, it appears that company operational cycles can moderate the effect of capital structure on cash holding level (Bradley *et al.*, 2011). The cash holding strategy of a company determines the future of that company. A company should maintain the balance between liquidity and profitability when it deals with operational activities. Companies with high profitability tend to have a shorter cash-converting cycle compared with companies with low profitability (Ferreira & Vilela, 2004).

Since liquidity is one of the main resources of a business unit, it is important to control expenditures and cash holding levels. This requires that companies define liquidity goals for each of their business activities and also for all of them (Coteicet *et al.*, 2011). When the system of liquidity goals and the report of controlling liquidity are used to compare the real results with the determined goals, the executives should be informed of what roles and functions are expected from them with respect to their responsibilities in the liquidity of business units. It should also be ascertained whether the determined goals were fulfilled. According to the balance theory, companies determine the optimal amount of cash by establishing a balance between benefits and cash holding cost. In fact, companies adjust their optimal liquidity levels by determining the importance of final expenditures and final benefits resulting from preserving cash. The important point is that there is a desirable level of cash for companies at which the management makes decisions based on the analysis of benefit costs and the increase in the value of company compared with maintenance (Wang *et al.*, 2013). Organizations tend to hold more amounts of cash as a precautionary criterion for maintaining their stocks in the market and reducing the risk of exploitation (Strebulaev, 2007). The competition intensity and lifecycle have significant effects on cash holding levels (Wolch, 2011). Higher cash holding levels enable institutes to take advantage of dividing stocks in the market and competing in the future especially in the face of financial constraints and competitions (Ebaid, 2009). Moreover, making decisions on capital structure to determine how to finance the organization influences the value of company like the other financial management decisions. There are two types of cash flows contributing to the capital structure. The first group includes the cash flows resulting from a company are called debts. The second group benefits from the remainders of these flows. They are called ownership rights. The cash flows in the first group are less expensive than the cash flows in the second group due to the supply of a constant efficiency for creditors. Nevertheless, the more debts the organization have, the higher the risk of bankruptcy goes. In such a case, the shareholders as the providers of the second group take

bankruptcy costs and demand more efficiency. Moreover, it should be noted that the operational cycle of a company should be regarded as a variable moderating the effect of capital structure on cash holding levels. Companies with longer operational cycles require more working capital so that they can keep their operational activities at a normal level and prevent the reduction in operational activities. Therefore, it is expected in companies with longer operational cycles that the cash holding level should be higher and vice versa (Ramjee and Gwatidzo, 2012). Thus, when the operational cycle reaches a certain point, companies increase their cash holding levels to deal with risk, create uncertain products, and meet managerial demands and investment needs. This is consistent with the precautionary motivation theory of cash holding. The operational cycle of a company, which is directly related to the time and speed of receiving cash, influences the cash holding level of a company. The aim of this study is to investigate, identify and describe the relationship between capital structure and cash holding level. It is also intended to identify and describe the moderating effect of operational cycle on the relationship between capital structure and cash holding level.

Theoretical Foundations

The most important principle of corporate governance is to make sure that correct governance is applied to manage the company and to maximize the equity. Therefore, one strategy is to become aware of the structures of capital and ownership so that they can be used to codify necessary strategies to decrease the costs of agency (Sundersan, 2013). The importance of capital structure was taken into account in the studies conducted by Modigliani and Miller. They believed that there was no difference between financing through shareholder equity and debt with respect to the company equity. Therefore, different financing methods do not bring extra equity; thus, there are no constraints for executives. However, empirical evidence indicates that this is not practically true. Modigliani and Miller's investigations presented new results to show the importance of capital structure at companies more than ever before. One of the factors influenced by the capital structure of company is cash holding. Various studies investigated the relationship between these two variables.

Balanteinet *al.* (2010) indicated that low profitability was observed in companies with high debts. Their research results also showed that there was a positive and significant relationship between capital structure and profitability.

Michel Soon and Partech (2011) investigated the direct effect of extra cash holdings on the operational performance. They focused their analyses on the companies which formed more than 22% of their assets through cash in consecutive years. Surprisingly, they realized that cash holding did not have a negative effect on the operational performance in such companies. Nevertheless, despite what shareholders expected, changing the operational performance would not necessarily change the shareholder equity.

Faulkender and Wang (2011) investigated the effect of extra cash holding on the shareholder equity accurately. Finally, they realized that more cash holdings increased the value of final funds. The value of final fund refers to the increased value which each cash unit can bring to each share in the company.

Seeking to determine the relationship of overinvestment in Wall Street, Officer (2013) found out that dividing the interest, cash and companies would be done in two ways in order to decrease the problems caused by making more investment. One way is that companies try to rebuy their shares. Another way of solving the problems resulting from cash is to divide the profit. Therefore, shareholder's expectations are decrease less, and over-investors and extra cash holdings would be less likely to arise as problems.

Yanchaowanget *al.* (2013) tested the relationship between corporate governance mechanisms of cash remainder and the effect on the company equity in Singapore's Stock Exchange. The research results indicated that companies with lower effectiveness of corporate governance were the companies which were more interested in cash holding. In a study entitled *the Theory of Capital Structure: Revision*, Ardalan (2015) indicated that the common assumption of capital structure theories was that the goal of a company was to maximize the prices of shares. Therefore, this paper showed that maximizing the prices of shares

as the company goal and analyzing its effects on prices were caused by the increase in dangerous ratios of debts in the company capital structure. It was also shown that the share price started to drop in some cases after an increase in the initial share price. Therefore, there can be an optimal structure for a company.

In a study entitled *the Effect of Profitability on Capital Structure and the Adjustment Speed: an Empirical Experiment for Company Selection in Nigeria's Stock Exchange*, Oina and Ukaaghu (2015) showed that the problem of capital structure was still about attracting many researchers and policymakers, especially in financial institutes. Capital structure is comprised of capital and debt. The financial structure of each company indicates that the financial activities are optimized by using a combination of debts and equity share.

In another study entitled *the Influence of Cash Flow Volatility on Capital Structure and the Use of Debt of Different Maturities*, Connorkeefe and Yaghoubh (2016) showed that the ratio of a company debt and its use were among the factors influencing the structure and fluctuations of cash flows. Their research results also showed that instable companies with high liquidity continued using short-term non-financial commitments to reduce debts in the long term.

Research Model

In this study, the capital structure includes two components: debt and shareholder equity. Moreover, cash holding level is investigated with respect to Dittmar and Mahrt-Smith's view (2017) including two components: cash and current assets.

Cash holding refers to the amount of cash which is held by a company to take normal actions and deal with commitments. In other words, it is the total cash which is equal to the cash including the ration of short-term investment. Cash holding is calculated through the following formula:

$$CH = (CASH + MKT) / TA$$

CH: cash holding

CASH: cash

MKT: sellable securities

TA: total assets

In this study, the operational cycle is investigated with respect to the view of Dechavet *al.* (2000) and the model presented by Wang *et al.* (2013). It is the mean time between the funds spent to create products and the funds received from the sales.

AR: receivable trading accounts

INV: inventory

AP: payable and trading accounts

Sales: sales

COGS: the cost of a sold product

Purchases: the cost of a sold product plus the inventory of final-term product minus the product of the first period

$$Cash_{i,t} = + B1 STD_{it} + B2 LTD_{i,t} + B3 EQ_{i,t} + \epsilon_{it}$$

$$Cash_{i,t} = + B1 STD_{it} + B2 LTD_{i,t} + B3 EQ_{i,t} + OC + OC * STD + OC * LTD + OC * EQ + \epsilon_{it}$$

STD: short-term debt
LTD: long-term debt
EQ: shareholder equity
OC: operational cycle
OC*STD: short-term debt in the operational cycle
OC*LTD: long-term debt in the operational cycle
OC*EQ: shareholder equity in the operational cycle

Research hypotheses

Primary Hypotheses

There is a significant relationship between capital structure and cash holding level.

The operational cycle has a moderating effect on the relationship between capital structure and cash holding levels.

Secondary Hypotheses

- There is a significant relationship between short-term debts and cash holding.
- There is a significant relationship between long-term debts and cash holding.
- There is a significant relationship between shareholder equity and cash holding.
- There is a significant relationship between short-term debts in the operational cycle and cash holding.
- There is a significant relationship between long-term debts in the operational cycle and cash holding.
- There is a significant relationship between shareholder equity in the operational cost and cash holding.

Statistical Population, Sample and Sampling Methods

The statistical population included all the companies listed in Tehran Stock Exchange. The systematic removal method was used to select the statistical sample. In fact, the statistical sample includes all the companies meeting the following conditions:

- They should be listed in Tehran Stock Exchange before April 2007 and should not stop operating before 2015.
- Their fiscal years should end in March 19 (Esfand 29) to meet the comparability.
- They should not stop operating or have any changes in the fiscal year during the research period.
- Their information should be accessible during the research period.
- They should not be among banks, insurance companies and investing companies.

The aim of this study is to investigate the relationship between capital structure and cash holding with respect to the moderating effect of operational cycle. Therefore, the companies listed in Tehran Stock Exchange were selected because they deal with the variables used in this study. The research data were obtained from 100 companies listed in Tehran Stock Exchange from 2008 to 2014.

Descriptive Research Findings

The following table includes the descriptive statistics for all the research variables. The observations are valid and accurate for each variable for seven years. The data are about 100 companies listed in Tehran Stock Exchange from 2008 to 2014. In the first section, the most important centrality and dispersion indicators are presented. They can be seen in Table 1.

Table 1: Descriptive Statistics

Variable	Abbreviation	Min	Max	Mean	SD
Cash holding level	Cash	0.008	0.34	0.164	0.18
Short-term debt	STD	0.05	0.93	0.45	0.29
Long-term debt	LTD	0.04	0.78	0.53	0.29
Shareholder equity	EQ	0.02	0.83	0.48	0.31
Operational cycle	OC	14	209	89.32	91.29

Reference: Research Findings

The means and standard deviations of the variables were used in this study. For instance, the mean of cash holding was 0.164, and the standard deviation of short-term debt was 0.29. Moreover, the maximum and minimum of each variable was presented. The subtraction of these two values is regarded as one of the simplest dispersion indicators, i.e. coefficient of changes. For example, the maximum of the long-term debt is 0.78, whereas its minimum is 0.04.

Normality Test

Before testing the research hypotheses, the normality of data should be checked. Different tests can be used to make sure of the normality of error expressions. One of such them is the Shapiro-Wilk test which was used in this study. If the remainders are of normal distribution, it can be claimed that the population is normal, too.

H₀: the model variables are normal

H₁: the model variables are not normal

Table 2: Normality Test

Variable	Shapiro-Wilk Test	Significance Level
First hypothesis error expression	0.78	0.29
Second hypothesis error expression	0.33	0.68

Reference: Research findings

The normality test of variables indicates the type of test used in this study. It also indicates the distribution and dispersion of data. According to Table 2, the significance level of this test was above 0.5 for all the variables, something which indicates the normality of data.

Collinearity Test

Collinearity means the presence of linear relationships between all or some of the explanatory variables of the regression model. In the linear regression analysis, it is assumed that there is no accurate linear relationship between any of the explanatory variables. The denial of this assumption causes a pro-

blem. However, there are two types of collinearity: complete and incomplete. If collinearity is complete, this assumption is not true.

When there is a complete linear relationship between the explanatory variables of a regression model, the estimations of the regression model cannot be uniquely calculated. Collinearity refers to the fact that two variables have a completely close linear combination with each other. In other words, although the model seems to be nice, it lacks the significantly independent variables. If collinearity is confirmed, there is a group of problems in determining the accuracy of regression equation.

Variance Inflation Factor (VIF) for determining collinearity:

VIF is used to determine collinearity. If VIF of the independent variable is higher than 5, it probably has collinearity with other variables. If so, it should be investigated more. Otherwise, there is no problem of collinearity among independent variables. The results of VIF collinearity test are as follows:

Table 3: Collinearity Test

Variable	Symbol	First Hypothesis	Second Hypothesis
Short-term debt	STD	1.02	1.08
Long-term debt	LTD	1.54	1.33
Shareholder equity	EQ	1.74	1.41
Operational cycle	OC	1.87	1.39

Reference: research findings

The collinearity values above 10 indicate the probability of collinearity among independent variables, and the values above 15 show the serious problem in the use of regression in current situation (HasasYeganehet *al.*, 2009). On the other hand, all the values of collinearity are below 10, a fact which shows the lack of collinearity among independent variables.

Primary Hypothesis Testing The F-Limer test

The F-limer test is conducted to determine the application of constant effects model in comparison with the combination of data. This test specifies the panel data model or the pool data model. If the significance level of this test is lower than 5%, it shows that the panel data model was used. If the it is higher than 5%, then it can be inferred that the pool data model was used. The results can be seen in the following table:

H0: the pool data model

H1: the panel data model

Table 4: the F-Limer Test

Hypothesis	Test	Statistic	Significance Level	Result
Primary	F	16.74	0.000	Panel data

Reference: research findings

The results of this test show that the significance level of models was below 5%; therefore, Ho (the pool data model) was not confirmed.

The Hausman Test

The Hausman test is conducted to determine the use of constant effects model in comparison with the stochastic effects model. The Hausman test is based on the presence or absence of a relationship between the estimated regression error and independent variables. If there is such a relationship, the constant effects model will be used. Otherwise, the stochastic effects model is used.

Ho: stochastic effects model

H1: constant effects model

Table 5: the Hausman Test

Hypothesis	Chi-Squared Test	Significance	Test Result
Primary	0.39	0.688	Stochastic Effects Model

Reference: research findings

The chi-squared test is a non-parametric test used to evaluate the equality of nominal variables. This test is the only solution to evaluate the equality of nominal variables with more than two categories; therefore, it is more widely used than other tests. This test is sensitive to the size of sample. According to the above table, the significance value of the research hypotheses is higher than 5%; therefore, the null hypothesis of the stochastic effects model is confirmed. This means the absence of a relationship between the estimated regression error and the independent variables. According to the results, the panel data method was used for hypothesis testing.

The Heterogeneity Variance and Autocorrelation Test

One of the assumptions of the regression equation is the constancy of variances of errors, something which is known as the homogeneity of variances. If the errors do not have constant variances, it is stated that there is a homogeneity of variances. Another assumption of the linear regression model is the zero covariance of components of error over time (or in some periods for variables).

When the variances of error expressions are not constant, it is stated that there is variance heterogeneity. Another assumption of the regression equation is the constant variance of errors, something which is known as the heterogeneity of variances. There is another assumption in the linear regression model. It is the zero covariance between the components of error over time (or in different periods for variables). In this study, the LR test was used to investigate the heterogeneity of variances. Then the Wooldridge test was used to evaluate autocorrelation.

Ho: the research variables do not have autocorrelation and variance heterogeneity.

H1: the research variables have autocorrelation and variance heterogeneity.

Table 6: The Autocorrelation Test and Variance Heterogeneity

Heterogeneity Variance Test			Autocorrelation Test		
F	Significance Level	Heterogeneity	F	Significance Level	Autocorrelation
0.2	0.79	No	0.01	0.82	No

Reference: research findings

Investigating the results of variance heterogeneity shows that the significance level was above 5%; therefore, the null hypothesis is not rejected. In other words, the research variables showed variance homogeneity and lack of autocorrelation.

Testing Primary Hypothesis

Ho: there is not a relationship between capital structure and cash holding at the companies listed in Tehran Stock Exchange.

H1: there is a relationship between capital structure and cash holdings at companies listed in Tehran Stock Exchange.

The results of Table 7 indicate the optimality of model for testing hypothesis. The Wooldridge statistic (41.22) and significance level (0.000) show the significance model for testing hypotheses. The results of Wooldridge test show the lack of autocorrelation among error expressions. The estimated correlation of coefficient is 19%, and capital structure (STD, LTD, and EQ) was regarded as the independent variable. The ratio of cash holding was regarded as the dependent variable. STD has a negative and inverse relationship with cash holding at the 0.000 significance level. LTD has a negative and inverse relationship with the ratio of cash holding at a 0.006 significance level. EQ has a positive and direct relationship with the ratio of cash holding at a 0.000 significance level. Given the fact that there is a relationship between capital structure and cash holding level, the first research hypothesis is confirmed. The concept of significance in correlation means whether the correlation obtained between two variables can be regarded as random or there is really a correlation between them. Whether the obtained value is significant or not is more important than the value itself. The correlation coefficient is shown with R. The coefficient of determination (R^2) is obtained between two variables by exponentiating R. The coefficient of determination shows what percentage of changes in the dependent variable is explained by the dependent variable. This coefficient is widely used in regression. According to the results of this hypothesis, the coefficient of correlation is 0.19%.

Table 7: Testing the First Hypothesis

$Cash_{it} = \beta_0 + B1 STD_{it} + B2 LTD_{it} + B3 EQ_{it} + \varepsilon_{it}$				
Variable	Abbreviation	Coefficient	Z	Sig.
Short-term debt	STD	-0.13	-3.68	0.000
Long-term debt	LTD	-0.28	-2.89	0.006
Shareholder equity	EQ	0.17	3.16	0.000
Y-intercept	$\alpha\beta$	0.11	1.93	0.057
Coefficient of Determination		0.19	Wooldridge statistic	41.22
			Sig.	0.000

Reference: Research Findings

Testing the Secondary Hypotheses

The F-Limer Test

The F-Limer test is used to determine the application of the constant effects model compared with the combined data model. This test determines the panel data model or the pool data model. If the significance level of this test is lower than 5%, it shows that the panel data model is used. If it is higher than 5%, then the pool data model is used. The results can be seen in the following table.

H₀: the pool data model

H₁: the panel data model

Table 8: The F-Limer Test

Hypothesis	Effects Test	Statistic	Sig.	Result
Secondary	F	18.33	0.000	Panel data

Reference: Research findings

The results of this test show that the significance level of the models is lower than 5%; therefore, H₀ (the pool data model) is not confirmed.

The Hausman Test

The Hausman test is conducted to determine the use of constant effects model in comparison with the stochastic effects model. The Hausman test is based on the presence or absence of a relationship between the estimated regression error and independent variables. If there is such a relationship, the constant effects model will be used. Otherwise, the stochastic effects model is used.

H₀: stochastic effects model

H₁: constant effects model

Table 9: the Hausman Test

Hypothesis	Test Summary	Chi-Squared Test	Significance	Test Result
Secondary	Stochastic Period	0.49	0.471	Stochastic Effects Model

Reference: research findings

The chi-squared test is a non-parametric test used to evaluate the equality of nominal variables. This test is the only solution to evaluate the equality of nominal variables with more than two categories; therefore, it is more widely used than other tests. This test is sensitive to the size of sample. According to the above table, the significance value of the research hypotheses is higher than 5%; therefore, the null hypothesis of the stochastic effects model is confirmed. This means the absence of a relationship between the estimated regression error and the independent variables. According to the results, the panel data method was used for hypothesis testing.

The Heterogeneity Variance and Autocorrelation Test

One of the assumptions of the regression equation is the constancy of variances of errors, something which is known as the homogeneity of variances. If the errors do not have constant variances, it is stated that there is a heterogeneity of variances. Another assumption of the linear regression model is the zero covariance of components of error over time (or in some periods for variables).

When the variances of error expressions are not constant, it is stated that there is variance heterogeneity. Another assumption of the regression equation is the constant variance of errors, something which is known as the homogeneity of variances. There is another assumption in the linear regression model. It is the zero covariance between the components of error over time (or in different periods for variables). In this study, the LR test was used to investigate the heterogeneity of variances. Then the Wooldridge test was used to evaluate autocorrelation.

Ho: the research variables do not have autocorrelation and variance heterogeneity.

H1: the research variables have autocorrelation and variance heterogeneity.

Table 10: The Autocorrelation Test and Variance Heterogeneity

Heterogeneity Variance Test		Autocorrelation Test			
F	Significance Level	Heterogeneity	F	Significance Level	Autocorrelation
0.93	0.174	No	0.37	0.633	No

Reference: research findings

Investigating the results of variance heterogeneity shows that the significance level was above 5%; therefore, the null hypothesis is not rejected. In other words, the research variables showed variance homogeneity and lack of autocorrelation.

Testing the Secondary Hypothesis

Ho: the operational cycle does not have a moderating effect on capital structure and cash holding.

H1: the operational cycle has a moderating effect on the relationship between capital structure and cash holding.

The results of Table 11 indicate the optimality of model for testing hypothesis. The Wooldridge statistic (63.12) and significance level (0.000) show the significance model for testing hypotheses. The results of Wooldridge test show the lack of autocorrelation among error expressions. The estimated correlation of coefficient is 19%, and capital structure (STD, LTD, and EQ) was regarded as the independent variable. The operational cycle was regarded as the moderating variable, and cash holding was considered the dependent variable. STD has a negative and inverse relationship with cash holding at the 0.000 significance level. LTD has a negative and inverse relationship with the ratio of cash holding at a 0.007 significance level. The operational cycle has a negative and inverse relationship with the ratio of cash holding at a 0.000 significance level. EQ has a positive and direct relationship with the ratio of cash holding at a 0.000 significance level. STD in the operational cycle has a negative and inverse relationship with the ratio of cash holdings at a 0.009 significance level. LTD in the operational cycle has a negative and inverse relationship with the ratio of cash holding at a 0.018 significance level. EQ in the operational cycle has a negative and inverse relationship with the ratio of cash holding at a 0.000 significance level. Given the fact that the operational cycle has a moderating effect on the relationship between capital structure and cash holding levels, the second research hypothesis is confirmed. The concept of significance in correlation means whether the correlation obtained between two variables can be regarded as random or there is really a correlation between them. Whether the obtained value is significant or not is more important than the value itself. The correlation coefficient is shown with R. The coefficient of determination (R^2) is obtained between two variables by exponentiating R. The coefficient of determination shows what percentage of changes in the dependent variable is explained by the dependent variable. This coefficient is widely used in regression. According to the results of this hypothesis, the coefficient of correlation is 0.21%.

Table 11: Testing the Secondary Hypothesis

$$\text{Cash}_{it} = \beta_0 + B1 \text{STD}_{it} + B2 \text{LTD}_{it} + B3 \text{EQ}_{it} + \text{OC} + \text{OC} * \text{STD} + \text{OC} * \text{LTD} + \text{OC} * \text{EQ} + \varepsilon_{it}$$

Vriable	Abbreviation	Coefficient	Z	Sig.
Short-term debt	STD	-0.16	-3.22	0.000
Long-term debt	LTD	-0.24	-2.86	0.007
Shareholder equity	EQ	0.15	3.63	0.000
Operational Cycle	OC	-0.057	-4.89	0.000
STD in OC	OC*STD	-0.14	-2.78	0.009
LTD in OC	OC*LTD	-0.098	-2.56	0.018
EQ in OC	OC*EQ	-0.038	-3.26	0.000
Y-Intercept	β_0	0.097	2.54	0.017
Coefficient of Determination		0.21	Wooldridge statistic	63.12
			Sig.	0.000

Reference: Research Findings

Conclusion and Suggestions

The cash holding policy has always been one of the most important financial policies in the management process of a company; therefore, different theoretical frameworks have been presented in the

financial literature to explain this policy. One of the factors influencing cash holding is company capital structure. Selecting the optimal capital structure and determining an appropriate combination of financial methods always improve the performance of a company and increase the wealth of shareholders. In other words, one of the ways of reducing conflicting interests between owners and executives is to use the optimal capital structure which increases the value of company. According to the investigations conducted on the information of companies listed in Tehran Stock Exchange as well as the necessary tests carried out in this study, it was clear that capital structure influenced cash holding. Therefore, the confirmation of this relationship indicates that the selection of cash holding and other factors influencing it such as capital structure can put the company on an ascending path, or it may drive the company towards bankruptcy. On the other hand, company executives should pay more attention to the selection capital structure which is one of the most complicated financial decision making areas due to its effect on cash holdings. Moreover, the operational cycle of a company was investigated as a moderating factor. The results showed that the operational cycle could moderate the relationship between capital structure and cash holding. In other words, companies with higher operational cycles can have appropriate cash holding levels due to the desirable selection of capital structure. The operational cycle of the company intensifies this relationship. Therefore, it is concluded that the operational cycle influences cash holding levels as well as the capital structure. It can also be regarded as one of the important factors used to make decisions on cash holding.

According to the results, some suggestions are made:

- The stock exchange investors are advised to invest in companies with higher operational cycles.
- Executives should take it into account that capital structure has an effect on cash holdings; therefore, they should be more careful in selecting the combination of capital structure.
- The executives of Tehran Stock Exchange are recommended to pay more attention to the length of the operational cycle model in evaluating the relationship between capital structure and cash holding.
- The investors in Tehran Stock Exchange are advised to maintain cash holding level at a balanced level because it is influenced by some factors such as the capital structure.

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