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EFFECTIVE FACTORS ON DEBT TO EQUITY RATIO OF SHAREOWNERS IN CAPITAL STRUCTURE OF THE ACCEPTED CORPORATIONS IN TEHRAN STOCK EXCHANGE

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ABSTRACT

Capital Structure of a corporation will indicate the relationship between financial leverage and equity of shareowners. Financial leverage will make limitations for managers while capital increases flexibility and making decision ability. Mainly, using financial leverage in financial structure will cause investors' expected returns increase but this function can corporation risk, too. So, using financial leverage is like a double-edged sword (mutual relationship) that can increase or decrease corporation value. This research aims to investigate the effective factors on debt to equity (D/E) ratio of shareowners in the capital structure of the accepted corporations in Tehran Stock Exchange. This research is comparatively based on its performance logic and research time is sectional and its performance method is descriptive-measuring and post-eventual. Research statistic population includes all the accepted corporations in Tehran Stock Exchange with a sample of 142 corporations chosen by systematic deletion. Research finding indicates that corporation growth opportunity, profitability, corporation size, and corporation age have positive meaningful effects on D/E ratio of shareowners. However, obvious properties, liquidity, and tangible asset have negative meaningful effects on D/E ratio of shareowners. It is suggested that research studied corporations will decrease D/E ratio of shareowners by an increase of usual stock sale.

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1. INTRODUCTION

The capital structure of a corporation indicates the relationship between financial leverage and shareowners' rights. Financial leverage will limit managers while capital increases flexibility and making decision ability. Financial leverage use in the capital market will cause an increase of expected return of investors but this function can corporation risk, too. So, using financial leverage is

like a double-edged sword (mutual relationship) that can increase or decrease corporation value, (Parakash & Gasef, 2002). Free cash flows are the criteria to measure commercial unit operation and represent the amount of cash flow that a corporation owns after calculating necessary expenses to reserve or develop properties. Free cash flows can have important applications for investors to evaluate the financial health of the commercial unit, (Maham & Heydari, 2015). Moreover, managers can invest in plans with positive pure now value by use of incomes of their own sources and this act can increase corporation value, (Mehrani & Bagheri, 2008). One of the important factors in the investment process in the determination of corporation value. Value of each corporation can be determined by attention to its stock value, so investor determines its priority based on the corporation value. Financial decisions (capital structure) is one of the effective factors on corporation stock value. In recent years, the importance and effectiveness of financial decisions have been the main subjects in university researches. Investigating the historical process of each country internal impure production has indicated as criteria on that country economic activity level and this variable has had on fluctuated long term process during years. The fluctuations are called commercial cycles in economic literature. Commercial cycles show that economic is endangered by boom and depression which removes it from long term process. While economic politic is dependent on economic boom and depression situations and politic which is necessary during the depression (boom) is not necessarily suitable for boom (depression) time, so politician should be aware of now and future situations of commercial cycles, (Masjed Mosavi et al., 2011; Khajehvandi et al., 2018).

Debt to equity ratio of shareowner is one of the financial ratios and is a measuring criterion of financial leverage. This ratio is attained by the division of total liabilities of the corporation over the equity of shareholders that indicates a corporation to secure its financial properties what percent of the equity of shareowners and liabilities use. High ratio of liability to equity of shareowners can cause additional interest payment and can cause liability ratio increase to shareowners` rights and corporation should potentially produce more income than the time of external financial securement. If a corporation income increases considerably than liability expense (interest expense), investors may benefit more than before with their investments in the corporation, (Ahmadi, 2007).

Capital structure subject points to a situational mixture of corporation securement sources such as; short term liabilities, bonds, long term liabilities, excellent share and usual share. Some corporations shouldn't consider any predetermined programs for capital structure and they only operate to change of corporation their sources by capital structure by financial decisions of financial management without any clarified planning, (Namzi & Shirzadeh, 2004). These corporations may be successful in the short term but finally, they will be encountered by problems in the securement of their financial sources for their activities. These corporations can't benefit from optimized use of. Finally, this reality should be considered that a corporation should plan its capital in a way that it can maximize the beneficiary amount of its cash and adapts its situation easily with a change of situations, (Salimi, 2013). Financial managers should plan an optimized capital structure based on theoretical concepts. Optimized capital structure happens when the market value of each share has been maximized. To determine the considerable capital structure, use of interest of each share, financial break-event point as measuring acceptable methods of financial degree, indifferent point of risk and return are necessary. Determination of optimized capital structure is a difficult duty in real situations and its inclusive will be more than theoretical discussions, (Bagherzadeh, 2012).

There are considerable differences between the capital structures of active corporations in different industries. Because of several effective factors on relative decisions to the capital structure of a corporation, before justices by individual who sets capital structure has an important role. While justifications of decision-makers about the importance of effective different factors on capital structure are different, then the capital structure of two similar corporations can be different. These effective factors can be psychological, complex and qualify while capital markets are not complete and a decision made may be faced with insufficient knowledge and hazard, so it will not always follow an accepted theory. Totally, corporations are interested in securing all financial sources of investment with the lowest expense, (Namazi & Shirzadeh, 2004). So, the research aim is investigating the effective factors on liability ratio to shareowners` rights in the capital structure of the accepted corporations in Tehran Stock Exchange.

2. RESEARCH HYPOTHESES

First Hypothesis: corporation growth has a positive meaningful effect on debt to equity ratio of shareowners

Second Hypothesis: tangible asset has a positive meaningful effect on debt to equity ratio of shareowners

Third Hypothesis: profitability has a positive meaningful effect on debt to equity ratio of shareowners

Fourth Hypothesis: liquidity has a positive meaningful effect on debt to equity ratio of shareowners

Fifth Hypothesis: corporation size has a positive meaningful effect on debt to equity ratio of shareowners

Sixth Hypothesis: corporation age has a positive meaningful effect on debt to equity ratio of shareowners

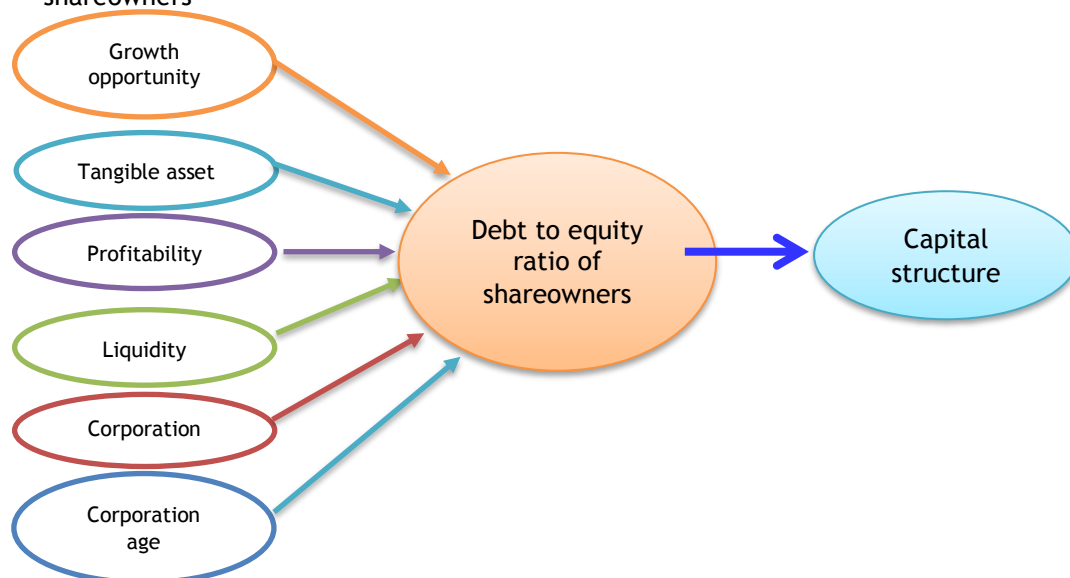


Figure 1: Research conceptual model (after Anor & Chin, 2016)

3. DEFINITIONS OF VARIABLES

Growth Opportunity: abilities of corporations in clarifying potential financial sources (both internal and external) for investment and supplying suitable financial plans (Araghi et al., 2010).

Tangible asset: this variable is measured by clerical value over all properties.(Sarlak et.al. 2018).

Profitability: profitability points to corporation ability in attaining income and interest. Income or pure interest is the only criteria of profitability measurement. Investors and creditors are interested

in the flow and future profitability evaluation of a corporation. Corporations for the absorption of their requirement capital are enforced to access sufficient interest to secure suitable return for investors and creditors, (Jafari, 2016).

Liquidity: it is the amount of cash that a corporation needs for its future payments and it is called cash flow and bank, (Denis & Sibelko, 2010).

Corporation Size: total Rial value of all published stocks of a corporation in the stock exchange, (Mohammadi et.al. 2010).

Corporation Age: it means situating a corporation in which cycle of age, puberty, growth or wane, (Mohammadi et.al. 2010).

Liability ratio to shareowners rights: is financial ratio and its criteria to measure corporation financial leverage. This ratio is accessed by the division of total liabilities of the corporation to shareowners` rights that indicates what percent of shareowners` rights and liabilities a corporation uses to secure its financial properties, (Ahmadi, 2007).

Operational Definitions of Variables

Growth Opportunity: $M/B = \text{ratio of corporation market value} / \text{clerical value}$

Tangible asset: tangible asset= value of obvious asset clerical/collection of properties

Profitability: the ratio of each interest price= market price average of each usual share/interest of each usual share

Market price average of each usual share= the average of the highest price and the lowest price during a period.

Liquidity: to calculate dependent variable of corporation remained cash ratio of cash collection and cash equations such as; short term investment over total properties after cash flow deduction and cash equations will use. Cash flow will attain directly from the balance sheet.

Corporation Size: corporation size is calculated by multiply of stock number of a corporation in day price of each share.

Corporation Age: Anthony & Ramesh (1992) divided corporations into life cycle levels use for variables of sale growth, asset expenses, the ratio of divided interest and corporation age. So, divided base on corporations in this research is similar to that processes of Anthony & Ramesh (1992). However, determination of the real age of some of the corporations will be faced with difficulty because of education, merging, existing accounting characteristic, and new reporting after education. So, the corporation age variable has been omitted and classification will be based on the other three variables:

At first, amounts of three variables have been calculated for each corporation-year and theses amounts will be divided based on statistic amounts into three low, medium and high classes.

Secondly, a grade is given to each of the observations in these three classes (low one, medium 2 and high 3).

Thirdly, a mixed grade will be attained for each corporation - year and in attention to chart (1), it will be situated in one of the growth, puberty and wane levels.

Finally, observations that will not be situated in mentioned variables in the framework of the life cycle model based on Figure 1.

The calculation method of variables will be as follow:

$$SG\ it = [1 - (\text{Sale it} / \text{Sale it-1})] * 100$$

$$DPR\ it = (\text{DPS it} / \text{EPS it}) * 100$$

CE= decrease (increase) of fixed properties during period / corporation market value *100

Sale: income sale, DPS: divided profit of each share, EPS: profit of each share

SG: Sale Growth

DPR: Divided Profit Ratio

it = company model i in year of t

Table 1: Corporation life cycle

Levels of the corporate life cycle	Sale growth	Divided profit ratio	Capital expenses
Growth (G)	3	1	3
Maturation (M)	2	2	2
Sunset (s)	1	3	1

Debt to Equity Ratio of Shareowners:

Debt to equity ratio of shareowners= total liability/equity shareowners

4. RESEARCH BACKGROUND

Banimahd et al. (2016) investigated the competitive power of product and expense of shareowners` rights and commercial units upgraded the competitive power of their products to remain in a competitive market. Research conclusions indicated that the competitive power of product and expense of shareowners` rights have a meaningful reversed relationship with each other. Maham & Heydari (2015) investigated investment growth and relationships between the market value of the stock, profit and clerical value of shareowners` rights. The study found how the relationship between the value of stock and profit and stock value and clerical value would be affected by investment growth, so better recognition of ratios of determination factors such as; price than profit and price than clerical value would receive.

Moradzadehfard & Faramarzi (2014) investigated the effect of financial securement out of balance sheet than equity of shareowners of the accepted corporations in Tehran Stock Exchange. The study indicated that financial securement out of balance sheet would not only increases stock profit, the return of equity of shareowners, profitability ratios and equity of shareowners of corporations but also in some cases it would decrease return of equity of shareowners through a decrease in profitability ratios (ROE, ROI).

Wang (2010) investigated the effect of corporation representation expense on less investment to free cash flows in China Stock Exchange and they concluded that there was a relationship between the increase of one unit in the corporation representation expense and increase in investment of free cash flows.

Gamariz & Balesta (1991) investigated the relationship between financial reporting quality, liability usance and investment efficiency. Their research conclusions represented that liability usance duration would be continued by investment efficiency improvement and would decrease more investment and less investment.

Isdorfer et al. (2006) investigated the relationship between capital structure, managers` rewards and investment efficiency and their research conclusions indicated that more financial leverage

would increase investment efficiency. Moreover, managers whom their rewards were dependent on liabilities investments would be less than managers whom their rewards were dependent on shareowners` rights.

Altaieb (1961) measured the effect of representation expense of corporations on the politic of financial leverage and stock profit. He concluded that there was a negative meaningful relationship between free cash flows and stock profit by investigating a sample consisted of 60 corporations from 2007 to 2011, while the relationship between free cash flow and financial leverage is positive and meaningful. Yao et al. (2011) investigated the effect of corporation financial limitation on investment by the use of three data of the stock market in Asia. They found that there was a negative comprehensive relationship between corporation financial limitation and its investment. This relationship would be weaker in the markets that the property return of corporations was homogenous and ongoing or in the markets in that corporations emphasized on growth.

5. RESEARCH STATISTIC POPULATION

Research statistic population include 856 accepted corporations in Tehran Stock Exchange from 2010 to 2014 (five-year duration) while 142 corporations have been chosen by systematic deletion (Fileting Table) as the research statistic sample.

6. MODEL ESTIMATION

First Hypothesis:

H0: corporation growth opportunity has no positive meaningful effect on debt to equity ratio of shareowners

H1: corporation growth opportunity has a positive meaningful effect on debt to equity ratio of shareowners

$$\text{Debt to equity ratio } it = \beta_0 + \beta_1 \text{ growth opportunity } it + \epsilon$$

Debt to equity ratio it: liability ratio (debt) over shareowners` rights of i corporation in t year

Growth opportunity: growth opportunity of i corporation in t year

ϵ : error member

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 2: Conclusions of F Limer and Husman Tests

Test kind	F limer Test	Husman Test
Statistic amount	F=9.5254	$\chi_2 = 10.6587$
P-Value	<0.001	<0.001
Model kind	Paneling	Fixed effects

Based on received conclusions of F limer test in the above table of model (1) estimation and its amount (9/5254) and its P-Value in %95 level is equal to zero, in the otherwise, Value < 0.05 so, H0 of model pooling is rejected and paneling model will be accepted. Finally, the paneling method will be used to estimate all studied sections of the research. However, based on received conclusions of Husman Test of the research first hypothesis that its amount is 10.5687 instead of $\alpha=0.05$ and amount of P-Value <0.01, so Ho will be rejected and rejection of H0 indicates that random effect method is not homogenous and constant effect method should be used.

Table 3: Model conclusions of model 1 constant effects

Constant effect model	Coefficients	SD	t statistic	P-Value	Result
Growth opportunity	0.521	0.081	6.432	<0.001	H0 is rejected
C	0.237	0.052	4.557	0.002	
e	0.400	0.031	12.903	<0.001	
R ²	0.67				
R ²	0.58				
D.W	1.86				
F Fisher	7.457 (prob <0.001)				

Based on conclusions of presented constant effect model in the above table, opportunity growth variable in the studied corporation has a positive meaningful effect based on t statistic amount is (6.432) and is more than critical level (1.96 to -1.96) and its relative possibility level is 0.000 and P-Value <0.05 on dependent variable of liability ratio than shareowners` rights, so H0 will be rejected by 95% confidence level in the research first hypothesis. Received R² indicates that descriptive variable can explain 0.67 percent of dependent variable changes. Based on adjusted determination coefficient 0.58 which indicates that this amount is high and its concept is model suitable explained ability. Calculated Watson-Durbin statistic (D.W=1.86) indicates self-correlation in model and independences or errors are affirmed (the difference between real amounts and proposed amounts by regression equation), based on a test of F fisher (7.457) and (prob=0.000) and fitness of total regression is credit and meaningfulness of total model is affirmed.

Second Hypothesis:

H0: tangible asset has no positive meaningful effect on debt to equity ratio of shareowners

H1: tangible asset has a positive meaningful effect on debt to equity ratio of shareowners.

Debt to equity ratio $it = \beta_0 + \beta_1 \text{ tangible assets } it + \epsilon$

Debt to equity ratio it : liability ratio (debt) over shareowners` rights of i corporation in t year

Tangible assets: tangible assets of i corporation in t year

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 4: Model conclusions of model 2 constant effects

Constant effect model	Coefficients	SD	t statistic	P-Value	Result
Tangible assets	-0.654	0.064	-10.171	<0.001	H0 is rejected
C	0.136	0.053	2.566	0.024	
e	0.856	0.009	95.111	<0.001	
R ²	0.68				
Adjusted R ²	0.66				
D.W	2.23				
F Fisher	6.442 (prob <0.001)				

Table 4, the tangible asset variable based on t statistic amount and probability level relative to it in 95% confidence level has a negative meaningful effect on the dependent variable. While the variable ratio of a tangible asset increases one unit, debt ratio to shareowners` rights will decrease about 0.521, so by 95% confidence level, H0 is rejected. Other calculated statistics such as; correlation coefficient (0.68), adjusted determination coefficient (0.66), Watson-Durbin statistic (2.23) and statistic of F Fisher test (6.442 (prob <0.001)) indicate the suitability of total fitness of regression.

Third Hypothesis:

H0: profitability has no positive meaningful effect on debt to equity ratio of shareowners

H1: profitability has a positive meaningful effect on debt to equity ratio of shareowners.

Debt to equity ratio $it = \beta_0 + \beta_1 \text{ profitability } it + \epsilon$

Debt to equity ratio it : liability ratio (debt) over shareowners' rights of i corporation in t year

Profitability: profitability of i corporation in t year

ϵ : error

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 5: Conclusions of F Limer and Husman Tests

Test kind	F limer Test	Husman Test
Probability	F=8.6985	$\chi_2 = 11.6352$
P-Value	<0.001	<0.001
Model kind	Paneling	Fixed effects

Based on received conclusions of F limer test in Table 5 of model (3) estimation and its amount (8.6985) and its P-Value in %95 level is equal to zero, in the otherwise, Value < 0.05 so, H0 of model pooling is rejected and paneling model will be accepted. Finally, the paneling method will be used to estimate all studied sections of the research. However, based on received conclusions of Husman Test of the research third hypothesis that its amount is 11.6352 instead of $\alpha=0.05$ and amount of P-Value <0.05, so Ho will be rejected and rejection of H0 indicates that random effect method is not homogenous and constant effect method should be used.

Table 6: Model conclusions of model 3 constant effects

Constant effect model	Coefficients	SD	t statistic	P-Value	Result
Probability	0.723	0.076	9.631	<0.001	H0 is rejected
C	0.116	0.023	5.043	0.0003	
e	0.578	0.031	1.864	0.578	
R ²				0.696	
Adjusted R ²				0.608	
D.W				1.853	
F Fisher				254.659 (prob <0.001)	

Based on conclusions of presented constant effect model in Table 6, profitability variable in the studied corporation has a positive meaningful effect based on t statistic amount is (9.631) and is more than critical level (1.96 to -1.96) and its relative possibility level is 0.000 and P-Value <0.05 on dependent variable of liability ratio than shareowners' rights, so H0 will be rejected by 95% confidence level in the research third hypothesis. While the variable ratio of profitability increases one unit, debt ratio to shareowners' rights will decrease about 0.723, so by 95% confidence level, H0 of this hypothesis will be rejected. Received R² indicates that descriptive variable can explain 0.696 percent of dependent variable changes. Based on adjusted determination coefficient 0.608 which indicates that this amount is high and its concept is model suitable explained ability. Calculated Watson-Durbin statistic (D.W=1.853) indicates self-correlation in model and independences or errors are affirmed (the difference between real amounts and proposed amounts by regression equation), based on a test of F fisher (254.659) and (prob<0.0001) and fitness of total regression is credit and meaningfulness of total model is affirmed

Fourth Hypothesis:

H0: liquidity has no positive meaningful effect on debt to equity ratio of shareowners.

H1: Liquidity has a positive meaningful effect on debt to equity ratio of shareowners.

$$\text{Debt to equity ratio } it = \beta_0 + \beta_1 \text{ liquidity } it + \epsilon$$

Debt to equity ratio it: liability ratio (debt) over shareowners` rights of i corporation in t year

Liquidity: liquidity of i corporation in t year

ϵ : error term

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 7: Conclusions of F Limer and Husman Tests

Test kind	F limer Test	Husman Test
liquidity	F=6.6587	$\chi_2 = 12.4512$
P-Value	<0.001	<0.001
Model kind	Paneling	Fixed effects

Based on received conclusions of F limer test in Table 7 of model (4) estimation and its amount (6.6587) and its P-Value in %95 level is equal to zero, in the otherwise, P-Value < 0.05 so, H0 of model pooling is rejected and paneling model will be accepted. Finally, the paneling method will be used to estimate all studied sections of the research. However, based on received conclusions of Husman Test of the research fourth hypothesis that its amount is 12.4512 instead of $\alpha=0.05$ and amount of P-Value <0.05, so Ho will be rejected and rejection of H0 indicates that random effect method is not homogenous and constant effect method should be used.

Table 8: Model conclusions of model 4 constant effects

Constant effect model	Coefficients	SD	t statistic	P-Value	Result
liquidity	-0.576	0.038	-15.166	<0.001	H0 is rejected
C	0.840	0.020	42.001	<0.001	
e	17.295	2.614	6.616	0.0001	
R ²				0.264	
Adjusted R ²				0.178	
D.W				2.316	
F Fisher				2.843 (prob <0.000)	

Based on conclusions of presented constant effect model in Table 8, liquidity variable in the studied corporation has a positive meaningful effect based on t statistic amount is (-15.166) and is more than critical level (1.96 to -1.96) and its relative possibility level is 0.000 and P-Value <0.05 on dependent variable of liability ratio than shareowners` rights, so H0 will be rejected by 95% confidence level in the research fourth hypothesis. Received R² indicates that descriptive variable can explain 0.178 percent of dependent variable changes. Based on adjusted determination coefficient 0.608 which indicates that this amount is high and its concept is model suitable explained ability. Calculated Watson-Durbin statistic (D.W=2.316) indicates self-correlation in model and independences or errors are affirmed (the difference between real amounts and proposed amounts by regression equation), based on a test of F fisher (2.843) and (prob<0.000) and fitness of total regression is credit and meaningfulness of total model is affirmed.

Fifth Hypothesis:

H0: corporation size has no positive meaningful effect on debt to equity ratio of shareowners.

H1: corporation size has a positive meaningful effect on debt to equity ratio of shareowners.

Debt to equity ratio $it = \beta_0 + \beta_1 \text{ size } it + \epsilon$

Debt to equity ratio it : liability ratio (debt) over shareowners' rights of i corporation in t year

Corporation size: the size of i corporation in t year

ϵ : error term

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 9: Conclusions of F Limer and Husman Tests

Test kind	F limer Test	Husman Test
Size	F=10.6358	$\chi_2 = 13.9658$
P-Value	<0.001	<0.001
Model kind	Paneling	Fixed effects

Based on received conclusions of F limer test in Table 9 of model (5) estimation and its amount (10.6358) and its P-Value in 95% level is equal to zero, in the otherwise, Value < 0.05 so, H₀ of model pooling is rejected and paneling model will be accepted. Finally, the paneling method will be used to estimate all studied sections of the research. However, based on received conclusions of Husman Test of the research fourth hypothesis that its amount is 13.9658 instead of $\alpha=0.05$ and amount of P-Value <0.05, so H₀ will be rejected and rejection of H₀ indicates that random effect method is not homogenous and constant effect method should be used.

Table 10: Model conclusions of model 5 constant effects

Constant effect model	Coefficients	SD	t statistic	P-Value	Result
Corporation size	0.645	0.007	92.142	0.0000	H ₀ is rejected
C	1.971	0.237	8.316	0.0000	
e	-0.123	0.014	-8.785	0.0009	
R ²	0.485				
Adjusted R ²	0.350				
D.W	2.439				
F Fisher	3.586 (prob<0.001)				

Based on conclusions of presented constant effect model in Table 10, the corporation size variable in the studied corporation has a positive meaningful effect based on t statistic amount is (92.142) and is more than critical level (1.96 to -1.96) and its relative possibility level is 0.000 and P-Value <0.05 on dependent variable of liability ratio than shareowners' rights, so H₀ will be rejected by 95% confidence level in the research fifth hypothesis. Received R² indicates that descriptive variable can explain 0.485 percent of dependent variable changes. Based on adjusted determination coefficient 0.350 which indicates that this amount is high and its concept is model suitable explained ability. Calculated Watson-Durbin statistic (D.W=2.439) indicates self-correlation in model and independences or errors are affirmed (the difference between real amounts and proposed amounts by regression equation), based on a test of F fisher (2.843) and (prob<0.001) and fitness of total regression is credit and meaningfulness of total model is affirmed.

Fifth Hypothesis: H₀: corporation age has no positive meaningful effect on debt to equity ratio of shareowners.

H₁: corporation age has a positive meaningful effect on debt to equity ratio of shareowners.

Debt to equity ratio $it = \beta_0 + \beta_1 \text{ size } it + \epsilon$

Debt to equity ratio it : liability ratio (debt) over shareowners' rights of i corporation in t year

Corporation age: age of i corporation in t year

ϵ : error term

β_0 : Coefficient of Constant

β_1 : Coefficients of independent and control variables

Table 11: Conclusions of F Limer and Husman Tests

Test type	F limer Test	Husman Test
Age	F=9.3654	$\chi_2 = 10.6985$
P-Value	<0.001	<0.001
Model kind	Paneling	Fixed effects

Based on received conclusions of F limer test in Table 11 of model (6) estimation and its amount (9.3654) and its P-Value in %95 level is equal to zero, in the otherwise, Value < 0.05 so, H0 of model pooling is rejected and paneling model will be accepted. Finally, the paneling method will be used to estimate all studied sections of the research. However, based on received conclusions of Husman Test of the research fourth hypothesis that its amount is 10.6985 instead of $\alpha=0.05$ and amount of P-Value <0.05, so Ho will be rejected and rejection of H0 indicates that random effect method is not homogenous and constant effect method should be used.

Table 12: Model conclusions of model 5 constant effects

Constant effect model	Coefficients	Standard deviation	t statistic	P-Value	Research conclusions
Corporation age	-0.219	0.026	-8.423	<0.001	H0 is rejected
C	13.702	0.141	97.177	<0.001	
e	15.513	2.164	7.168	0.0006	
R ²	0.870				
Adjusted R ²	0.776				
D.W	1.608				
F Fisher	15.607 (prob<0.001)				

The constant effect model in Table 12, the corporation age variable in the studied corporation has a positive meaningful effect based on t statistic amount is (8.423) and is more than critical level (1.96 to -1.96) and its relative possibility level is 0.000 and P-Value <0.05 on dependent variable of liability ratio than shareowners` rights, so H0 will be rejected by 95% confidence level in the research sixth hypothesis. Received R² indicates that descriptive variable can explain 0.780 percent of dependent variable changes. Based on adjusted determination coefficient 0.776 which indicates that this amount is high and its concept is model suitable explained ability. Calculated Watson-Durbin statistic (D.W=1.608) indicates self-correlation in model and independences or errors are affirmed (the difference between real amounts and proposed amounts by regression equation), based on a test of F fisher (15.607) and (prob<0.001) and fitness of total regression is credit and meaningfulness of total model is affirmed.

7. CONCLUSION

This article aim is investigating the effective factors on debt to equity ratio of shareowners in capital structure of the accepted corporations in Tehran Stock Exchange. Based on test of hypotheses that indicates growth opportunity, profitability, corporation size, and corporation age have positive meaning effect on debt on debt of equity ratio of shareowners. Tangible asset and liquidity have negative meaning effect on debt on debt of equity ratio of shareowners

8. AVAILABILITY OF DATA AND MATERIAL

Data used or generated from this study can be requested to the corresponding author.

9. REFERENCES

- Araghi, A., Sohrabi, M., and AmirKhanloo, J. (2010). Investigating linear and nonlinear relationships between accounting variables and stock price changes in companies admitted to Tehran Stock Exchange. Volume 2, Issue 5, 2010, Page 125-144
- Anthony, J. H. and K. Ramesh (1992), "Association between Accounting Performance Measures and Stock Prices: A Test of the Life Cycle Hypothesis", *Journal of Accounting and Economics*, 15, 203-227.
- Altaleb G. (1961), Corporate Debt Capacity: A Study of Corporate Debt Policy and the Determination of Corporate Debt Capacity, Division of Research, Graduate School of Business Administration, Boston, MA: Harvard University Press;
- Ahmadi, A.,(2007), The Impact of Industry and Size on the Capital Structure of Companies Listed in Tehran Stock Exchange. *Journal of Social Sciences and Human Sciences*, Shiraz University, No. 55.
- Bagherzadeh, S., (2012), "Specification of capital structure in the accepted corporations in Tehran Stock Exchange", *Magazine of financial researches*, Tehran university, No.16
- BaniMahd B., YaghoubNejad A., VahidKia E., (2016). Competitive power of product and cost of equity. *Financial Accounting and Auditing Research (Journal of Accounting and Auditing)*: Summer 2012, Volume 7, Number 26; From page 107 to page 118.
- Denis, D.J. & V. Sibilkov. (2010). Financial Constraints, Investment, and the Value of Cash Holdings. *Review of Financial Studies*, 23, 247-269.
- Isdorfer M.L., M.R. Roberts, and J.F. Zender (2006), "Back to the Beginning: Persistence and the Cross-Section of Corporate Capital Structure", Working Paper, David Eccles School of Business, University of Utah, Available at SSRN: <http://ssrn.com/abstract=881899>;
- Jafari, M., and Arefnejad, M., (2016). Effect of Turnover Capital Management and Financial Leverage on Profitability of Some Companies in Tehran Stock Exchange. *Journal of Economic Sciences*. Year 10 Number 34 (15 pages from 167 to 181).
- Maham K., and Heydari M.R., (2015). The growth of investment and the relationship between stock market value, profit, and book value of equity. *Financial Accounting Knowledge*: Fall 2014, Volume 1, Number 2; pp:79-96.
- Mehrani, S., Baheri, B. (2008), "Investigating the effect of free cash flows and institutional investors on profit management in the accepted corporations in Tehran Stock Exchange", *Community of Iran Accountants*, 1st year, No. 2, p.p. 52-58
- Masjed Mousavi, R., Maysazadeh A., and Rahmani R., (2011). The financial software examines the relationship between profitability and returns according to the company's life cycle and size. *Accounting and Audit Research* No. 9.
- Mohammadi, Sh., Raei, R., Ghalibaf, H., and Golzarzai, G.H., (2010). Analysis of collective behavior of investors in Tehran Stock Exchange using state space model. *Journal of Research in Financial Accounting*. Second year, number two, sequential number (4),
- MoradzadehFard M.,and Faramarzi J., (2014). The effect of off-balance sheet financing on the equity of the companies admitted to the Tehran Stock Exchange. *Financial Accounting and Audit Research (Journal of Accounting and Auditing)*: Summer 2009, Volume 1, Issue 2; pp:117-131.

- Khajehvandi, A., Soleymani, A., & Pilevari, N. (2018). Determination of The Impact of The Style-Shifting Activity Management And Prediction of the Performance of Company's Market Value of Equity. *International Transaction Journal of Engineering Management & Applied Sciences & Technologies*, 9(6), 503-514.
- Namazi, M., Shirzadeh, J. (2004), "Investigating relationship between capital structure and profitability in the accepted corporations in Tehran Stock Exchange", *Magazine of Accounting & Auditing Investigations*, Tehran University, No.42.
- Parakash, K., & Chathoth, (2002). *Co-alignment between Environment Risk, Corporate Strategy Capital Structure and firm performance*, Blacksburg. Marshall School of Business, University of Southern California.
- Salimi, S. (2013), "The effects of industry and size on capital structure of corporations in Iran", M.A. Thesis, University of Human & Social Sciences.
- Yao, Tong., Yu, Tong., Zhang, Ting., Chen, Shaw (2011), Asset Growth And Stock Returns : Evidence From Asian Financial Markets, *PacificBasin Finance Journal*, no.19.
- Wang, G.Y. (2010). The Impacts of Free Cash Flows and Agency Costs on Firm Performance, *Journal of Service Science & Management*, No. 3, pp. 408-418.



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