Analysis Effective Financing Methods of Operating Performance and Offering of Optimized Financing Structure for Pegah Company of Isfahan

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ABSTRACT

Companies require finance resources to perform their activities and the resources would be provided through releasing ordinary and preferred stock to investors and borrowing or get loans from creditors. Some theories have addressed the issue that why firms choose a particular method of financing and what impact such choices would have on the firm performance. Using regression model and correlation analysis, the study has dealt with to examine the relationship between the size and type of financing by four performance measures of, rate of return on investment (ROI), financial efficiency of an organization, rate of return on equity (ROE), and the liquidity of Pegah Company of Isfahan during 1379 to 1392. Results of this study similar other local studies showed that except Equity method in this company, that has significant and positive relationship with rate of return on equity, other Equity methods don’t have significant relationship with Performance measures.

KEYWORD

Financing, performance, rate of return on investment, financial efficiency of organization, return on equity rate, liquidity

INTRODUCTION

Financing is essential for the survival of the firm activity. Company management has different sources and different ways of financing to provide necessary funds to financing capital expenditure and the firm operation. Financing can be carried out through releasing stock or debt securities that are different. Some theories have addressed the issue that why firms choose a particular financing strategies and how the choices would be reflected in the company’s past and future performance; However, a wide range of researches have examined infrastructure factors and financing works, such as the relationship between financing through releasing debt securities or stock and profit or future cash flows [1]. Experimental studies of the effect of financing on firm performance focus on the two main measures, i.e. the stock return and operating performance. The results show that future stock return will be significantly affected by financing activities.

PROBLEM STATEMENT

Economic institutions and enterprises need macro capital to be survived and develop their activities [2]. Business units are highly dependent on the clients to fund their required capital. Customers’ role is providing required capital to business units to be able using them in different industries. One of the main points of interest to financial managers to expand their activities and services is planning to attract the attention of customers, attract financial resources and to increase the liquidity. Business units’ ability to determine the appropriate financial resources and right decision making in this case and plan and increase advertising to optimize the composition of financial resources has been considered as the main factors of success. The main goal to management should take into considerate when choosing the method of financing is to increase the wealth of shareholders. That is, considering cost of each of financing various sources and its impact on efficiency and risk, choose resources which would cause to minimize the cost of financing [3]. Therefore, identifying financing methods priority and factors affecting them and also choosing appropriate methods is very important.

Results from experimental studies indicate that future stock return is significantly affected by financing activities. On the other hand, the economists, investors and corporate executives concern that what a relationship is between the
various modes of financing and stock prices in the market and whether by changing the composition of capital structure, the value of stock in the market would be changed or in other words, does the optimal capital structure exist?

Now the question is whether the size of financing in this business unit would have an impact on its performance? Whether the performance is also influenced by the type of financing? And if it’s effective, which of financing models has a priority to maximize shareholders’ wealth and how is the financing optimal structure of the business units?

**LITERATURE OF RESEARCH**

Asadi and Poor Ghorban concluded in a study that there is a reverse relationship between cash flow resulting from financing activities and future stock return as well as between the funds from borrowing and future stock return and also between the funds from borrowing. Moreover, there is no significant relationship between the funds resulting from releasing stock and future return on stock and as well as the proceeds of borrowings and the proceeds of and future stock return.

Abzari et al found that despite lack of significant difference between using various methods of financing (accumulated profit, stock and debt) between the studied companies, there is a significant relationship between the way of companies’ financing and their size.

Mojtahedzadeh et al showed in a research that not only the financing has no effect on before and after operating performance, but the type and volume of financing has not significant impact on the most measures of the operating performance neither.

Kordestani and NajafIomran concluded that the relationship between net change in general financing, net change in foreign financing and the change in provided operating net assets of domestic financial resources with unusual return on stock accumulated, is meaningful and significant; but contrary to the prediction, it is positive.

Mollanazari et al also showed that there is a significant relationship between methods of financing and successful company and success and lack of success of the accepted companies in Tehran stock exchange and also increase of capital more affect companies’ success than the bank loan.

Mclaughlin et al showed that companies have had a considerable improvement in operating performance; but after stock seasonal assurance, average changes in the operating performance has been decreased of 20% over three years and most decrease was experience through stock issuance.

Hertzel et al showed that despite high value of stock market within supply time, companies which have privately supplied the stock, have had better performance during a period of three years after assurance. Also Heron Valley showed that the operating performance is highly related to the type of company’s financing. Keser also showed that changes in the company’s operation performance, is regularly related to the amount and type of the company’s financing fences. Chi and Pecht concluded that initial supply of stock would result in a significant decrease in profitability, sales growth rate and company’s efficiency is profitability in its ability, the growth rate sales and company efficiency and Chenge et al showed that these companies have better operating performance prior to the initial stock supply, rather than the same industries.

**SELECTION OF FINANCING SOURCES**

Several theories regarding the selection of financing sources (selection between debt and equity) have been provided by researchers that ever now all these theories focus on the impact of type of financing source on the value of the company. The theories are as [3]:

1. **The traditional theory**
   The theory basis is that an optimal capital structure exists and we can increase the value of company using leverage.

2. **Miller and Modigliani theory**
   Miller and Modigliani (1958), two scholars in whose research the modern theory of capital structure (MM) began stated that the cost of company’s capital theory under certain conditions (failure to pay income taxes, and lack of tax costs) would not be changed by the change of company’s capital structure. And favorable debt substitution with a lower financing rate in the company financial structure, will be exactly compensated with decreasing in price of normal stocks of the company.

3. **The Pecking Order Theory**
   According to this theory, in cases where there is asymmetry of information between managers and outside organizational investors, the managers would rather supplying financial sources of inside the company to outside sources of company, that means at first they will finance of the profits or accumulated savings part, then if internal resources are not sufficient, among the sources outside of the company, they will first attempt to release the least risky sufficient and more financial sources are needed, they will eventually venture to release the stocks [4].

4. **Static Trade off Theory**
   According to this theory, as the company regulates its dividend paid in direction of a desired payment in the future and moves in line with it, it also determines an optimal debt ratio and the company’s debt ratio would be determined based on the balance of costs and benefits [5]. In the theory, optimal capital structure can be viewed as a balance between tax advantages of debt and the costs of financial crisis and possible bankruptcy (debt-induced) and representation.

5. **The Market Timing Theory**
   Basis of this theory is market conditions, it means that managers will assess market conditions for both financial source -borrowing and release stock- if they need financing they will use a source which market conditions is appropriate. If the market conditions of both sources financing is not suitable they will delay the issue but if the market conditions they would perform financing even if they need no financial resources [4].

1. Modigliani, F; Miller, M H. (1958)
6- Dynamic Financial Model
The dynamic model which has devoted many researches to them in the last decades, the company tries to adjust its level of debt or leverage at different times. Of course, it also comes with adjustment costs and identifying affecting factors on the adjustment speed is too important.

OPERATING PERFORMANCE AND ITS EVALUATION MEASURES
Assessment operating performance is to evaluate the amount of access to organizational goals. Evaluating companies effectiveness and performance contrary to the initial impression, is complex and difficult and usually to do it different measures would be used [1]. Some researchers have classified the measures to evaluate performance due to the type of data used in its calculation, and the studied subject as following:

1. Accounting approach: in performance evaluation using this approach, the information contained in the financial statements is usually used. Evaluation measures in this approach including: return on assets (ROA), return on equity (ROE), earnings per share (EPS) and...
2. Financial approach: in this approach the financial theories and concepts of risk and return are mostly used. The evaluation measures in this approach are as: return on investment (ROI), return ration and...
3. Economic approach: in this approach the economic concepts are mainly used. Company performance would be evaluated in this approach with an emphasis on assets profitability power as for the return rate and the cost rate of capital used. The evaluation measures in this approach including: economic value added (EVA), market value added (MVA) and Refined economic value added (REV A).
4. Integrated approach: in this approach it is attempted to use financial statement and values in addition using the printed information in the financial statements, so that the evaluation would be more relevant. The evaluation measures in this approach including: price/earning ratio (P/E), Market value/ book value per share ratio (M/B) and Q.Tobin's ratio [6].

RESEARCH VARIABLES
1- There is a significant positive relationship between financing size and performance in Pegah Company of Isfahan.
2- There is a significant positive relationship between type of financing methods and performance in Pegah Company of Isfahan.

RESEARCH ANALYTICAL MODEL
The main question of this research is studying two independent variables of financing through normal stock release and financing through obtaining facilities with four dependent variables of rate of return on investment, financial productivity of organization, return on equity rate and liquidity of financing volume. Total changes of financing through normal stock release and financing through obtaining facilities as changes in the volume of financing in models 1 to 4, were explained as independent variables.

One-variable regression models to examine the relationship between each of operating performance measures with the volume of company financing:

\[
ROI = \alpha + \beta \Delta XFIN_{BS} \quad (1)
\]
\[
Income/Labor = \alpha + \beta \Delta XFIN_{BS} \quad (2)
\]
\[
ROE = \alpha + \beta \Delta XFIN_{BS} \quad (3)
\]
\[
Liquidity = \alpha + \beta \Delta XFIN_{BS} \quad (4)
\]

In two-variable regression models to study the relationship of each of operating performance measures with financing type of the company, independent variable of the above model was divided to two financial parts through common stock and \(\Delta DEBT_{BS}\) release and financing through obtaining facilities and to determine the influence of financing type on the company performance, the models of 5 to 8, were respectively formed.

CALCULATION METHOD OF RESEARCH VARIABLES
The research variables include two parts. The first part contains criteria of financing changes and the second part includes criteria operating performance. Independent variable of the study is changes in financing that is measured with two criteria of "changes volume in debt", and "changes volume in stock". To measure the variable, the two approaches of balance sheet and cash flow statements have been proposed [7].

Balance Sheet approach was used in this study. In a balance sheet approach, changes in financing are calculated according to the following pattern:

\[
\Delta XFIN_{BS} = \Delta EQUITY_{BS} + \Delta DEBT_{BS}
\]
\[
\Delta XFIN_{BS} = \text{Net changes in financing}
\]
\[
\Delta EQUITY_{BS} = \text{Changes volume in return on equity}
\]
\[
\Delta DEBT_{BS} = \text{Changes volume in debt}
\]

Changes volume on equity is equal to the changes volume in the common stock of year (t-1) to year (t), which follows the model below:

\[
\Delta EQUITY_{BS} = CEQUITY_{t} - CEQUITY_{t-1}
\]
\[
CEQUITY_{t} = \text{Book value of the common stock in year (t)}
\]
CEQUITY\(_{t,1}\) = Book value of the common stock in year (t-1)
Changes volume in debt is equal to the changes volume in the volume of short-term debt plus the changes volume in long-term debt, which is obtained by the equation:

\[
\Delta D\text{EBT}_{BS} = \Delta LT\text{DEBT}_{BS} + \Delta SHT\text{DEBT}_{BS}
\]

LTDEBT\(_{BS}\) = Changes volume in long-term debt from year (t) to year (t-1), which is calculated from the following equality:

\[
\Delta LT\text{DEBT}_{BS} = LT\text{DEBT}_t - LT\text{DEBT}_{t-1}
\]

SHTDEBT\(_{BS}\) = Changes volume in short-term debt is determined year (t) to year (t-1) based on the above equation.

Dependent variable of the research is operating performance which is calculated using four measures. These measures are as follows:

\[
\text{Rate of return on investment (ROI)} = \frac{\text{Profit after Tax deduction}}{\text{Total Assets}}
\]

Financial efficiency of the organization = \(\frac{\text{Earning}}{\text{Labor}}\)

\[
\text{Rate of return on equity (ROE)} = \frac{\text{Profit after Tax deduction}}{\text{Equity}}
\]

\[
\text{Liquidity} = \frac{\text{Cash assets}}{\text{Current Debts}}
\]

The above variables of the functional measures used for dimensions balanced is an equal score card from financial viewpoint [8].

**DATA ANALYSIS**

After evaluating all studied independent and dependent variables, the data series were in the Eviews software from 1379 to 1392, and after the removal of autocorrelation and variance inequality, statistical tests were carried out to estimate the regression model that following only confirmed hypotheses tests have been presented.

Nomber3 Sub-hypothesis test:

Nomber3 Sub-hypothesis: There is a significant positive relationship between financing size and rate of return on equity of the organization in Pegah Company of Isfahan.

Tab. 1. Relationship between financing size and rate of return on equity of the organization

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.093304</td>
<td>0.172860</td>
<td>0.539765</td>
<td>0.5992</td>
</tr>
<tr>
<td>X</td>
<td>1.24E-11</td>
<td>3.88E-12</td>
<td>3.187037</td>
<td>0.0078</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.458416</td>
<td>Mean dependent var</td>
<td>0.51423</td>
<td></td>
</tr>
<tr>
<td>Adjusted</td>
<td>0.413283</td>
<td>S.D. dependent</td>
<td>0.54476</td>
<td></td>
</tr>
</tbody>
</table>

As it can be seen, the statistic value of Durbin-Watson is 1/73. If the test statistic is between 1/5 and 2/5 it will show that errors have dependency and there’s lack of autocorrelation. Also since The Prob parameter related to the independent variable in this model in reliability level of 95% is less than 5%, thus the coefficient of variable X (changes volume in financing) in the regression model is significant and it could be concluded that the independent variable effect on rate of return on equity changes with the coefficient 0/102. According to the above table the determination coefficient is 0/41 that shows the relative relationship between dependent and independent variables.

Tab. 2. Relationship between Changes volume in equity and Changes volume in debt with rate of return on equity of the organization

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.106002</td>
<td>0.138811</td>
<td>0.763646</td>
<td>0.4611</td>
</tr>
<tr>
<td>X1</td>
<td>3.18E-11</td>
<td>1.35E-11</td>
<td>2.355174</td>
<td>0.0381</td>
</tr>
<tr>
<td>X2</td>
<td>7.94E-12</td>
<td>3.95E-12</td>
<td>2.012879</td>
<td>0.0693</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.60212</td>
<td>Mean dependent var</td>
<td>0.51423</td>
<td></td>
</tr>
</tbody>
</table>

Adjusted R-squared: 0.52978 S.D. dependent var: 0.54476

S.E. of regression: 0.37356 Akaike info criterion: 1.05592

Sum squared resid: 1.535 Schwarz criterion: 1.19286

Log likelihood: -4.39144 Hannan-Quinn criter.: 1.04324

F-statistic: 8.323197 Durbin-Watson stat: 2.23009

Prob(F-statistic): 0.0063
As it can be seen, the statistic value of Durbin-Watson is 1.65. Also since The Prob parameter related to the independent variable in this model in reliability level of 95% is less than 5%, thus the coefficient of variable $X_1$ (changes volume in equity) in the regression model is significant and it could be concluded that the independent variable effect on rate of return on equity changes with the coefficient 0/006. According to the above table the determination coefficient is 0/6 and the adjusted determination coefficient is 0/53 that shows the relative relationship between dependent and independent variables.

The regression model derived from this test would be as:

$$\text{ROE} = 0.106 + 3.18 \times 10^{-1} \Delta \text{EQUITY}_{BS}$$

Therefore, in a general conclusion it can be said that the changes of return on equity rate depend on volume and type of the company financing and independent variables don’t have considerable effect on performance measures.

<table>
<thead>
<tr>
<th>Number</th>
<th>Sub-hypothesis</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There is a significant positive relationship between the volume of financing and rate of return on investment in Pegah Company of Isfahan</td>
<td>Hypothesis rejection</td>
</tr>
<tr>
<td>2</td>
<td>There is a significant positive relationship between the volume of financing and Financial efficiency of the organization in Pegah Company of Isfahan</td>
<td>Hypothesis rejection</td>
</tr>
<tr>
<td>3</td>
<td>There is a significant positive relationship between the volume of financing and return on equity rate in Pegah Company of Isfahan</td>
<td>Hypothesis confirmation</td>
</tr>
<tr>
<td>4</td>
<td>There is a significant positive relationship between the volume of financing and Liquidity in Pegah Company of Isfahan</td>
<td>Hypothesis rejection</td>
</tr>
<tr>
<td>5</td>
<td>There is a significant positive relationship between equity changes and debt changes with rate of return on investment in Pegah Company of Isfahan</td>
<td>Hypothesis rejection</td>
</tr>
<tr>
<td>6</td>
<td>There is a significant positive relationship between equity changes and debt changes with Financial efficiency of the organization in Pegah Company of Isfahan</td>
<td>Hypothesis rejection</td>
</tr>
</tbody>
</table>

**Hypothesis**

There is a significant positive relationship between equity changes and debt changes with return on equity rate in Pegah Company of Isfahan

Ther is a significant positive relationship between equity changes and debt changes with Liquidity in Pegah Company of Isfahan

**Conclusion**

Although the economic units need financing to be survived but the results obtained from the present research in Pegah Company of Isfahan showed that volume and type of the company financing don’t have considerable effect on performance measures. The results obtained from the present research similar to the research result by Mojtabahzadeh et al in 1388 and have differed from Heron Valley et al research in 2004, Wang and Keser in 2005, Chi and Pecht and Carol Padgett in 2006 and Chenge et al in 2007.

**References**


