

## **THE EFFECT OF LIFE CYCLE ON THE RELATIONSHIP BETWEEN FINANCING APPROACHES AND FIRM VALUE**

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### **ABSTRACT**

The effect of the firm's life cycle has been previously studied and confirmed in many researches. Assessing the relationship between different approaches of financing and firm value has also received much attention. But the effect of life cycle on the relationship between financing approaches and firm value has not been assessed yet. This study intends to examine the effect of life cycle on the relationship between financing approaches and firm value. Target population of the study is consisting of all listed companies on Tehran Stock Exchange over a period from 2007 to 2011. Needed data was collected through audited financial statements and performance reports of listed companies on Tehran Stock Exchange and Rahavard Novin Database. Data analysis and hypotheses testing were conducted through the application of Excel and SPSS software and statistical regression models of pooled data and generalized least square method. Findings of the research confirmed the results of some associated studies accomplished by other researchers and evidenced that life cycle significantly affect the relationship between financing approaches and firm value.

*Keywords: firm's life cycle, firm value, financing approaches*

### **INTRODUCTION**

Long-term success requires companies to produce goods of higher quality, lower cost, and better selling price. Such production itself requires financing with reasonable costs. Capital market is regarded as one of the most important tools of achieving economic growth and development in the most countries. Although Iran enjoys many overt and covert resources, most Iranian companies suffer from lack of investment (Ahmadi Mansourabad, 2006). Moreover, capital market structure is not sufficiently strong to provide financial resources. With renewed prosperity of Tehran Stock Exchange and its spread to other provinces and increasing popularity of stock securities, investment decision-making has got great importance with respect to the level of public awareness about the financing approaches and financial decision-making processes. Several factors increase the need for investment, one of which is the implementation of development projects and plans. Companies which consider both the development and maintenance of their market share can be successful.

Many studies have assessed the relationship between firms' financing and their value, and found a significant relationship between these two variables. Financial sciences scholars such as Miller and Modigliani, Hampton, Warner, Scott, and Martin agree that applying financial leverage can enhance firm value and shareholders' wealth. Miller and Modigliani believe that having more long-term liabilities in any companies' capital structure is preferred. Thus, more liabilities in capital structure can decrease tax expenses and would increase cash flow and firm value. Due to the fact that interest is the final objective, using financial leverage is of considerable importance. So, capital structure can determine the optimal leverage of shareholders' wealth. If optimal capital structure is neglected when financing, inappropriate financial leverage may be brought about.

On the other hand, some researches' findings demonstrate that firms' financial characteristics are not the same in different life cycles. Anthony and Ramesh (1992) examined the association between accounting performance measures and stock prices through the application of a test of the life cycle. They found a significant relationship between stock prices and accounting performance measures. It proves that a firm's financial characteristics are affected by the life cycle stage in which the firm is. In other words,

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accounting criteria may not be the same in different life cycles. Thus, it seems that life cycle model is a more powerful criterion for predicting firm value and supplying users with financial reports .

Remainder of this paper would be as follows: in the next section, theoretical concepts are explained and the related literature is reviewed and then, research hypotheses are designed. Next, research variables and their measurement tools, methodology, data analysis and hypotheses testing are described. Finally, findings, conclusion, limitations and suggestions are mentioned.

## **THEORETICAL BACKGROUND AND LITERATURE REVIEW**

Theoretical background of the current study is based on three groups of theories which are stock market value (or firm value), capital structure and life cycle. Conceptual framework of the study and its hypotheses are comprised of these three theoretical fields.

The objective of entering any financial market is gaining interest. Many investors do not only aim to earn as much as other investors, but they attempt to earn more than them. According to the theory of market efficiency, proposed by Fama in 1970, a market in which prices always fully reflect available information is called efficient, and none of the investors has superiority over its rivals, since none of them gets access to more information. But in real world, there are reasonable disagreements with market efficiency theory. For instance, there are many investors who gain much more interest in comparison to other investors. Krugman, a professor of economics at MIT University, believes that investors' behaviour affect the efficiency or inefficiency of market; therefore, stock price is not only the result of existing information in market (Kamankesh, 2010). Furthermore, the amount of market efficiency is not the same in different conditions, and market in terms of efficiency can be classified into three groups, namely strong-form efficiency, semi-strong form efficiency and weak-form efficiency each of which has their specific characteristics (Malkiel & Fama, 1970).

On the basis of the traditional approach in the field of firms' capital structure, each firm has an ordinary capacity for debt according to its characteristics. It refers to a debt level which can decrease the firm's financial costs. According to this traditional approach, it was believed that the firm's capital costs' changes are trivial. Since determining debt capacity was not possible, managers' financial decision-makings were dependent upon their experiences and internal feelings which were formed based on some golden rules which were used in financial decision-makings (such as matching the date of matured liabilities and useful economic life), factors such as corporate assets value (mostly real estate), the ability of returning liabilities in the future or managing them in the past (Donaldson, 1961).

New theories of financial structure were formed at late 1950s when Modigliani and Miller in 1958 asserted that the value of the firm is completely independent of the capital structure. They proposed new concepts which brought about new uncertainties and can be proved under different conditions. In this direction, two basic and different theories were designed. The first which was suggested by Miller and Modigliani (1958) and completed by scholars such as Hirshleifer (1966) and Stiglitz (1969) is based on classic arbitrage, which leads to the independency of firm value from capital structure. Subsequently, many scholars tried to reject Miller and Modigliani's claims. Findings show that Miller-Modigliani theorem cannot exemplify all conditions and observed phenomena.

Trade-off theory which is derived from Miller-Modigliani theorem (1958) states that optimal capital structure is an indicative of existing equilibrium between tax benefits from liabilities and bankruptcy costs (Kraus & Litzenberger, 1973). Pecking Order theory is another related theory which postulates that companies prioritize their sources of financing, first preferring internal financing, and then external resources (Hejazi et al., 2012).

On the other hand, lifecycle hypothesis assumes that each organization like all other creatures, have a lifecycle as it is born, grows, matures and finally dies. When organizations are young, they are very flexible, but not very controllable. By passage of time the relationship changes. Controllability increases and flexibility decreases. Benefits and problems are associated with both young, entrepreneurial organizations and old or aging ones. Young organizations are incredibly flexible, but they are also unpredictable. Their leaders take great risks, with potentially disastrous results. Old organizations are

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stable and controllable, but they become inflexible and bureaucratic. Successful organizations combine elements of both. These organizations are both flexible and controllable and entrepreneurial, but structured (Adizes, 1988).

Reviewed literature of economics and management sciences shows different proposed models for life cycle. According to these models, institutions and companies follow their specific plans and policies which can be reflected in the companies' accounting information (Ghorbani, 2006). Some scholars such as Anthony and Ramesh (1992), Black (1998), Jenkins (2004), and Sugianis (1996) assessed the effect of life cycle on accounting information. These scholars have introduced four stages for the companies' life cycle which are start-up, growth, maturity and decline or stagnation stage each of which has their specific characteristics.

Various factors have been investigated as important determinants in the companies' financial structure so far. Industry type (Scot & Martin, 1976; Remmers, 1975), firm size, business risk and financial leverage (Ferri & Jones, 1979; Naidu, 1984; Bradley, Jarrel & Kim, 1984), technology (Anderson, 1990), tax, management tendency toward flexibility and return changes (Merton, 1991), and competitive conditions (Mc Cue, 1992) are important factors which were examined by many researchers.

The relationship between firm value and capital structure has been assessed in various studies and different findings were achieved (Mayers, 1997; Delavari, 1998; Stewart & Glassman, 1988; Ahmadi Mansourabad, 2006; Sinayi, 2011). Delavari (1998) did not find any significant relationship between the performance of the firms which used external financing and those which used internal resources. In 1991, an Iranian Master student (Mazhar, 1991) of International American University assessed the factors related to capital structure and found that increasing liabilities can decrease firm's profitability. Nevertheless, Stewart and Glassman (1988) found that financing through liabilities can bring tax savings due to paying interest costs and financial leverage puts pressure on managers to increase firms' returns. The obtained results of the study conducted by Noravesh and Abedi (2005) show that in most cases there is a linear relationship between financing methods and the percentage of changes of capital costs, but its significance is dependent upon the type of financing and the studied year. Findings of Hashemi and Akhlaghi (2010) show a significant positive relationship between financial leverage, dividend policy and valuable profitability.

No sufficient studies have been conducted in the field of life cycle yet. The first one in this subject was accomplished by Anthony and Ramesh (1992) in which life cycle was classified into the stages of growth, maturity and decline. They examined the relationship between performance criteria, sales growth, capital costs and stock market. They found a significant relationship between performance criteria and stock market prices in different stages of life cycle in a way that the variables of sales growth and capital costs had a downward trend from the first to the final stages.

There are other researches which investigated different variables such as the relationship between the costs and future benefits of the firms' R & D and different stages of life cycle (Sugianis, 1996), increasing explanatory power of evaluating on accruals based patterns in comparison to cash flows based patterns during life cycle (Black, 1998), the effect of life cycle on the relevance of the earning determinants (Jenkins et al., 2004), the comparison of increasing power of criteria based on cash flows and accruals to calculate firm value (Aharoni et al., 2006), the use of activity-based costing system at different stages of life cycle (Kallunki & Silvola, 2008), and finally extra earning and dividend policies in life cycle model at capital market (Min-Shik Shin et al., 2010).

Some papers in Iran also assessed the relationship between earnings, cash flows and firm values in the framework of life cycle model (Ghorbani, 2006), the effect of life cycle on increasing explanatory power of earning's components and cash flows (Dehdar, 2007), the effect of life cycle on the relevance of risk and performance criteria (Karami & Omrani, 2010), and the effect of life cycle and conservatism on firm value (Karami & Omrani, 2010).

As it can be noticed, no one has assessed the effect of life cycle on the relationship between financing approach and firm value, while the variables have been separately examined in various studies. The present study aims to connect these two fields of accounting queries.

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### RESEARCH METHODOLOGY

Research philosophy of this study can be considered as an objective one which followed functionalism as its research paradigm. Owing to the fact that it is supported by different theories which have been summarized in the previous section, deductive reasoning has been applied to raise three research hypotheses in this study. Objective and real data were collected to test the research hypotheses.

#### Hypothesis Development

As it has been mentioned in the section of literature review, many studies have been conducted in the field of relationship between financing approaches and firm performance. Accounting scholars partially agree that there is a significant relationship between these two variables. In other words, since different financing approaches impose direct or indirect costs on firms, they can affect firm value. Many studies have been recently conducted to evaluate the effect of life cycle on other financial features and confirmed this effect. Thus it is expected that life cycle affect the relationship between financing approach and firm performance, since it can change in different life cycles due to the financial needs. Furthermore, internal financial resources change in different life cycles. Considering the reviewed literature, three hypotheses have been proposed and tested in this study.

**First hypothesis:** Life cycle significantly affect the relationship between external financing changes and firm value.

**Second hypothesis:** Life cycle significantly affect the relationship between capital stock changes and firm value.

**Third hypothesis:** Life cycle significantly affect the relationship between long-term liabilities changes and firm value.

#### Variable Measurements

There are three main variables mentioned in research hypotheses which are financing changes, firm value and life cycle. The first one (external financing changes) segregated into two other variables as capital stock changes and long-term liabilities changes.

#### Independent variables

External financing changes, capital stock changes and long-term liabilities changes are independent variables of this study which can be defined and measured in the following manner.

External financing changes can be calculated through the sum of capital stock changes and long-term liabilities changes. Capital changes may be measured through the following formula:

$$\Delta \text{EQUITY} = \frac{\Delta \text{EQUITY}}{\text{Average assets}}$$

In the abovementioned formula,  $\Delta \text{EQUITY}$  refers to capital stock changes caused by issuing and selling new shares just in cash and on credit, excluding capital increase via conversion of Retained Earnings or other Reserves. Dividing capital stock changes by the average assets of the firm is done to neutralize the effect of firm size.

The following formula was used to calculate long-term liabilities changes.

$$\Delta \text{DEBT} = \frac{\Delta \text{DEBT}}{\text{Average assets}}$$

$\Delta \text{DEBT}$  refers to the changes in ending balance of long-term liabilities including long-term accruals such as different types of debts, loans, and their repayment. Dividing  $\Delta \text{DEBT}$  by the average assets of the firm neutralizes the effect of firm size.

#### Dependent variable

Firm value is the dependent variable in this study which is calculated through the following formula:

$$Q_{\text{Tobins}} = \frac{\text{MVE} + \text{PS} + \text{DEBT}}{\text{TA}}$$

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Where;

QTobin: market value of total assets of firm i at the end of year t divided by book value of firm’s total assets

MVE: market value of ordinary shareholders’ equity which can be measured through multiplying the market price of each share by total number of outstanding ordinary shares

PS: liquidation value of preference shares

DEBT: net value of short-term liabilities plus book value of long-term liabilities

TA: book value of total assets

**Moderator variable**

Life cycle is the moderator variable of this study which is defined through the application of the model proposed by Anthony and Ramesh (1992). They used a 4-component model for life cycle which includes the following variables: sales growth, capital costs, dividend ratio and age. In the current study, Park and Chen (2006) methodology was utilized and firms were classified based on three stages of growth, maturity and decline.

First, variables were examined and measured for each year-firm and classified into 5 levels, shown in table 1.

Second, a compound value was calculated for each year-firm which was classified into three stages of growth, maturity and decline:

- If total sum is between 16 and 20, it is in growth stage, and it gets 3.
- If total sum is between 9 and 15, it is in maturity stage, and it gets 2.
- If total sum is between 4 and 8, it is in decline stage, and it gets 1.
- 

**Table 1: Life cycle model of the firm**

Life cycle stages	Firm age	Sales growth ratio	Capital costs ratio	Dividend ratio
First	5	1	1	3
Second	4	2	2	3
Third	3	3	3	3
Fourth	2	4	4	4 (2)*
Fifth	1	5	5	5 (1)*

\* If total sum of age, sales growth and capital costs were less than 7.5, 4(5) should be divided by dividend, and write 2(1).

The above variables were calculated through the application of the following formulas:

Sales growth ratio:

$$SG_{i,t} = \left[ 1 - \frac{SALE_{i,t}}{SALE_{i,t-1}} \right] * 100$$

Where: SG= sales growth ratio      SALE= sales income

Dividend ratio:

$$DPR_{i,t} = \left( \frac{DPS_{i,t}}{EPS_{i,t}} \right)$$

Where: DPR= dividend per share ratio      EPS= earnings per share      DPS= dividend per share

Capital costs ratio:

$$CE_{i,t} = \left( \frac{\text{changes in fixed assets during the period}}{FMV} \right)$$

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Where: CE= Capital cost ratio FMV= market value of the firm  
 AGE= different between the year the firm was established and year t

### Data collection methods

Desk method (English and Persian books, theses, articles and databases) was applied to collect needed data. These data which are called secondary data enjoy appropriate validity and consistency. In order to test research hypotheses, financial data existing in Tehran Stock Exchange were utilized. Audited financial statements and performance reports of listed companies on Tehran Stock Exchange, were collected over a 5-year period, from 2007 to 2011 from Rahavard Novin Database.

### Target population and sampling

Target population of the research is consisting of all listed companies listed on Tehran Stock Exchange provided that they have following conditions during 2007 to 2011:

- firms which were active in Stock Exchange from the fiscal year 2007 to 2011.

firms whose fiscal year end to the 21st of March 1 (End of Iranian calendar year) each year.

- firms whose share has been transacted during the studied period at least each three months
- firms which financed both from share issuance and liabilities
- firms which are not among handling or intermediating companies
- firms which have not changed their fiscal year during the studied period
- firms whose needed data are available

Considering the abovementioned terms, 105 companies were chosen as the research population. Due to the fact that this number was not too big as a population, all companies were regarded as the members of the statistical sample. So the sample number is 525 year-company (5 years\*105 firms).

### Data analysis methods

Moderated multiple regression was used to assess and estimate the general model and test research hypotheses. Most important assumptions of simple and multiple regression model are normality of distributions, independence of observations, and variance homoscedasticity, which were evaluated through Kolmogorov – Smirnov test, residual diagram against estimated amounts, Durbin-Watson test, and scatter plot diagrams. Statistical tests were conducted through SPSS Software, version 16. In the next section, the results of data analysis and research hypotheses testing are presented.

### DATA ANALYSIS ANA HYPOTHESIS TESTING

As it was mentioned, needed data were collected from 105 companies on Tehran Stock Exchange from 2007 to 2011. Before testing the regression model's goodness of fit, outlier data were omitted through drawing box plot for each variable. Having omitted the outliers, the sample size decreased from 525 to 497 observations. Table 2 shows the descriptive statistics for the research variables.

**Table 2: Descriptive statistics for the variables after omitting the outliers**

Variables/ Statistics	N	Mean	Median	Standard deviation	Min.	Max.
Firm value	497	1.31	1.19	0.45	0.61	2.94
Changes in capital stock	497	0.013	0	0.03	0	0.21
Changes in long-term liabilities	497	0.001	0.002	0.04	-0.18	0.20
Changes in external financing	497	0.015	0.003	0.05	-0.18	0.20
Life cycle	497	1.8571	2	0.46	1	3

Moderated multiple regression was applied to test the research hypotheses.

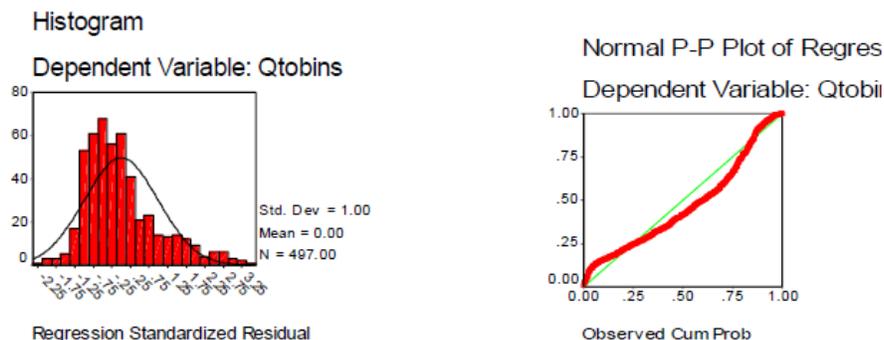
First hypothesis: Life cycle significantly affect the relationship between external financing changes and firm value.

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Regression model for testing the first hypothesis is as follows:

$$Qtobin_{it} = \beta_0 + \beta_1\Delta XFIN_{it} + \beta_2X_{1it} + \beta_3\Delta XFIN_{it}X_{1it}$$

Where QTobin refers to firm value,  $\Delta XFIN$  stands for external financing changes, and  $X_1$  is the mediator variable of life cycle.



**Figure 1: Normal P-P plot and Histogram of the variable of performance value**

The above model was examined through SPSS Software, version 16. It should be mentioned that the normality of dependent variables was tested before running the model. Histogram and Normal P-P plot were used to test the normality of distributions (Figure 1), and their relative normality was confirmed. Having confirmed the relative normality of the dependent variable, general significance of the regression model was evaluated. As it can be seen in table 3, F and P statistics prove the significant of the regression model (P-value is less than 0.05). Moreover, R square and adjusted R square are respectively 0.106 and 0.101 which demonstrate the extent of the variance of the dependent variable that can be explained by the independent variables.

**Table 3: Significance indexes of the first hypothesis model**

R square	Adjusted R square	F-statistic	P-value	Durbin-Watson statistic
0.106	0.101	19.514	0.001	1.949

Durbin-Watson statistic equals 1.949 which shows the independence of residuals. VIF statistic was applied to assess the lack of multicollinearity between independent variables. The values less than 10 for VIF confirm the lack of multicollinearity. In the studied model, all VIF statistics were less than 10 (see table 4) which demonstrate non- multicollinearity in the regression model.

As the goodness of fit is confirmed for the model, it can be concluded that the first hypothesis is accepted at the confidence level of %95, since according to table 4, P-values of all three independent variables were significant in the regression model.

**Table 4: Estimation of regression coefficients for the first hypothesis**

Regression coefficient	$\beta_i$	T-test statistics	P-value	VIF-statistic
$\beta_0$	1.752	14.906	0.000	----
$\beta_1$	1.743	2.411	0.016	1
$\beta_2$	-0.219	-3.559	0.000	1.689
$\beta_3$	0.861	2.469	0.014	1.689

Second hypothesis: Life cycle significantly affect the relationship between capital stock changes and firm value.

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Regression model for testing the second hypothesis is as follows:

$$Qtobin_{it} = \beta_0 + \beta_1 \Delta Equity_{it} + \beta_2 X_{1it} + \beta_3 \Delta Equity_{it} X_{1it}$$

Where Qtobin refers to firm value,  $\Delta Equity$  stands for capital stock changes, and  $X_1$  is the mediator variable of life cycle.

The results show that the model is significant and the existing autocorrelation can be ignored (table 5), thus  $\beta$  coefficients can be described.

**Table 5: Significance indexes of the second hypothesis model**

R square	Adjusted R square	F-statistic	P-value	Durbin-Watson statistic
0.107	0.102	19.706	0.001	1.949

These coefficients are reflected in Table 6. Among  $\beta$  coefficients, only  $\beta$ -coefficient of life cycle is significant and other coefficients are insignificant. Thus, the second hypothesis is rejected at the confidence level of %95, while there is a significant relationship between life cycle and firm value.

**Table 6: Estimation of regression coefficients for the second hypothesis**

Regression coefficient	$\beta_i$	T-test statistic	P-value	VIF-statistic
$\beta_0$	1.606	13.713	0.000	----
$\beta_1$	3.418	1.406	0.161	1.002
$\beta_2$	-0.148	-2.420	0.000	1.691
$\beta_3$	1.463	1.111	0.267	1.689

Third hypothesis: Life cycle significantly affect the relationship between long-term liabilities changes and firm value.

Regression model for testing the third hypothesis is as follows:

$$Qtobin_{it} = \beta_0 + \beta_1 \Delta DEBT_{it} + \beta_2 X_{1it} + \beta_3 \Delta DEBT_{it} X_{1it}$$

Where Qtobin refers to firm value,  $\Delta DEBT$  stands for long-term liabilities changes, and  $X_1$  is the mediator variable of life cycle.

The results show that the model is significant and the existing autocorrelation can be ignored (table 7), thus  $\beta$  coefficients can be relied on.

**Table 7: Significance indexes of the third hypothesis model**

R square	Adjusted R square	F-statistic	P-value	Durbin-Watson statistic
0.107	0.102	19.706	0.001	1.943

As it can be seen in table 8,  $\beta$ -coefficients of all variables are significant. Thus, the third hypothesis is confirmed.

**Table 8: Estimation of regression coefficients for the third hypothesis**

Regression coefficient	$\beta_i$	T-test statistic	P-value	VIF-statistic
$\beta_0$	1.764	15.258	0.000	----
$\beta_1$	2.366	3.138	0.002	1.002
$\beta_2$	-0.218	-3.625	0.000	1.691
$\beta_3$	1.135	3.133	0.002	1.689

Table 9 presents a summary of the findings regarding the hypotheses testing based on which first and third hypotheses are confirmed, and the second is rejected. In the next section, these results will be explained and discussed in detail.

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**Table 9: The results of hypotheses testing**

Hypothesis		Results
First	Life cycle significantly affect the relationship between external financing changes and firm value.	Confirmed
Second	Life cycle significantly affect the relationship between capital stock changes and firm value.	Rejected
Third	Life cycle significantly affect the relationship between long-term liabilities changes and firm value.	Confirmed

**CONCLUSION AND DISCUSSION**

The current study aimed to assess the effect of life cycles stages on the relationship between external financing changes and firm value. Target population of the study was consisting of all listed companies on Tehran Stock Exchange over a period from 2007 to 2011. Having considered some criteria for sampling, 105 companies were chosen, but due to the fact that this number was so limited, all members of target population (525 year-company) were regarded as the research sample. Three hypotheses were proposed and tested in this study. Panel data were applied to test the hypotheses. Moderated multiple regression and Excel and SPSS software were utilized for data analysis and hypothesis testing. T-test, F-test, Durbin-Watson statistic and adjusted R square were used to analyze the data obtained from each regression model. Finally, the achieved findings showed that first and third hypotheses can be confirmed, while the second hypothesis is rejected.

**Discussion about the results**

Accepting the first hypothesis means that external financing changes and life cycle simultaneously affect firm value.  $\beta$ -coefficient of the variable of external financing changes is positive. In other words, there is a direct relationship between external financing changes and firm value. But  $\beta$ -coefficient of life cycle is negative. It shows that when a firm is moving from growth towards maturity and decline stages, firm value increases. It should be noticed that the amount of this variable in growth stage is 3, and in decline stage is 1. Since this variable is a moderator between external financing and firm value, its effect is shown with  $\beta_3$  which is positive and significant. This variable which has been computed by multiplying external financing changes by life cycle, shows that life cycle is a moderator variable. Positivity demonstrates that in growth stage, the relationship between external financing and firm value is stronger compared to the maturity and decline stages. In other words, the effect of external financing on firm value in decline stage is low, in maturity is moderate, and in growth is high. Findings of this study can be reasonably accepted and are consistent with the findings of Hashemi and Akhlaghi (2010) and Ahmadi Mansourabad (2006). Findings of life cycle section cannot be compared to other researches, since no specific study has been conducted in this field.

Second hypothesis was rejected based on the collected data and the applied statistical method. In fact, rejection of the second hypothesis shows that capital stock changes and firm value are not significantly related, so they are not significantly affected by life cycle, although the effect of life cycle over time (when moving from growth to decline stages) is confirmed. It seems to be strange, but it could be correct, since other researches also confirmed it (Ahmadi Mansourabad, 2006), and it can be an indication of differences in Iran's stock market compared to other countries (for instance Stewart & Glassman, 1988). Furthermore, due to the specific economic conditions of Iran (for example very high rate of inflation), companies try not to finance through shares, but they prefer long-term liabilities. Results of the third hypothesis testing also confirm these findings.

Third hypothesis was confirmed, so long-term liabilities changes and firm value are positively related, and life cycle affects this relationship. The extent of relationship between liabilities changes and firm value varies in different stages of life cycle. It may also confirm that companies try to receive loans and facilities in growth stage, since they do not need them that much during maturity and decline stages, as availability of financial resources through internal resources during these stages would increase. Results

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of this hypothesis testing are consistent with the findings of Stewart and Glassman (1988), and inconsistent with some internal studies such as Delavari (1998).

### **Limitations**

Getting access to technical information in different fields is of great importance during the process of conducting a research. In Iran, shortage of databases and necessary technologies limited this study to get access to needed information, financial statements and disclosure notes of listed companies on Tehran Stock Exchange. The studied period has also brought about some limitations, since if it was longer, the results might be more generalized. Weak-form of efficiency in Iran Stock Market as an intervening variable could uncontrollably have been affected the achieved results. All researches which are conducted in the field of stock market are influenced by this variable.

### **Suggestions for future studies**

Owing to the fact that the second hypothesis was rejected, it is suggested to replicate this study with the same target population to achieve more reliable results. Target population of this study was all industries and companies of Stock Exchange. It is suggested to separate different industries and assess the studied variables again. Last but not the least, financial relations of the companies with life cycle, as a moderator variable, could be examined. Although many studies have been accomplished in this field, some relations are still vague such as the effect of life cycle on earnings quality or share returns in that kind of the companies.

This study intended to complete and push forward the previous studies in this field as much as possible. The significance of this study is adding the variable of life cycle to the researches which examined the relationship between financing changes and firm value, and investigating the probable difference between financing changes through capital and long-term liabilities. Results of this study can be helpful for capital market participants, owners and managers of the companies. It reminds that they should pay more attention to the stage in which a company is, and enhance firm value through this knowledge.

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