

The financial leverage role in cash flow of accepted firms in Tehran stock exchange

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Abstract

Investment is essential factor for economic growth and development of any country and one way to secure financial resources for investment is use of dept in structure of companies, which dept in capital structure seems like leverage in our minds (capital structure is combination of dept and shareholder rights). Leveraged buyout is one of important financial concepts which has special role in capital structure of firm. One which has no dept is capitalized structure firm. This study pursue analyzing of relationship between firm's financial leverage and their cash flow in Tehran's stock exchange as case study at years of 2007-2012 using panel data to assess research hypothesizes.

Keywords: *financial leverage, cash flow, panel data*

1. Introduction

Accounting is efficient means that play important role in technologic progresses and socioeconomic development process of different nations. Also science and technology improvement and continuously variety of service and industrial activities cause the accounting to be essential base of decision making process as to make response for these much duties, in its evolution steps, accounting has divided to different branches. Today importance of financial issues and relevant decision making in firms is not unapparent as their future life is strongly depend on their decision making method and performances. To improve of firm financial resources are required which there are different types of financing methods and as there is limitation in using them, determining optimum capital structure is one of the most important issues which managers have to encounter with. Also in today's competitive circumstance to continue their operations, firms have to deal with much factors and project financing issues to be able to continue their life, i.e. the firm's operation should be profitable.

Economic firms are also need to be finance to do trade and remain in business and financial securitization has different types such as certified and uncertified resources. but in majority conducted researches in this area financing resources of firms based on their financing policy has divided to "internal financial resource" and "external financial resource" which they can be used in short and long term periods. And in one other side cash flows and predicting of cash flow volume also are lifeblood of each economic firm and its management task necessities. Investors, trusters and other users of accounting information to make financial and investing decisions are required to cash flow volumes, which is a base to stock benefit payment, interest, repayment of debt and so on (Hashemzehi, 2013).

Stating of the Problem

Capital structure is one of the primarily subjects of modern financial theory which has been as focused area of researchers in recent decades. Financing issues come from firm's requirement to keep its value in such ways as new asset buying, improve of company' capacity, employ new labor force and raw material purchase, which all need new fund and this posed in financial resource standard (Abzari et al., 2007).

Capital structure is combination of common stock, preferred stock and its related subsets, stored gains and debt which firm use it to self asset financing (Dimitris and Maria, 2010). Also a part from cash flow,

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other related independent debt factors that used by researchers in capital structure model contain liquidity, profitability, institutional investment, size of firm, stock gain payment and keep tax advantages (Chyi and Mustapha, 2012).

Financial secure method must be compatible with type of firm's investment and use financial leverage in the way that both maximize firm's value and prevent possible unfavorable consequences of financial risk and debts (Arbabian and Safari Graeli, 2010). The majority of capital structure researches have focused on big public nonfinancial firms which are access to global worlds. In fact, Marsh (1982) show that maybe bigger companies use more of saving bonds as they are subject to internal and foreign funds, time flexibility and lower costs associated to their capital structure to investment. In trade term, leverage refer to relationship between trade change percentage of constant costs and gains before interest and tax. Leverage may have three types as follow: Financial Leverage (FL), Operation Leverage (OL) and Combination Leverage (CL). Leverage contains alarm representative of managers' information respect to investment opportunities. Capital structure theories state that manager of firms which have suitable growth opportunities, should less leverage since if they increase their external debts, they will not be able to take advantage of their investment opportunities (Noravesh and Yazdani, 2010). Cash flow information can help decision makers in assessing firm's liquidity and payment power of debts. Meanwhile this information can be useful to evaluation of opportunity and risks of trade unit as consult to management (Arabmazar Yazdi, 2007).

Cash flows have two potential in setting of leverage. First cash flow to setting of leverage, should replace lower cost opportunities in market as if firm need to gather external financial resources by leverage can publish commercial papers or pay to shareholder rights by considering whether situation is less or more than leverage level. So, firms with high positive cash flow is willing to pay the investors but that firm cans impress leverage by payment of debt or shareholder rights, second is case that firms are encounter to constant cost of accessing to stock markets (Hashemzahi, 2013). Leveraged payout is one important factor in making investment decisions in both micro and macroeconomic levels as growth and operation continuing need financial resorce which has limitation. Also detecting priorities in financing methods and impressive factors on them to maximize shareholder wealth is important (Moradzadeh and Nadalipour, 2009).

Capital Structure

To investment and provide their required assets, firms have to obtain financial resources. capital structre contain dept and shareholder rights that via them firm finance themselves in long term. In fact capital structure is long term finance of firm which showed via those two above factor and financial structure consist of short and long ter debts and shareholder rights, thus capital structure is part of firm's financial structure (Hashemzahi, 2013).

Today financial issues are clear too everybody, so there are different theories on capital structure which refer to three required financial resource to financing the firms:

1-resources which apparently do not have any cost: commercial creditors, pre reception from customers, payable costs and so on.

2- Internal financial resources which finance via this needs firm's profitability during past operations and by these cumulative profits are relevant financial resource for firm, i.e. replace of dividing firm's gains between shareholders, use them to gain more invest them in new operations.

3- those financial resources which obtain from saving bond publishment, sharing bonds, loan and stocks whether in long term or in short term, depend on firm's decision (Izadi and Saedi, 2012).

We can say that capital structure determination goal is specifying each firm's financial combination for maximizing its shareholder wealth. Each of these financing methods has special advantage and disadvantages. Using shareholder right resource, usually lead to decreasing of stock revenue as well as create debt method which may initially cause firm's value but its inordinate using cause increase in financial risk, expected revenue and lenders, effective debt rate and firm's financial costs (Khadka, 2006). Capital structure and its optimum combination and in other word, firm's financing method of different resources, are developed by Modigliani and Miller (1985) as first time and then used as base of much researches.

Capital Structure Theories

There are different theories associated with capital structure that all of them follow basic question of whether the firm can affect value and its capital cost by changing combination of financial resources. And also does optimum capital structure really exist. There is no any global structure to select the capital structure (Apostu, 2010). No one can present optimum structure in this area and presented theories have not been able to explain ideal firm's financing real behavior. While there is a lot number conducted researches in this area and they are still in action to obtain that optimum approach. Since Modigliani and Miller (1985), some different theories on capital structure have evolved that best of them is Pecking Order Theory (Apostu, 2010). We will analyze presented approach and theories associated with capital structure in follow.

There are below presented paradigms on capital structure as yet:

- 1-Traditional Approach
- 2- Net Income Approach
- 3- Net Operating Income Approach
- 4- Modigliani and Miller Approach
- 5- Trade-Off Theory
- 6- Pecking Order Theory

Model Specification

This research pursue analyzing the relationship between firm's leverage and cash flow, to do so, we follow Mostafa and Chai (2012) regression model which contain different factors as variables such as liquidity, investment, Tangible, stock gain, profitability, cash equity and flow ratio. To test research hypothesis and survey the relationship between variables, by considering type of data, here we used panel data multiple regression model.

So we used following model to assess the relationship between dependent variable and independent variables:

$$D_{it} = b_1 I_{it} + b_2 CF_{it} + b_3 CS_{it} + b_4 Q_{i,t-1} + b_5 P_{it} + b_6 TANG_{it} + b_7 CR_{it} + b_8 DIV_{it} + e_{it}$$

Where the used annual ratio in model are defined as follow:

Debt ratio (D_{it}): sum of debts to net assets

Investment (I_{it}): capital expenditure to constant assets

Cash flow (CF_{it}): cash flow to sales

Cash stock (CS_{it}): cash flow to net constant asset

Q-Tobin ($Q_{i,t-1}$): market value to paper value

Profitability (P_{it}): Net profit before tax to total asset

Tangible ($TANG_{it}$): Net constant asset to total asset

Current (CR_{it}): Total current asset to total current debts

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Stock gain (DIV_{it}): profit to total net income

Error (e_{it}): Error term

2. Results

In estimating above model, we consider Panel Data method and as we reported F-Limer Statistics in below table (and Appendix 5), F is equal to 5.136 which as we compare it with critical value in table1, we cannot accept H_0 hypothesis and also Chi-Square statistics is equal to 790.72 which confirm F-Statistics obtained result.

Table-1-F-Limer Test Result

Test	Statistics	Degree of Freedom	Probability
F-Test	5.136	-198.538	0.00
Chi-Square Test	790.72	198	0.00

To perform F-Limer test we should estimate our model using panel data method with fixed effects, then we will be able to do F-limer test. The result show that both F and Chi-Square Statistics reject null (H_0) of estimate model via **Pool** in less than 5% significance level. Then we specify type of estimating model method between Fixed Effects and Random Effects through Husman test. To do so, we first estimate the panel model with Random Effects and after that we can perform Husman test for that model. We find that for both F statistic and Chi-Square Statistic (especially it is equal to zero in 8 degree of freedom), we cannot reject null (H_0) of estimate model via Random Effects in 5% significance level. Thus in some words, we can say that more relevant model in this research is panel data analyzing with random effects method (table- 2), so via this we can estimate our model and after comparing with model hypothesizes obtain relevant results.

Table-2-Ths Husman Test Results

	Chi-Square Statistic	degree of freedom	Probability
Chi-Square Test	0.00	8	1.00

What we can obtain from both tables (i.e. 1&2 tables) is, as they guide us to choose model, estimate our model using panel data with random effects method. So the results are presented in table-3 as follow:

Table-3- Model Estimation Results

Variables	Coefficients	Statistics	Probability
<i>C</i>	0.856491	40.28204	0
<i>DIV</i>	-239.5027	-2.777933	0.0056
<i>I</i>	0.000473	2.656755	0.0081
<i>CF</i>	-0.000924	-2.124071	0.034
<i>CS</i>	0.000358	0.440703	0.6596
<i>Q</i>	0.003635	1.627459	0.1041
<i>P</i>	-0.01255	-16.45205	0
<i>TANG</i>	239.4132	2.777171	0.0056
<i>CR</i>	-0.043332	-8.200066	0
<i>R</i> ²	0.515389	<i>D-W Statistics</i>	0.627631

Each of these above variables assess one of model hypothesis which discussed in first section, so we start from first hypothesis that is relationship between cash flow and financial leverage in accepted firms of Tehran' stock exchange. Coefficient of this variable is -0.000924 with statistic value -2.124071 has confirmed negative and significance relationship for above variable in 5% significance level. For second one that that is relationship between investment and financial leverage in accepted firms of Tehran' stock exchange and we calculate this as 0.000473 with statistic value 2.656755 has confirmed positive and significance relationship for above variable in 5% significance level.

To analyze third hypothesis that is the relationship between cash stock and financial leverage in accepted firms of Tehran' stock exchange. We calculate this as -239.5027 with statistic value -2.777933 has confirmed negative and significance relationship for above variable in 5% significance level. For the fourth one which analyze relationship between Q-Tobin ratio and financial leverage in accepted firms of Tehran' stock exchange and its obtained value is 0.003635 with statistic value 1.627459 has confirmed positive but insignificance relationship for above variable in 5% significance level, i.e. this hypothesis is rejected.

Fifth hypothesis that analyze relationship between profitability stock and financial leverage in accepted firms of Tehran' stock exchange and obtained value is -0.01255 with statistic value -16.45205 has confirmed negative and significance relationship for above variable in 5% significance level. For sixth one that survey relationship between current flow ratio and financial leverage in accepted firms of Tehran' stock exchange and we calculate it as -0.043332 with statistic value -8.200066 has confirmed negative and significance relationship for above variable in 5% significance level.

The seventh hypothesis that analyze relationship between stock gain payment ratio and financial leverage in accepted firms of Tehran' stock exchange and our obtained value for it as 0.000358 with statistic value 0.440703 has confirmed positive but insignificance relationship for above variable in 5% significance level, i.e. this hypothesis is rejected. And as last one for eighth hypothesis which analyze the relationship between tangible asset ratio and financial leverage in accepted firms of Tehran' stock exchange and its obtained value is 239.4132 with statistic value 2.777171 has confirmed positive and significance relationship for above variable in 5% significance level.

Finally for survey total model significancy we use F-Test which based on null of insignificance total regression versus the alternative of significance total regression assess them. Our obtained value for F statistics is 67.02993 which has significance difference with critical value, i.e. null can be strongly rejected.

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