

Association between Capital Structure and Accounting Conservatism in Iranian Stock Market

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Abstract

The present study intends to investigate the relation between capital structure and accounting conservatism according to operating and book procedures. It is an applied and correlation research which used a sample of 100 listed companies on Tehran Stock Exchange during a period of two years from 2008 to 2009. Regression model and descriptive statistical methods were applied to appraise hypotheses. Finally, correlation analysis was accounted among variables. The findings of the research indicate that the hypotheses are rejected and there is no significant relationship between capital structure and operating and book conservatism. This paper extends the existing literature especially relating to all decisions about capital structure and its impact on firms' value.

Keywords: Capital Structure, Operating Conservatism, Book Conservatism, Iran

1. Introduction

Recently, new markets have paid more attention to some characteristics such as investment, value production, value maintenance, and risk management. They require a comprehensive knowledge of firms' condition in financial markets and effective elements in the firms' performance within the framework of various industries. Owing to the fact that inside and outside variables are broadly different in each firm or industry, firms' ranking is today on the basis of their capital structure. In fact, rendering and producing services are dependent upon how financial budget and funds are provided and consumed.

Firms can provide their financial needs in two ways: Choosing an eligible liability, or loan and share issue. These choices can make significant changes in the amount of capital structure, profitability or detriment.

The concept of accounting conservatism is rooted in the Middle Ages. It is defined as the accountant's tendency to require a method of slower recognition of sales revenue, faster recognition of costs, less appraisal of assets, and more appraisals of liabilities, and consequently, less accumulated dividend.

The current study examines the association between firms' capital structure and conservatism through two different methods of operating and book approaches in financial reports. It aims to answer the main question of the research.

2. Statement of the problem

How to budget and how to provide financial needs are of great importance in the public joint stock companies (Braili and Miles, 2004). Managers are responsible to make the best decisions in order to maximize the firm value for shareholders. Any changes in the capital structure of the firm can affect capital expenditures and firm value.

According to some managers – stock clearing agencies or firm owners – several firms budget their financial programs in a way that seem to be less profitable and therefore, receive more awards. Considering the fact that decisions related to capital structure is influential in firms' value, several questions are always repeatedly asked, for instance: How can the firms observe the managers' financial decisions and prevent them from unethical opportunistic behaviours? Is there a significant relationship between capital structure and accounting conservatism? It seems that accounting conservatism is capable of answering the aforementioned questions reasonably and helpfully.

3. Theoretical Background

There have been many different theories related to capital structure since 50s which can be described in the following manner:

3.1 Taking Opportunity

Based on this theory and considering the costs of shareholders' rights and liabilities, managers take each

opportunity to provide financial needs (Bidgeli and Mazaheri, 2009).

3.2. Modigliani-Miller Theorem

Modigliani and Miller applied traditional theory and proved that firms' capital cost is not dependent upon financial leverage of the firm; it is also permanent in all levels. As a result, the leverage of the firm has no effect on the market value of the firm. Moreover, in specific conditions and without considering the way of providing financial needs (whether through taking out a loan or issuing shares), a firm value is invariable. Due to the role of the market, a firm value cannot rise by changing the capital structure. In other words, firm value is independent of leverage and capital structure (Izadnia, and Rahimi, 2009).

3.3. Trade-Off Theory

On the basis of trade-off theory, capital structure is achieved by making balance between the various costs and benefits of alternative leverage plans. According to this theory, liability and equity should be repeatedly changed and replaced to maximize its value (Izadnia, and Rahimi, 2009).

3.4. Net Income Approach

This approach is based on the fact that each enterprise can decrease its capital charges through liabilities. Optimal capital structure is achieved when capital charges are reduced to a minimum (Izadnia, and Rahimi, 2009).

3.5. Traditional Theory

It is based on this belief that optimal capital structure always exists, and firm value can be increased by making use of leverage. Traditional theory is a moderate viewpoint which proposes an association between leverage and firm value (Izadnia, and Rahimi, 2009).

4. Review of Literature

Antony Kari and waklman (2007) in their research are deal with studying the effect of capital structure on the performance of the minor financial organizations. The research data had been covered within 1995-2004 and within the framework of stable and incidental methods. The findings indicate that most of minor financial organizations include of high lever degree and they use long term provision of financial procedure in turn of short term debt for their operations.

Zeitun and Tian (2007) examined the impact of ownership structure on firm performance and the default risk of a sample of 59 publicly listed firms in Jordan. They found that ownership structure has significant effects on the accounting measure of performance return on assets (ROE). Government shares are significantly negatively related to the firm's performance ROE and the firm's probability of default.

Sheikh and Wang (2011) conducted an empirical study of firms in manufacturing industry of Pakistan. The results of their research suggested that profitability, liquidity, earnings volatility, and tangibility (asset structure) are related negatively to the debt ratio, while firm size is positively linked to the debt ratio.

Margaritis and Psillaki (2007) conducted a research entitled "capital structure and firm efficiency" and investigated the relationship between firm efficiency and leverage using a sample of 12,240 New Zealand firms. They found that higher leverage leads to better firm performance.

Garcia et al. (2006) investigated the relationship between conditional conservatism, firm investment efficiency and firm risks and found that increased disclosure and higher quality financial reporting mitigates information asymmetry problems and agency costs.

Ahmed and Duellman (2007) concluded that the percentage of inside directors is negatively related to conservatism and the percentage of outside directors' shareholdings is positively related to conservatism.

Kordestani and Najafi (2007) did a research under the title of 'the investigation of determining factors of capital structure'. They considered the theories of 'trade-off' and 'pecking order in their work and found that firm size and debt ratio are positively related based on book value. Furthermore, there is a negative significant relationship between tax saving (except for debt) and debt ratio based on book value and market value.

Izadnia and Rasaeiyan (2008) conducted a research entitled 'capital structure and corporate income tax' and examined the relationship between capital structure and taxes of listed companies on Tehran stock exchange. Testing research hypotheses was done through distributed lags processing and combined regression model, and the obtained results indicated that there is a weak significant relationship between capital structure and taxes of listed companies on Tehran stock exchange.

Hassas Yeganeh and Shahriari (2010) appraised the association between ownership concentration and conservatism in listed companies on Tehran stock exchange. Their findings demonstrate that enhancing firm size decreases the amount of conservatism. Level of competition in an industry and state ownership and the amount of conservatism are positively related to each other. No significant relationship was observed between risk taking and effective rate of tax.

Ahmadpour and Salimi (2007) assessed the relationship between the type of an industry and firms' size and their effect on capital structure of listed companies on Tehran stock exchange. They concluded that capital structure is not the same in different industries and there is no significant association between firm size and firm structure.

5. Research Questions

Two questions should be answered in this study:

1. Is there a significant relationship between firm's capital structure and accounting conservatism based on operating approach?
2. Is there a significant relationship between firm's capital structure and accounting conservatism based on book approach?

6. Research Hypotheses

Two hypotheses should be tested in the current study:

H1: There is a significant relationship between firm's capital structure and accounting conservatism based on operating approach.

H2: There is a significant relationship between firm's capital structure and accounting conservatism based on book approach.

7. Data Collection and Analysis

Needed data related to the variables and firms' financial statements were assembled from Tehran stock exchange website and DVDs. Tadbirpardaz and Denasahm databases were also utilized to achieve required data.

8. Research Methodology

The current study is an applied and correlation survey. An inductive method was applied to analyze the data. Research methodology is post-mortem and based on real financial statements. Regression methods were applied in the study to test research hypotheses.

9. Target Population and Statistical Sampling

Target population of this study is consisting of listed companies on Tehran stock exchange. Statistical sampling was conducted through systematic deletion and simple random sampling. Companies could be accepted as target population which have the following conditions:

1. Financial year of the firm ended in March and all needed data are available and easy to get access.
2. The firm was accepted and active in Tehran stock exchange from 2008 to 2009.

10. Research Variables

In this study, 'capital structure' is the independent variable and 'accounting conservatism' is the dependent variable.

10.1. Independent variable

Independent variable of this study is capital structure which is a combination of liability and shareholder's rights through which the companies provide their financial needs.

Capital structure can be calculated by dividing the ratio of total liability to total assets in each year.

Capital structure = Total liability / Total assets

10.2. Dependent variable

Accounting conservatism is the dependent variable of this study. Givoly and Hayn (2000) model was applied to

assess accounting conservatism. By and large, the existing relationship between operating accruals and total assets of the beginning of each firm's period indicates the index of operating conservatism.

Operating conservatism = operating accruals \times (-1) / total assets of the beginning of each firm's period

Book conservatism = value of the firm's stock market / book value of shareholders' rights.

11. Results

11.1 The relationship between capital structure and operating conservatism (Y1)

11.1.1 Correlation analysis

TABLE 1. Model Summary

MODEL	R	R2	Adjusted determination coefficient	STD. ERROR
1	0.12a	0.014	0.002	108.69888

A: Predictors

Constant : capital structure

The correlation between capital structure and operating conservatism is about 0.12 (R= 0.12) and coefficient of multiple determination (R2) is about 0.014. In other words, the variable of 'capital structure' could justify 0.014 percent of total amount of operating conservatism, and the rest is allocated to other factors and accidental events.

11.1.2 Variance analysis

There is no linear relationship between capital structure and operating conservatism (linear regression model).

H0: $r = 0$

There is a linear relationship between capital structure and operating conservatism (non-linear regression model).

H1: $r \neq 0$

TABLE 2. ANOVA ^a

MODEL	Sum squares	T	Variance	F	Sig.
Regression	14253.333	1	14253.333	1.206	0.275a
1 Remaining	968866.551	82	11815.446		
TOTAL	983119.883	83			

A: Predictors- Constant capital structure

A:Dependent Variable :conservatism operational Y1

a. In the above table, Significance equals 0.275 which is more than 0/05 so H0 and H1 are respectively confirmed and rejected with the confidence level of 95%.

Testing the significance of coefficients

Capital structure has no effect on operating conservatism. H0: $\beta = 0$

Capital structure is effective in operating conservatism. H1: $\beta \neq 0$

TABLE 3. Coefficients^b

MODEL	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	STD. ERROR	Beta		
Predictors	114.295	22.279		5.130	0.000
capital structure	-28.850	26.267	-0.12	-1.098	0.275

A: Dependent Variable :conservatism operational Y1

b. significance is 0.275 which is more than 0/05 so it cannot be considered significant. Considering the amount of Beta which is 0.12, the variable of capital structure does not have much effect on operating conservatism. So, H0 is confirmed and H1 is rejected.

Regression model can be written in the following manner:

$$\text{Operating conservatism} = 114.295 - 28.250 (\text{capital structure})$$

11.2 The relationship between capital structure and book conservatism (Y2)

11.2.1 Correlation analysis

Table 4 .Model Summary

MODEL	R	R2	Adjusted determination coefficient	STD. ERROR
1	0.003a	0.000	-0.011	0.74334

A: Predictors- Constant capital structure

The correlation between capital structure and book conservatism is about 0.003 (R= 0.003) and coefficient of multiple determination (R2) is about 0.000. In other words, the variable of 'capital structure' could justify 0.000 percent of total amount of book conservatism, and the rest is allocated to other factors and accidental events.

11.2.2 Variance analysis

There is no linear relationship between capital structure and book conservatism (linear regression model).

$$H_0: r = 0$$

There is a linear relationship between capital structure and book conservatism (non-linear regression model).

$$H_1: r \neq 0$$

Table 5. ANOVA^c

MODEL	Sum squares	T	Variance	F	Sig.
Regression	0.000	1	0.000	0.001	0.979a
Remaining	48.625	88	0.553		
TOTAL	48.625	89			

A: Predictors- Constant capital structure

A: Dependent Variable :conservatism Y2

c. In the above table, Significance equals 0.979 which is more than 0/05, so H0 and H1 are respectively confirmed and rejected with the confidence level of 95%.

11.2.3 Testing the significance of coefficients

Capital structure has no effect on book conservatism. H0: $\beta = 0$

Capital structure is effective in book conservatism. H1: $\beta \neq 0$

TABLE 6.

MODEL	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	STD. ERROR	BETA		
Predictors	1.279	0.149		8.611	0.000
capital structure	-28.850	0.179	-0.003	-0.026	0.979

A:Dependent Variable :conservatism Y2

Coefficients^d

d. According to the table, due to the fact that significance is 0.979 which is more than 0/05, so it cannot be significant. Regarding the amount of Beta which is 0.003, the variable of capital structure does not have much effect on book conservatism. So, H0 is confirmed and H1 is rejected.

Regression model can be written in the following manner:

$$\text{Book conservatism} = 1.279 - 28.850 (\text{capital structure})$$

12. Conclusion

The first hypothesis assumed that the firm's capital structure affects operating accounting conservatism. Owing to the fact that the results of testing coefficients and regression significance showed 0.275 for the level of significance which was more than 0/05, linearity of regression model was not confirmed, and it was proved that capital structure did not have any significant effects on operating conservatism; therefore, with the confidence level of 95% this conclusion could be drawn that there was no significant linear relationship between capital structure and operating conservatism, and capital structure did not have any significant effects on operating conservatism.

The second hypothesis assumed that the firm's capital structure affects book accounting conservatism. Due to the fact that the results of testing coefficients and regression significance showed 0.979 for the level of significance which was more than 0/05, linearity of regression model was not confirmed, and it was proved that capital structure did not have any significant effects on book conservatism, so with the confidence level of 95% this conclusion could be drawn that there was no significant linear relationship between capital structure and book conservatism, and capital structure did not have any significant effects on book conservatism.

13. Applicatory recommendations

Considering the fact that applying capital structure and leverage is of great importance in all firms and regarding the firm size and the type of industry, it is suggested that analysts and investors attempt to choose the most appropriate method of calculating financial leverage in the listed companies on Tehran stock exchange.

14. Recommendation for further researches

1. Investigating the association between financial leverage (being short-term or long-term in capital structure) and firms' performance
2. Examining the association between the level of ownership among managers and financial leverage in the firm
3. Assessing the association between capital structure and profitability management in different industries

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