The Effect of Financing Methods on the Profitability Level of Food Industry Companies Quoted in Tehran Stock Exchange

Jamshid Jafari DARABJERDI[1]
Tahereh Kakoo JOYBARY[2]

[1,2]Department of Qeshm Branch, Islamic Azad university, Iran,
[2]E-mail: javad_kaliji@yahoo.com (Corresponding author)

Abstract	*The purpose of this research is to study the effect of financing methods on profitability level of food industry companies quoted in Tehran stock exchange. Time period of this research is 2007-2011, and a number of 37 food industry companies were chosen as sample. Regression analysis and Pearson`s correlation have been used in SPSS 16 software, in order to test the research assumptions. In this research, dividend revenue has been considered as dependent variable, and financing methods in three dimensions (retained earnings, long-term loan, and short-term loan) have been considered as independent variables. The research findings indicate that using loan (long-term loan and short-term loan) leads to increase in dividend revenue in food industry. While, using retained earnings in financing, has no effect on dividend revenue on mentioned industry.*
Key words	Retained earnings, long-term loan, short-term loan

1. Introduction

Supplying financial resources is the most significant issue in financial management, and is considered as concerns and responsibilities of financial directors. Companies can supply financial resources through different methods. Directors` awareness from different methods and tools of financing and their effects helps the continuity of companies` activities, and it facilitates the processes. To have a correct insight about the effects and connections of financing and operational performance, help directors to make strategic and fundamental decisions, and reveal appropriate information to those who are interested in investing in these companies.

Decisions about financing is the main decision-making domain, and it is a significant phase in company`s growth. One of the main concerns of companies which are experiencing growth in their life cycle, is the methods to supply financial resources. The necessity to supply financial resources is firstly because the value of companies` assets decreases because of some external factors such as currency ratio, inflation, and bank interest ratio, and secondly because operational mechanisms of companies cause that company needs money in the form of financial resources, in order to purchase new assets, increase company`s capacity, employ new employees, and purchase raw materials. (Mohammad Mehdi Razaghi, 2007).

The findings of some previous researches indicate that stock returns are significantly affected by financing activities outside the organization. So, in companies which supply financial resources, low amount of stock returns is usually related to financing transactions such as the first publication or republication of stock capital stock, publication of synthetic securities including changeable loans and long-term loans, which increase company`s cash.

However, some financial specialists believe that company value is dependent to management performance not to capital structure, in another side attention to tax savings which are resulted from loan interests, has convinced a group of financial masters that using long term loans as a financing method is a

significant way to increase the value of company and subsequently the stock holders` wealth. They believe that there is a desirable capital structure for each company, in which the company`s value will be maximized.

In this research, we have tried to study the effect of financing methods on dividend revenue of food industry companies quoted in Tehran stock exchange, by considering current situations of Iran`s capital market.

2. Research history

The results of some domestic and foreign researches relevant to the subject of this research are listed below:

Hamed Soltani Nezhad (2006), in a research named "comparative study of selling borrowing stock according to Islamic contracts", has reviewed stock sale in the form of borrowing as a financing method for companies. This research which is performed to support MA thesis, has argued about issues such as mechanism of borrowing transactions, mechanism of capital borrowing market, borrowing transactions and use of future contracts, borrowing sales limitations, and pricing.

Mohammad Rahmani (1995) studied financing methods such as long term loans, and publication of normal stocks and their effects on stock prices in companies quoted in Tehran stock exchange. The results indicate that there is significant relationship between financing methods and stock prices.

Behnam Samadi (2011) in his research reviewed the effect of financing and development tols of machinery companies quoted in Tehran stock exchange. In this research, the evaluation of growth and development were done through using three criteria: dividend revenue, stock price, and dividend. The results indicate that there is a significant relationship between financing tools and dividend revenue, there is no significant relationship between financing tools and stock price and dividend criteria, and finally our main assumption is that there is a significant relationship between financing tools and development tools of mentioned companies.

Samad Mashmool Bonab (2005) studied financing through loan on profit of companies by considering food and atumobile industries. The results indicate that there is significant relationship between financing through loan in profit of automobile industry companies, and these results are consistent with Millroom and Dillani theory, that indicate that there is a significant relationship between long term loans and profit, which results in increase in company`s value and stock holders` wealth.

Khalil Shafiei (2004) studied the financing methods in electricity industry. He believes that applying financial management techniques and methods in companies` financing is mandatory, and using a correct financial mechanism, enables companies to achieve their general goals. At the end, he suggests the best financing methods including borrowing international financial resources for electricity industry.

3. Research assumptions

This research has 1 main assumption and three secondary assumptions:

The main assumption: there is a significant relationship between financing methods and profitability level of food industry companies quoted in stock exchange.

The first secondary assumption: there is a significant relationship between financing through retained earnings and food industry companies quoted in Tehran stock exchange.

The second secondary assumption: there is significant relationship between financing through borrowing (long term loan) and food industry companies quoted in Tehran stock exchange.

The third secondary assumption: there is a significant relationship between financing through short term loan and food industry companies quoted in Tehran stock exchange.

4. Research variables

4.1. Independent variables

Financing methods is the independent variable of this research and below criteria are used to measure it:

a) Retained earnings: retained earning has always been a significant resource for long term financing of companies. In this research retained earning-to-total assets ratio is used.

b) long-term loan: long-term loan is a kind of long term debt which is usually payable in more than 1 year and less than 10 years period, and is used for obtaining fixed assets and working assets. This kind of loan is supplied by banks and financial institutes. In this research, long term loan-to-total assets ratio is used.

c) short-term loan: short term financing is used to support temporary investments in current assets, and its due time is usually less than 1 year. In this research, short term-to-total assets ratio is used.

4.2. Dependent variable

Dividend revenue is the dependent variable used in this research, and profit of each share (EPS) on book value of each share was used to measure it.

5. Population and statistical sample

Total food industry companies quoted in Tehran stock exchange are the population of this research, in 2007 to 2011 time period. Through screening method, only companies which had below qualifications were selected:

1. Their financial year is ended in March, and they have not changed their financial year during research period. This is because of controlling the effects of other economic variables in different time periods during the year and the same effects of them on sample.

2. Companies being reviewed should be active in Tehran stock exchange in research period and their financial statements should be available.

3. Companies which in 2007-2011 time periods have increased their capital through maintaining dividend revenue and loans.

After performing above mentioned limitations, a number of 37 companies were selected as sample.

6. Research method and data collection

In a sense that this research is trying to determine the relationship between financing methods and profitability level of food industry companies, it is a correlation research, and since determination of such a relationship can be used by a large group of those who use companies` financial information, it is an applied research. After-event approach is used to implement the research. After-event approach is used where researcher reviews the issue after the event has happened, moreover; when manipulation of independent variables is impossible (quoted by Namazi, 2010). In this research, data and variables are collected through gathering data from sample companies through their financial statements, explanatory notes, weekly reports, and stock exchange journal and by using Rah Avard Novin software.

7. Data analysis methods and testing the assumptions

This research reviews the relationship between financing methods and profitability level of food industry companies through using regression analysis in the form of regression model, as below:

$$EPS_{it} = \beta_0 + \beta_1 RE_{it} + \beta_2 STL_{it} + \beta_3 LTL_{it} + \varepsilon_{it} \qquad (1)$$

In which:
EPS_{it}= the profit of each share of company i at the end of financial year t;
ER_{it}= the level of retained earnings of company i at the end of financial year t;
STL_{it}= the level of short term loan of company i at the end of financial year t;
LTL_{it}= the level of long term loan of company i at the end of financial year t;
E_{it}= regression remaining of company i at the end of financial year t.

It should be mentioned that regression model for testing the main assumption and Pearson`s correlation for testing secondary assumptions were used.

8. Analysis of research data

8.1. Testing the first secondary assumption

By considering that data are in distance scale, and data distribution is normal, "Pearson`s correlation" was used to test this assumption.

Table 1 shows the results of testing the first secondary assumption through Pearson`s correlation.

Table 1. The result of testing the first secondary assumption

number	Pearson`s correlation coefficient	Significant level	Test result
185	0.027	0.719	H_0 assumption is not rejected

The results of testing the first secondary assumption showed in table 1 indicate that H_0 assumption is not rejected and financing through retained earnings has no effect on profit of each share, and the error level is 5%. So, we can say that financing through retained earnings has no effect on profit of each share, and there is a weak correlation variable of 0.027 between these two, so the first secondary assumption is not approved.

8.2. Testing the second secondary assumption

By considering that data are in distance scale, and data distribution is normal, "Pearson`s correlation" was used to test this assumption.

Table 2. The result of testing the second secondary assumption

number	Pearson`s correlation coefficient	Significant level	Test result
185	0.249	0.001	H_0 assumption is not rejected

The results of testing the second secondary assumption showed in table 2 indicate that H_0 assumption is not rejected and financing through long-term loan has no effect on profit of each share, and the error level is 5%. So, we can say that financing through long-term loan has effect on profit of each share, and there is a relatively strong correlation variable of 0.249 between these two, so the second secondary assumption is approved.

8.3. Testing the third secondary assumption

To test this assumption "Pearson`s correlation" is used too. The results of testing this assumption are shown in table 3.

Table 3. The results of testing the third secondary assumption

number	Pearson`s correlation coefficient	Significant level	Test result
185	0.498	0.000	H_0 assumption is not rejected

The results of testing the third secondary assumption showed in table 3 indicate that H_0 assumption is not rejected and financing through short-term loan has no effect on profit of each share, and the error level is 5%. So, we can say that financing through short-term loan has effect on profit of each share, and there is a strong correlation variable of 0.498 between these two, so the third secondary assumption is approved too.

8.4. Testing the main assumption

Regression model of the effect of different financing methods on profitability level of food industry companies in research period shown in table 4, indicate that only the effect of short-term loan on profitability is positive (0.012), and by considering t possibility test (0.0000), it is significant. It indicates that if we review the effect of different financing methods on profitability level at the same time, only short-term loan has a significant effect on profitability of food industry companies.

The results related to F test indicate that, model is significant in general, and by considering Dorbin-Watson test, it does not have self correlation problem.

Moreover, the results related to adjusted determination coefficient indicate that about 0.248 amounts of profitability changes of food industry companies have been affected by the effects of financing methods.

Since the effect of short-term loan on profitability is significant, the main assumption of research is approved too.

Table 4. The effect of different financing methods on profitability level of food industry companies

tests Variables	Regression coefficients	T test value	T test possibility
Fixed amount	-863.433	-0.810	0.419
Retained earnings	-0.009	-1.473	0.143
Long-term loan	0.018	1.233	0.219
Short-term loan	0.012	6.926	0.00
Determination coefficient	Adjusted determination coefficient	F test possibility	F test
0.260	0.248	0.0000	21.219

9. Conclusion and recommendations

The purpose of this research is to review the effect of different financing methods on profitability level of food industry companies. A number of 37 companies were reviewed in 2007-2011 time period. Regression and correlation models have been used in order to test the research assumptions. The results indicate that financing through long-term and short-term loan has effect on profit of each share. The results also indicate that financing through retained earnings has no effect on profit of each share. The results of this research are consistent with that of previous research. Moreover, the results of this research that financing through retained earnings has no effect on profit of each share, is not consistent with previous research.

Considering above mentioned results, below recommendations are proposed:

1. Since sample companies use borrowing method in order to supply financial resources, and also financing from internal resources of company such as retained earnings, because of its low cost and availability, we recommend companies to use their internal financing resources as far as possible.

2. Considering that in borrowing it is possible to use different resources with different cost values, from 0 up to 30% interest ratio, we recommend companies to try to supply finance in the form of portfolio, so that the average of their financing through borrowing, is at minimum.

3. We recommend banks to pay long term loans according to company status and analysis of company processes.

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