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Exploring Intellectual Capital

Investigating the Relationship between Capital Structure and Cash Resources Returns in the accepted Companies in the Securities Market

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Abstract
The purpose of determining the capital structure is to specify the composition of each company's financial resources in order to maximize the shareholders' wealth. Therefore, the present study examines the relationship between the effect of capital structure and the return on cash resources. The research population of this study includes the companies accepted in Tehran Stock Exchange during a five-year period (years 2010-2016). Finally, based on the research constraints and using the systematic elimination method, the information of 125 companies was gathered. The target research is an applied research. In terms of the type of research project, this research is post-event as it relies on the historical data and its derivation method is inductive and correlational. This research consists of three main hypotheses. In this research, linear regression has been used to test the hypotheses of the research. Eviews software has been used to analyze the data and test the hypotheses. After testing the research hypotheses, which were done separately for each hypothesis, we concluded that there is a meaningful relationship between cash-flow, the ratio of profit before interest and taxes and the ratio of market value of assets / book value of assets and the capital structure.
Keywords: Capital Structure, Cash Resources Returns, Companies In The Securities Market

1. Introduction
The power of liquidity means that it is traded in the stock exchange market, so that Amihoud (2012) introduced the power of liquidity as an index, like the risk index, and states that the decrease of the liquidity of a share lessens its attractiveness for the investors unless it yields more revenue (P.34). The goal of investment is, above all, increasing value or, at the very least, protecting financial assets. Therefore, it seems important to evaluate the performance of a portfolio for investors in terms of liquidity, whether an individual individually reviews his portfolio or the investment company does it.
One of the methods used to maximize the shareholder wealth is the proper selection of the main sources of financing, in which the combination of financial resources has features such as

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low cost of capital and higher returns. "The capital structure that increases the company's value or minimizes the overall cost of capital is the optimal capital structure of the company, and this optimal capital structure is a combination of debt and equity, and when the stock has a high liquidity, the cost of equity is reduced for the stakeholders and companies with higher stock liquidity tend to have a lower financial leverage" (Lipson & Mortal, 2009, P. 615). In the capital structure (especially in the cases of information asymmetry), it is preferable to finance through domestic resources and to provide financial provision through stock shares.

There are different theories about the company's capital structure. Some of these theories consider the existence of debt in the company's capital structure as a factor enhancing the value of the company and some of them consider itas a factor reducing the value of the company. It is also theoretically possible that managers will have plans for restructuring capital. Thereafter, considering the role of capital structure in wealth creation, it is important for the company to examine the factors affecting it. Therefore, it can be assumed that there is a relationship between the capital structure and liquidity indices. The main objective of this paper is to test the existence of a relationship between these two categories, and to examine the factors affecting the structure of capital. The findings of this research can help company managers admitted in the stock exchange to determine the appropriate method for financing the funds.

2. Literature Review

The purpose of determining the capital structure is to specify the composition of each company's financial resources in order to maximize the shareholders' wealth. Since the company's cost of capital was considered as a function of its capital structure, choosing the optimal capital structure reduces the company's capital cost and increases its market value. Not surprisingly, Myers (1984, P. 580) has likened the company's capital structure to a puzzle. This issue how companies choose the combination of their financial resources has long been the focus of attention and the source of several discussions. "The liquidity of stocks by reducing the transaction costs reduces the cost of capital and is one of the important factors that influences the capital structure" (Lipson & Mortal, 2009, P.618).

There are different theories about the company's capital structure. Some of these theories consider the existence of debt in the company's capital structure as a factor enhancing the value of the company and some other consider it as a factor decreasingthe value of the company. It is also theoretically possible that managers will have plans for restructuring capital. Thereafter, considering the role of capital structure in wealth creation, it is important for the company to examine the factors affecting it. Liquidity is one of these affecting factors; this issue is examined that whether the high stock liquidity leads to more reliance on the stakeholders' cost of equity. If it is true, the investors' investment can be directed tothe right way.

Studies on liquidity indices began in the early 20th century. From the beginning, it attracted the attention of financial markets. An asset is considered cash that can be traded in the short term without causing loss. Liquidity is not simply the ease of buying and selling assets but it also includes the speed of conversion of investment or assets into cash. "Factors related to liquidity of the stock market can be noted as the difference in the bid price and offer price of the shares,

which has been introduced as the most important factor affecting liquidity" (Fang et al., 2009, P. 10). Chen et al. (2007) state that the amount of this gap determines the level of liquidity to a large extent. The price offered by a trader to buy the securities is called the bid price and the price offered to sell the securities is called the offer price. The difference between the two suggested prices is also called the bid-offer spread (P. 120).

A lot of studies have been done about liquidity and its impact on the capital structure. The researchers have shown that liquidity reduces transaction costs, and most investors (with a short-term investment horizon) prefer high-liquidity stocks due to low transaction costs over low-liquidity stocks. In his research, Baker and Stein (2004) concluded that during periods when the company's stock was highly liquid, the company was able to accumulate more capital through the sale of shares (P. 275). Similarly, Glosten and Milgrom (1985) also found that there is a relationship between risk and bid-offer spread. The specific accounting ratios (interest paid percentage, asset size, and asset gains) as risk indices are negatively related to bid-offer spread. Given these results, it can be expected that high liquidity will reduce the cost of capital (P.75). The existence of a relationship between liquidity of shares and equity costs creates a relationship between stock liquidity and capital structure. To calculate the capital structure, the financial asset which is an indicator of the company's capital structure is used.This amount is obtained through D / A (book value of the total debt / book value of the total asset).

Lipson and Mortal (2009) investigated the relationship between stock liquidity and capital structure in Nasdaq's stock market and proved that there was a significant relationship between them, and concluded that with the increase in stock liquidity reduces the cost of equity and thus, the companies prefer to fund through stocks (p. 620). Chang and Hung (2008) used other criteria such as price gaps, price effects, and the probability of information-based transactions (implicit) for assessing liquidity, and found that companies with better management and narrower price gap are minimally affected by the transaction volumes and the reduction of probability of transaction based on implicit information (P. 25). Deuskar (2006) presented a model for assessing the behavior of liquidity and volatility of stock prices. In this model, the investors forecast the recent price changes for changes in an asset with risk. Banerjee et al. (2005) provided evidence withthe relationship between the company's interestdistribution policy and stock market liquidity. They showed that holders of low-liquidity shares are more likely to receive cash benefits. The results of their research indicate that there is a negatively significant relationship between stock liquidity and cash interest distribution.

Becker and Stenin (2004) concluded in their studies that high liquidity in the company is so attractive to investors in such a way that it creates an unreasonable demand for stock purchase. This false sense of certainty leads the investor to less react with the flow of information that emphasizes the decline in stock prices, which results in the growth of stock, which intensifies due to the selling restrictions in the short term and the existence of unaware investors. Holmstrom and Tirole (1998) also believe that the existence of high liquidity in stocks allows stock buyers to make decision only on the basis of the minimum profit from their investment and without considering the liquidity risk, and thus the investors pay an additional amount as a stock for the benefit of liquidity. This research seeks to re-examine the models used in other countries in order to find the relationship between the return behavior of stock

cash resources and the capital structure of the company in the stock exchange of Iran. The results can be useful for both stock managers and policy makers.

Habimana (2014) investigated the relationship between capital structure and financial performance. The analysis is performed on a large cross-sectional dataset of firms operating in Africa, Middle East, Asia, Eastern Europe, Russia and China. Employing the Ordinary Least Squares technique, our findings provide evidence that capital structure matters for firm's financial performance. Leverage is negatively and significantly related to returns, and positively related to systematic risk. Overall, the findings support the static trade-off theory of capital structure; there is an optimal level of debt to equity ratio, above which the marginal benefit of financing capital with debt starts decreasing.

Szucs (2015) examined the capital structure of the companies operating in the Hungarian chemical industry in the period of 2004-2013. First the database is presented which was used for the examination, than the linear regression, the multivariate statistical method which was used for the identification of the relations between the indicators. The main conclusion of the study is that in the examined countries the chemical companies are characterized by a different capital structure policy and the composition of the explanatory variables show significant differences. The earlier formulated theories are only partially valid considering the examined sample, although beyond the involved index numbers the macro factors play a significant role in the explanation of the model as well.

Ravanpak et al. (2016) investigated the role of capital structure on the quality of the financial reporting in the companies accepted in the stock exchange has identified and evaluated. The statistics population of research, the companies accepted in the stock exchange in the Tehran and the research term from 2007 to 2013 is investigated. this study is part of empirical research in accounting and for the doing it of the research methods of causal-comparative and correlation have been used.in the research In order to analyze the data and test of the hypothesis of correlation test, the mean difference test and the regression model profit was used. By using of correlation test the person it was found which centralization ownership variables and margin profit and capital structure in the confidence level of 5 percent significant relationships with transparency financial reporting having also centralization ownership variables negative relationships with transparency financial reporting having and transparency financial reporting positive relationships with capital structure be having.

Angahar and Ivarave (2016) studied empirically investigated the effect of capital structure on corporate profit; evidence from cement manufacturing firms in Nigeria. It focused on quoted cement manufacturing firms in Nigeria from 2004-2013 using ex-post facto research design. Multi regression analysis was used to test the hypotheses. The findings were that, there exists a positive and significant effect of short term debt, long term debt and shareholder's fund on the profit of cement manufacturing firms in Nigeria. The study recommends among others that, management should adopt a sound financing mix which will be beneficial to firms in the long run also; policies by Government should create a favourable macro-economic environment for cement companies to operate profitably.

3. Model and Empirical Results
3.1. Data and Unit Root Tests
Before estimating the model, the data must be analyzed. The most important of these analyses are to determine the reliability of the variables studied. To determine the reliability, the root test of the unit has been used. In this section, only the table for the unit root test of the financial leverage is shown. Other results related to other variables are also the same. In Table (1), the logarithm of the market value of 125 years of the company has been tested for the unit root of the combined data during the period of 2010-2016.

Table 1. Financial leverage reliability test

Method	Test statistic	P-value	Number of sections	Included observations
zero hypothesis: existence of a unit root (Common unit root process)				
Levin-Lin- Chow ADF stat	-34.4557	0.0000	125	500
zero hypothesis: existence of a unit root(Single unit root process)				
Im, Pesaran and Shin W-stat	-12.5845	0.0000	125	500
ADF – Fisher Chi-square	496.409	0.0000	125	500
PP - Fisher Chi-square	583.121	0.0000	125	500

The zero hypothesis is based on the existence of a unit root. The Table information shows that this hypothesis is rejected by taking into account the unit root process by Levine, Lin and Chow method with 125 cross sections and 500 observations at the significant level of 5%.

Also, the zero hypothesis based on the existence of a unit root is rejected by taking into account Im, Pesaran and Shin (IPS) test with 125 cross sections and 500 observations, Fisher ADF test with 125 cross sections and 500 observations as well as Fisher PP test with 125 cross sections and 500 observations at the significant level of 5%. The unit root test results of all variables indicate the lack of unit root.

After ensuring the reliability of the data, the model for the time period (2010-2016) is estimated for 125 companies. For estimation of patterns related to each hypothesis, it is necessary to perform F-test using EVIEWS9 software for detection of panel and Hausman data to apply fixed or accidental effects.

The following model is based on the research by Lipson and Mortal (2009) with the necessary adjustments:

$$\frac{D}{V} = a + bRESPRD_{it} + cDR_{it} + d\frac{V}{A} + e\frac{ET}{A} + fLN(PRC) + g\frac{DP}{A} + kLN(A)$$

Where D/V indicates the financial leverage (an indicator of the capital structure) which is equal to the book value of the debt / book value of the asset

RESPRD indicates the difference between the bid price and the offer price

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DR indicates the debt rate index

V/A indicates the ratio of the market value of the asset to the book value of the asset

ET/A is equal to the profit before deducting the interest and tax / the book value of the asset

PRC indicates the average stock price during the year

DP / A is equal to the depreciation cost / book value of the asset

Ln (A) indicates the book value of the asset used to control the size of a company

Hypothesis 1: There is a significant relationship between capital structure and liquidity.

Hypothesis 2: There is a significant relationship between capital structure and profit before interest and tax.

Hypothesis 3: There is a significant relationship between capital structure and market value ratio of asset / book value of assets and capital structure.

Before making an estimation, various tests should be performed to determine the cross section and its type in the estimation and the existence of heterogeneity variance.

Initially, F statistic is used to determine the existence or absence of a separate cross section for each company.

Since F with a degree of freedom of 124 and 493 at a probability level of 95% is approximately 10,000, and given that the obtained F is greater than the Table F, the zero hypothesis based on the data combination method is rejected, and the opposite hypothesis, namely, the capability of the panel data method is accepted.

H0: The data combination method is suitable for estimation.

H1: The panel data method is suitable for estimation.

Table 2: F-Limer Test Model

Statistics	Amount	Degree of freedom	P-value	**Result**
F	3.381575	(124.493)	0.0000	Panel data

After determining the existence of a distinct cross section for each section, is itquestionable that whether this cross section should be considered as constant effects or random effects? Therefore, in regression analysis of the combined data of the subject, the estimation is questioned to be based on the method of random effect or constant effect. The choice of the random effect model or the constant one cannot be predetermined. Due to the fact that in the F-Limer test, the data combination method has not been confirmed, Hausman test is conducted. Based on the calculations performed, the constant effect method is more suitable.

H0: The random effects method is suitable for estimation.

H1: The constant effects method is suitable for estimation.

Table 3: Hausman Model Test

Chi-square statistics	Degree of freedom	P-value	Result
50.437674	7	0.0000	Fixed effects

3.2. Model Estimation

In this section, the model estimation results obtained from the multivariable regression are evaluated.

$$\frac{D}{V} = a + bRESPRD_{it} + cDR_{it} + d\frac{V}{A} + e\frac{ET}{A} + fLN(PRC) + g\frac{DP}{A} + kLN(A)$$

To determine the significance of the fitting model, the probability level of the F statistics should be considered. The above Figure 1 or 2?? Shows that this amount is less than 5%. Thus, we conclude that the model is generally statistically acceptable and the high level of Fisher's (F) statistics suggests that there is a strong relationship between the variables in this model. The coefficient of determination and the adjusted coefficient of determination show the explanatoryhigh power of the model. From the proposed Watson camera statistics, the lack of correlation in the model can be confirmed. However, due to the short period of time, it is not necessary to examine this statistics.

Now, considering the significance of the whole fitted model, the significance of each of its explanatory variables is analyzed. As shown in the Table 4? Below, for each coefficient variable, standard error, statistics t, and finally, the value of p is given. For significance of each of the variables in the model, the p value column or the significance level should be considered. Now, with respect to the value of p-value, if the arbitrary error α is compared with the values of p, the significance of the variables can be examined.

Table 4: Estimates of the model coefficients

Variable	Coefficient	Std.Error	t- Statistic	Prob
C	0.254344	0.089290	2.848525	0.0046
difference in the bid price and offer price of the shares	0.284758	0.033625	8.468686	0.0000
debt rate index	0.762411	0.036220	21.04940	0.0000
ratio of the market value of the asset to the book value of the asset	-0.106694	0.006732	-1584940	0.0000
ratio of the profit before deducting the interest and tax to the book value of the asset	-0.009992	0.000448	-22.31267	0.0000
average stock price during the year	0.005338	0.000714	7.479797	0.0000
ratio of the Depreciation expense to the book value of the asset	0.068935	0.010972	6.283040	0.0000
Book value of the asset	-0.030402	0.004254	-7.145919	0.0000
R-squared: 0.91	Adjusted R-squared: 0.89	D-W stat: 2.13	Prob (f-statistic): 0.0000	

As shown in the Table above, there is a significant relationship between capital structure and liquidity, and the first hypothesis is confirmed. There is also a significant relationship between

the profit before interest and tax and capital structure, and the second hypothesis is also confirmed.

In addition, there is a meaningful relationship between the capital structure and the ratio of the market value of the asset / book value of assets;thus, the third hypothesis is confirmed as well.

Table 5: Summary of test results of hypotheses

Hypotheses	Test Result
Hypothesis 1: There is a significant relationship between capital structure and liquidity.	Confirmed
Hypothesis 2: There is a significant relationship between capital structure and profit before interest and tax.	Confirmed
Hypothesis 3: There is a significant relationship between capital structure and market value ratio of asset / book value of assets and capital structure.	Confirmed

5. Conclusion

The results of this study are consistent with theoretical foundations and research history. There are different theories about the capital structure of the company. Some of these theories consider the existence of debt in the company's capital structure as a factor enhancing the value of the company and some other researchers consider it as a factor reducing the value of the company. Moreover, theoretically, it seems that managers have plans for capital restructuring. Therefore, considering the role of capital structure in wealth creation, it is important for the company to examine the factors affecting it. Therefore, it can be assumed that there is a relationship between capital structure and liquidity indices. Capital structure reflects on the use of debt and equity to finance assets and collectively includes the left side of the balance sheet. The results of the research on the relationship between liquidity and capital structure indicate that increased liquidity reduces the stakeholders' costs of equity and the existence of a relationship between stock liquidity and shareholders' equity costs makes a link between stock liquidity and capital structure. Therefore, companies with stocks with higher liquidity prefer to finance through stocks. Finally, considering the findings of this study, there is a significant relationship between the research hypotheses.

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