ABSTRACT

The aim of current study is to assess the effect of management overconfidence on corporate debt maturity structure decisions with emphasis on leverage and liquidity risk theory and theory of matching maturities of assets of companies listed in Tehran Stock Exchange. In order for this, 166 firms were selected from companies listed in Tehran Stock Exchange, the information required for which was available for a 10-year period of study during the period 2002-2011 were used. Research method is correlation and to test research hypotheses, multiple regression analysis with pooled data was applied. Research finding indicate a significant negative relationship between debt ratio and debt maturity in net income and operating cash flow in firms with strong overconfidence management. Also, It was found that the relationship between structure of assets and debt maturity in firms having strong overconfidence management in net income and operating cash flow is negative and significant.

KEYWORD

behavioral finance, management overconfidence, debt maturity, liquidity risk, matching maturity of assets.

INTRODUCTION

Traditional finance tries to provide a model to understand financial variables behavior. One fundamental paradigm of traditional finance is that an individual acts rationally. Rationality means that the main objective of a financial decision maker is self-interests, their decisions are all rational and in order to gain most profit ever, they adapt as new information is provided. Many researchers and scholars found limitations for rational human assumption. Particularly, a voluminous scientific work has been conducted related to limited rationality, self-interest and perfect self-control. In response to limitations resulting from perfect rationality assumption, behavioral finance was created and it is a new alternative to traditional finance models.

To understand financial decision maker’s behavior, psychology is applied to assess psychological dimensions of individual’s behavior in financial market [1]. In behavioral finance, behavioral characteristics affecting individuals’ decisions are discussed which are called behavioral biases. Recent studies found more than fifty behavioral biases one of which is overconfidence or too much trust in oneself and is explained as a meaningless belief in cognitive abilities, judgments and intuitive reasoning of a person. Cognitive psychological measurements and tests show that individuals have overestimations about their ability to forecast and accuracy of the information provided for them. In short, most people consider themselves as smarter than what they are in reality believing that they have better information [2].

A majority of firms use debts in structure of their assets. Debt structure is a major index determinant of firm’s success resulting in its sustainable growth [3]. Therefore, decisions toward debt structure are vital for business survival [4]. However, it is not easy to select debt structure and a wrong decision may lead the firm to crisis and bankruptcy. Based on maturity, debts in financial structure of the firm are divided into two groups of long-term (with maturities greater than one year) and short-term (with maturities less than one year) debts. The extent of these two groups included in financial structure of the firm is called debt maturity [5]. Different elements affect corporate debt maturity. It is supposed that, influencing debt ratio and assets structure, which are determinants of corporate debt maturity, overconfidence can affect this variable. Regarding above argument, due to the needs for enrichment of accounting literature in this subject, in this research, the relationship between management overconfidence and corporate debt maturity is considered.

Theoretical principles of research

Variety of factors relate to debt maturity structure in a firm and different theories are applied to explain them. Determinant factors of finance structure (including debts) of a firm is a combination of factors related to its unique features and those related to its institutional environment. It is possible that, maturity structure as well [6].
Since Modigliani & Miller’s research on capital structure, many studies tried to explain capital structure decisions and different theories were suggested on debt structure. Research background provides several leading theories for the literature about debt maturity structure including: theory of agency costs, leverage, signaling and compliance of maturity and tax [7], each of which considering some features of firms as determinants of debt maturity structure. 

In this research, relationship between management overconfidence and corporate debt maturity is analyzed with a focus on leverage and liquidity risk theory and matching maturity theory. 

**Leverage theory:** with focus on liquidity risk, it notes that the more debt ratio of the firm, the longer should debt maturity structure be considering more liquidity risk i.e. there is a significant relationship between debt ratio and debt maturity structure and compared to short-term debt, long-term debt should be applied more. Solano & Teruel (2007), also, forecasted a positive relationship between debt maturity and leverage and they proved it in their research conclusion. They wrote that as was expected firms with higher leverage level prefer long-term debt to control their risk [8]. Jen et al (2003), in another research, considering balanced approach toward debt maturity structure, found out that as they expected, there is a positive relationship between leverage and debt maturity. They considered leverage state as a symbol of default risk and claimed that when facing more risks, firms should have compression of lower pay of interests. Hence, this is a logical relationship. Noting that, due to tendency to prevent bankruptcy risk, leverage firms try to use long-term debt more [9]. Richard et al (2008) expected a negative relationship between liquidity and maturity that was prove after analysis of Chinese firms. Of course, this is related to a part of their research where ratio of current asset to current debt is considered for liquidity measurement [10]. However, it is possible that overconfident managers weaken this logic positive relationship between debts and debt maturity. Since overconfident managers overestimate potential project success and profitability and they underestimate related risks, they may use more ratios of short-term debt to equity. Therefore, based on theoretical principles, it is expected that relationship between debt ratios and debt maturities in firms with overconfidence is negative. 

**Matching maturity theory:** the theory notes that a firm should match debt maturity with its assets maturity [11]. Basically, an appropriate finance pattern is when assets growth matches finance period desirably. In order to reduce financial risk, it is recommended that fixed assets and permanent part of current assets are financed by long-term resources and variable part of current assets are financed by short-term resources [12]. Mauer & Stohs (1996) who found results indicative of a positive relationship between debt maturity and matching principle, noted that in case such matching is not considered and debt has shorter maturity than asset, there will be no sufficient cash flow to repay debt and if maturity is longer, cash flows of assets will stop while payments continue. Hence, matching principle is a hedging factor covering expected costs of financial distress [13]. 

However, positive relationship between debt maturity and assets structure may be weakened due to managers’ overconfidence since they may have an overestimation of investment projects profitability and underestimation of related risks. Therefore, according to theoretical principles it is expected that the relationship between assets structure and debt maturity in firms with overconfident managers is negative.

**Literature Review**

**Overseas research**

In a study, management overconfidence, Valera & Fedik (2014) presented another explanation for financial decisions by a firm measuring effect of management overconfidence on released debt levels. Regression coefficient indicated a crucial role of overconfidence in firm’s financial decisions. 5% of net increase in financing through debt and 2% net increase in financing through shares is determined by regression. It was also shown that overconfident managers prefer to release more debt than equity [14]. Huang, Tan & Faff (2013) considered relationship between management overconfidence and corporate debt maturity defining overconfidence as better work out and an overconfidence measure is preferred managers’ equity. They extended their research considering the effect of liquidity risk and agency problems between borrowers and shareholders. According to hypotheses, there was found some strong evidence that firms with overconfidence managers, despite high financial strategies-related liquidity risk, tend to choose shorter debt maturity structure using short-term debt with maturity less than a year [15].

Young Park (2013) conducted a study, effects of extrovert management on firm’s financial decisions, analyzing a personality feature named extroversion coded as self-introversion, inner joy, self-perceptions, risk preference, biased opinions such as overconfidence and optimism in brain physiology and intelligence-related genetics. Results showed that extrovert managers tend to release risky debt securities and use more leverages [16].

Serpi & Tomak (2013) analyzed the relationship between overconfidence an capital structure in Turkish factories. Results showed that the relationship between overconfidence and debt is ambiguous and there was no sufficient evidence to prove positive relationship between overconfidence and debt level [17].

Wei et al (2011) examined the effect of excessive managerial trust on decisions related to debt maturity structure in Chinese firms. Results indicated that similarity of responsibilities of CEO and Chairman of the Board as one excessive trust variable resulted in shorter debt maturity structure. Thus, manager may control their commercial decisions results and evaluate defeat potential less than reality. Variables such as manager’s age, education and experience were considered in study as well [18].

Hung & Chen (2011) carried out a research on relationship between management overconfidence and financing through debt in firms with different ownerships. Results showed that there is a different effect of management overconfidence on financing through debt in firms with different ownerships.
Managers of governmental firms are more overconfident and show more tendency to choose financing through debt compared to nongovernmental firms’ managers. All overconfident managers of firms with different ownerships prefer to have debts with longer maturity however, this tendency seems to be more in governmental firms[19].

Feng Lee (2010) conducted a research named ‘self-attribution bias and financial policies’ and results showed that overconfident managers tend to release future financial statements and earnings forecasts. Future financial statements have less deviation but earnings forecasts are highly optimistic. These managers like to have more leveraging, rely more on long-term debt financing, have higher redemption of shares and less potential dividends. Totally, finding showed that both self-attribute and overconfidence bias affect firm policies[20].

Naday (2010) conducted a research, optimism, availability of credit and financing costs: evidence from American small businesses. Results showed that optimistic managers tend to use short-term debt more[21].

Chen S & Chen Li Li (2009) studied the effect of management overconfidence on capital structure and corporate debt maturity structure. Results showed that management overconfidence contains a positive relationship with capital structure of sample firms i.e. corporate debt with overconfident managers was more than before. Also, management overconfidence has a negative relationship with debt maturity structure and overconfident managers prefer to use short-term debt more[22].

Landier&Thesmar (2009) analyzed the effects of overconfidence effects on corporate debt maturity structure assuming that investors cannot discriminate overconfident and logic managers in finance markets. Overconfident managers will choose short-term debt contracts and logic ones will choose long-term debt contracts[23].

Park&Kim (2009) considered relationship between management overconfidence and leverage in Korean firms and they found out that overconfident managers have more tendency toward debt creation[24].

Ben David, Graham&Harvey (2006) studied management overconfidence and firm policies result of which showed that overconfident managers use more leverage and long-term debt[25].

Sun (2005) and Jiang&Li (2006) claimed that Chinese firms with high fixed assets ratio, have longer debt maturity[26],[27].

**Domestic research**

“The effects of board features on debt maturity structure of the firm”, was a research by Hajiha.Z.&Akhlaghi.H. (2013) and its aim was to measure effects of board size, outside board members and duality of CEO duties as independent variables on debt maturity structure as dependent variable in Tehran Stock Exchange. Results from hypothesis testing indicated that there is a significant positive relationship between debt maturity structure and board size. There is also a significant negative relationship between proportions of outside board members and debt maturity structure. Findings show the effect of strong board of directors on financing decisions. In addition to this, there was not any relationship between duality of CEO duties and debt maturity structure[28].

Musavi, Sadeghi, Abdollahi&Khorrami (2012) conducted a research to evaluate difference in confidence level of men and women in decision-making. Results showed that all examinees in this research are overconfident. Despite higher confidence of men in decision-making, this difference was not significant[29].

Hajiha&Akhlaghi (2012) had a research, “factors influencing debt maturity structure of the firm: experiment of agency and leverage theories” and findings showed that in the total sample, there is a positive relationship between firm size, tangible asset and growth opportunity and debt maturity structure. There was no relationship between financial leverage and debt maturity structure[30].

Azad.A.&arian Tabar.A. (2012) conducted a research on liquidity of assets and capital structure of firms listed in Tehran Stock Exchange. Results indicated that there is a significant direct relationship between liquidity of assets and capital structure.

Therefore firms can increase high-liquidity assets to rise their financial leverage. Using financial leverage is dependent on assets structure and borrowing power of the firms. Firms with high-liquidity assets can easily repay their debts. In addition, assets liquidity increases their collateral value[31].

**Research hypotheses**

**Primary hypothesis 1:** the relationship between debt ratio and debt maturity in firms with strong overconfidence management is negative.

**Secondary hypothesis 1-1:** the relationship between debt ratio and debt maturity in firms with strong overconfidence management is negative in net profit.

**Secondary hypothesis 1-2:** the relationship between debt ratio and debt maturity in firms with strong overconfidence management is negative in operating cash flows.

**Primary hypothesis 2:** the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative.

**Secondary hypothesis 2-1:** the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative in net profit.

**Secondary hypothesis 2-2:** the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative in operating cash flows.

**Research method**

This is a post-event research since it is conducted based on observed data analysis. Considering objectives, it is a descriptive research because it manages to describe relationships between two or more variables. Research period is 2002 to 2012 the information of which was acquired from financial statements and reports from the firms. The method applied for the research is correlative and analysis method is multivariate regression. The population was all firms listed in Tehran Stock Exchange. All the firms
with following qualifications were chosen and others were rejected:

The ending date of fiscal year must be the last day of the year (March, 19th)

Holding firms, banks, insurance companies, investment and brokerage firms must not be sample members.

Full information of each considered firm must be available during research time limit.

During research period, firms must not undergo any fiscal year changes.

Considering these, 166 firms with active participation in Tehran Stock Exchange were chosen for hypotheses test during 2002 to 2012 research period.

**How to measure overconfident managers:**

Management overconfidence is independent variable in this research. Due to excessive trust in their operational abilities, overconfident managers have expected profit in excess of actual interest and expected cash flows in excess of actual cash flows. To measure management overconfidence, we put companies present in an industry in a data matrix during research period.

\[
CFO_{it} = \alpha + \alpha_1 CFO_{it-1} + \varepsilon_i
\]

We execute this pattern as cross-sectional (panel) and CFO it estimated pattern is obtained. Now, if CFO estimated by this pattern is more than actual CFO of the firm, it means that management is overconfident. The same is done for net profit.

\[
NI_{it} = \alpha + \alpha_1 NI_{it-1} + \varepsilon_i
\]

As CFO.

**Descriptive statistics**

Tab.1. descriptive statistics of research variables. Firms with strong overconfident management in net profit.

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable</th>
<th>Symbol</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>Overconfident management</td>
<td>OC</td>
<td>EEPS-AEPS &gt; 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ECFO-ACFO &gt; 0</td>
</tr>
<tr>
<td></td>
<td>Debt maturity</td>
<td>DM</td>
<td>DM = IBD/TA</td>
</tr>
<tr>
<td></td>
<td>Debt ratio</td>
<td>DR</td>
<td>DR = TD/TA</td>
</tr>
<tr>
<td></td>
<td>Assets structure</td>
<td>AS</td>
<td>AS = TFA/TA</td>
</tr>
<tr>
<td></td>
<td>Institutional ownership</td>
<td>IO</td>
<td>Shares held by institutional owners</td>
</tr>
<tr>
<td></td>
<td>Tenure period</td>
<td>TP</td>
<td>Period of CEO membership in board of directors</td>
</tr>
<tr>
<td></td>
<td>Duties duality</td>
<td>DD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm growth</td>
<td>FG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm size</td>
<td>FS</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable</th>
<th>Symbol</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confounding</td>
<td>Debt maturity</td>
<td>DM</td>
<td>IBD: non-current interest-bearing debt at end of year</td>
</tr>
<tr>
<td></td>
<td>Debt ratios</td>
<td>DR</td>
<td>TD: total liabilities at the end of the year</td>
</tr>
<tr>
<td></td>
<td>Assets structure</td>
<td>AS</td>
<td>TFA: tangible fixed assets at the end of the year</td>
</tr>
<tr>
<td></td>
<td>Institutional ownership</td>
<td>IO</td>
<td>Shares held by institutional owners</td>
</tr>
<tr>
<td></td>
<td>Tenure period</td>
<td>TP</td>
<td>Period of CEO membership in board of directors</td>
</tr>
</tbody>
</table>

**How to measure research variable**

Tab.3. how to measure research variable.

<table>
<thead>
<tr>
<th>Type</th>
<th>Variable</th>
<th>Symbol</th>
<th>Measurement method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>Overconfident management</td>
<td>OC</td>
<td>EEPS-AEPS &gt; 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ECFO-ACFO &gt; 0</td>
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<tr>
<td></td>
<td>Debt maturity</td>
<td>DM</td>
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<tr>
<td></td>
<td>Debt ratio</td>
<td>DR</td>
<td>DR = TD/TA</td>
</tr>
<tr>
<td></td>
<td>Assets structure</td>
<td>AS</td>
<td>AS = TFA/TA</td>
</tr>
<tr>
<td></td>
<td>Institutional ownership</td>
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<tr>
<td></td>
<td>Duties duality</td>
<td>DD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm growth</td>
<td>FG</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profitability</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Firm size</td>
<td>FS</td>
<td></td>
</tr>
</tbody>
</table>
Management duties duality | Dual |
---|
Firm growth | Growth |
profitability | Profit |
Firm size | Size |
| Q=St-St-1/ St-1 |
| St: current year sales |
| St-1: last year sales |
| Profit: NIS/NI |
| NIS: net profit |
| S: revenue |
| Size: Ln (TA) |
| TA: total assets at the end of the year |

**HYPOTHESIS TESTING**

**Secondary hypothesis 1-1**: the relationship between debt ratio and debt maturity in firms with strong overconfidence management is negative in net profit.

**Secondary hypothesis 1-2**: the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative in net profit.

**Secondary hypothesis 2-1**: the relationship between debt ratio and debt maturity in firms with strongly overconfident managers is negative in net profit.

**Secondary hypothesis 2-2**: the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative in operational cash flows.

### Table 4: results from testing hypotheses 1-1 and 1-2

<table>
<thead>
<tr>
<th>variables</th>
<th>coefficients</th>
<th>T statistics</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>-0.085</td>
<td>-5.723</td>
<td>0.000</td>
</tr>
<tr>
<td>AS</td>
<td>-0.435</td>
<td>-28.397</td>
<td>0.000</td>
</tr>
<tr>
<td>Inst</td>
<td>0.000</td>
<td>0.627</td>
<td>0.530</td>
</tr>
<tr>
<td>Tenure</td>
<td>-0.004</td>
<td>-4.037</td>
<td>0.000</td>
</tr>
<tr>
<td>Dual</td>
<td>-0.027</td>
<td>-3.059</td>
<td>0.002</td>
</tr>
<tr>
<td>Growth</td>
<td>0.013</td>
<td>1.887</td>
<td>0.059</td>
</tr>
<tr>
<td>Profit</td>
<td>-0.013</td>
<td>-2.757</td>
<td>0.005</td>
</tr>
<tr>
<td>Size</td>
<td>0.016</td>
<td>6.906</td>
<td>0.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.266</td>
<td>-7.345</td>
<td>0.000</td>
</tr>
<tr>
<td>Determination coefficient</td>
<td>0.377</td>
<td>Watson-camera</td>
<td>1.650</td>
</tr>
</tbody>
</table>

| F statistics | 57.003 |

As is seen in table 4, variable debt ratio coefficient (Debt) is -0.085. Considering T-statistics and significance of this variable, results indicate that coefficient is significant at 0.05% error level. This indicated that debt ratio coefficient has a negative significant relationship with corporate debt maturity, therefore, as a result of H1, first secondary hypothesis of research is approved (first hypothesis approved).

Also, R2 is 0.377 showing that around 38% of changes in dependent variable is explained by independent variables.

In addition, variable assets structure coefficient, AS, is -0.435. Regarding T-statistics and significance of this variable, results show significance of coefficient in 5% error level. As a result of H0 assumption, second hypothesis of research is rejected (second hypothesis approved).

**Secondary hypothesis 2-1**: the relationship between debt ratio and debt maturity in firms with strong overconfidence management is negative in operational cash flows.

**Secondary hypothesis 2-2**: the relationship between assets structure and debt maturity in firms with strong overconfidence management is negative in operational cash flows.

As is seen in table 5, variable debt ratio coefficient (Debt) is -0.047. Considering T-statistics and significance of this variable, results indicate that coefficient is significant at 5% error level. As a result of H0 assumption, the third secondary hypothesis is rejected (third hypothesis approved).

Also, variable rate of assets structure, AS, is -0.376. Considering T-statistics and significance of this variable, results show that coefficient is significant at 5% error level. As a result of H0 assumption, fourth hypothesis of research is rejected (fourth hypothesis approved).

**Summing up and interpretation of results**

According to leverage theory, it is logical that the more corporate debt ratio, the longer debt maturity structure considering higher liquidity risk will be i.e. there is a positive relationship between corporate debt ratio and debt maturity structure. Since higher short-term debt ratio may results in liquidity problems, Diamond (1991), Mayer (1996) and Dauta et al (2005) found out that firms with higher debt-to-equity ratio have higher long-term debt-to-equity shares. However, this relationship may be weaken by overconfident managers. Because overconfident managers overestimate potential success and profitability of projects and underestimate related risks like liquidity risk, they may use short-term debt-to-equity ratio. Therefore, according to theoretical principles, the relationship between debt ratio and debt maturity in firms with overconfident managers may be negative.

The first secondary research hypothesis says that relationship between debt ratio and debt maturity in firms with strongly overconfident managers is negative in net profit. Also, third secondary hypothesis notes that relationship between debt ratio and debt maturity in firms with strongly overconfident managers is negative in operational cash flows.

Results from first and third hypotheses testing indicated that relationship between debt ratio and debt maturity in firms with strongly overconfident managers is negative and significant in net profit and operational cash flows.
Research results confirm Hung, Taff&Tann (2013) findings showing that despite financial strategy-related high liquidity risk, overconfident managers tend to choose shorter debt maturity structure using short-term debt with maturity less than a year[16]. Besides, it confirms Chen Xu&Chen Li Li (2009) and Yue et al (2006) findings saying that overconfident managers will choose higher debt-to-equity ratio especially shorter debt ratio to equity shares and Jang& Lee (2005) and San et al (2006) findings showing that the more the ratio of Chinese corporate debts, the longer corporate debt maturity[23],[27],[28]. Ben David, Graham&Harwy (2007) research results indicated that overconfident managers use more leverage and more long-term debt compared to short-term ones which is confirming to current research findings[26]. Also, it does not match Feng Lee (2010) findings noting that overconfident managers tend to focus more on long-term debt finance[21]. Matching maturity theory notes that firms must match debt maturity and their assets maturity (Ross et al 2002, Braille and Myers 1994, Hart& Moore 2003)[12]. The most appropriate finance pattern is that growth assets must match finance periods desirably. In order to reduce financial risk, it is recommended that fixed assets and permanent part of current assets through long-term resources and variable part of current assets are financed by short-term resources (Haji Ahmadi, 2010) [13]. One reason is that if corporate debt maturity structure is shorter than asset, as debt maturity comes, firms may not have sufficient cash to repay debt. To reduce financial risks, firms should try to match debt maturity and assets structure (Opler, 1996). Therefore, firms with high tangible fixed assets ratio have longer debts. However positive relationship between debt maturity and assets structure may be weaken due to managers’ overconfidence, since they overestimate profitability of investment projects and underestimate related risks. Hence, according to theoretical principles, but maturity it is expected that the relationship between assets structure and debt maturity in firms with overconfident managers is negative.

Second secondary hypothesis notes that the relationship between assets structure and debt maturity in firms with overconfident managers is negative in net profit. Also, fourth secondary hypothesis indicates that the relationship between assets structure and debt maturity in firms with overconfident managers is negative in operational cash flows.

Results from second and fourth hypotheses indicated that the relationship between assets structure and debt maturity in firms with overconfident managers is negative and significant in net profit and operational cash flows. Research results in this subject match with Di Lang (1991) findings. He notes that overconfident managers may overestimate profitability of investment projects and underestimate related risks. In other words, they may overestimate growth rate.

Current research results indicating negative relationship between management overconfidence and corporate debt maturity do not match SerpillDumac findings (2013). He considered relationship between overconfidence and assets structure in Turkish factories. Results showed that relationship between overconfidence and debt is ambiguous and there is no sufficient evidence indicative of positive relationship between management overconfidence and debt level [18]. Fengli, Yanni&Kowingwy (2011) conducted a research “an experiment on management overconfidence and corporate financial decisions in China” and results showed management overconfidence has no significant effect on corporate assets structure and this is inconsistent with findings of current and past research results [21]. Richard Fairchild (2007) did not agree with current and past research results claiming that overconfident managers tend to use free cash flows more than invest on a new project and this may reduce firm value (free cash flow problem) ending in less use of debt (logic manager knows that a new project reduces value and using debt makes no commitment on investing, while overconfident manager supposes that new project increases value and reduces debt in order for investment) [11]. Brittle. Koch& Mueller (2007), also, did not approve optimistic positive relationship between management and leverage level which does not confirm findings of current research.

Suggestions from research results
Considering managers’ overconfidence effects in this research, it is recommended to Stock Exchange to provide necessary context to identify this criterion for investors especially institutional owners.

Regarding negative significant relationship between debt ratio and debt maturity in firms with strong overconfident management and firms with strong overconfident management in cash flows, it is recommended to actual and potential investors to study managers’ overconfidence in targeted firms and then considering role and level of institutional shareholders’ ownership in their expected output, take an appropriate risk premium into consideration.

Suggestions for future research
In this research, one component of behavioral biases in corporate financial decisions was evaluated and it is recommended that other components i.e. optimism, self-attrition and …, in corporate debt maturity are studied. It is recommended that managers’ overconfidence for different industries in Stock Exchange are identified separately to understand overconfidence level in each industry.

In current research, management overconfidence is based on profit forecast and it is recommended to measure it based on balance sheet items such as capital expenditures and other items in the balance sheet with a balance sheet approach. The relationship between management overconfidence and corporate debt maturity was studied in this research and it is recommended that in future research, relationship between management overconfidence and choice between debt and equity.

**REFERENCE**

management faculty, Tehran University


