Assessment methods to finance small and medium enterprises (SME) in Qazvin Province

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Abstract

Various methods of financing the development of suitable bedding for quick access to the financial resources needed for project implementers need the best and fastest possible way and will produce economic. This study attempts to examine ways to finance industrial projects, 244 in small and medium enterprises Qazvin is based on sampling Morgan selected using data collected by the questionnaire is analyzed in SPSS software explain the methods used to identify the various types of domestic and international to select the most appropriate and efficient financing tool used to give applicants. The results indicate that the most used method of borrowing from a bank is use of other methods have been used to finance short.

Keywords: Financing methods, entrepreneurship, small and medium businesses, loan

Introduction

In 1990, financial management was introduced as a scientific and as a part of economy. Financial management duties and responsibilities have been changing from that time up to now. However, one of the important and fixed duties of financial management has been financing for different institutes. Companies try to maximize their value and appropriate financing plays important role in companies' profitability. Financial resources are made up of both internal and external resources. Internal resources include: cash flows resulted from operation, cash flows resulted from assets sale and external resources include borrowing from financial markets and distribution of shares (Ghods, 2012).

Statement of the problem

A company starts with its founder's capital before absorbing capital from investors. Therefore, in the next step, the company needs more capital and provides it through external investors (SchovinBacher, 2007). Financing small and average projects are among the important problems and unfamiliarity of executers with financing methods cause problems.

Almost 18392 incomplete industrial plans are in Iran and only 150 plans are among important projects and other projects are small and non-strategic. According to statistics (until November 2012), 6805 industrial units have had physical progress of about 20 to 40 % and about 5825 plans are close to completion with 40 to 60% of progress. Projects with more than 60% progress are about 5762 and other projects have had less than 20% progress (management of statistics in ministry of industry, mining and commerce, 2011).

This subject is so important that if some of the projects are financed well and completed, many jobs will be created and industrial projects executers will face fewer problems for financing through bank loans.

Research question

The question which is the main problem of the research is what is the main method used for financing small and medium-sized projects and whether the executers use the most appropriate methods or not.

Theoretical fundamentals and research background

Financing through borrowing: this method includes money borrowed by SMEs owners and must be repaid with interest rate. Many entrepreneurs use capital supplied by means of this method to establish

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their business (Bigdellou, 2005).

Financing through capital market: In this method, the investor(s) become the owner of the company. In this method, risk is divided and its potential learning also are divided (Ahmadpour and Moghimi, 2006).

Financing through cash flow (internal sources): a business is faced with two subjects in selection of appropriate source of financing: 1) whether internal resources can be used for financing? 2) if we need financing from outer resources, whether it is from liabilities or equity? If the answer is the first question, the form and place of resource should be clarified (Ghods, 2011).

Table 1. Definition of SMEs in European Union

	Number of employees(people)	Transactions volume (million Euro)	Total assets value (million euro)
Micro companies	Less than 10	Less than 2	Less than 2
Small companies	10 to 50	2 to 10	2 to 10
Middle-sized companies	50 to 250	10 to 50	10 to 43

Source: internet websites of European commission (Mosleh Shirazi, 2006), (Sheghaghi, 2005), (Ghareche, 1998).

Table 2. Advantages and disadvantages of methods of financing small and middle-sized projects

Financing methods	Advantages	Disadvantages
Methods based on liability and based on capital	Calculation of total company assets in financial statements	Unfavorable influence on company statements
Long-term financing through bank credits reserve	Increase in usable capital owned by board of managers and possibility of long-term repayment for liabilities	Dissatisfaction of shareholders from low EPS and payment of loans interest as a part of production costs
External resources	Possibility of receiving inexpensive loans and facilitation of goods and materials purchase in the origin	Conditions and terms of these resources are not cost-effective for SMEs and in some cases, SMEs do not have necessary specialization to use such resources.
Local model of micro-financing based on Donation Institute philosophy	Exploitation of wandering and without-owner resources and its distribution in investment markets	Religious problems and need to legal and religious licenses which are usually troublesome.
Private sources through borrowing Internal methods Through capital	Distribution of boycotted resources in private sector which mainly feel satisfied to deposit and purchase of securities with minimum earning	Investors who have invested a small capital may not tolerate market tensions variations.
New methods of financing the projects	Comprehensive types and styles of internal and external financing	Conditions of external resources are usually non-implementable for SMEs

Previous Research

In spite of many studies conducted in the field of capital structure, unfortunately financial studies do not have a long background in Iran and only in recent years, some studies have been conducted in the field of financial resources investigation and the following studies are a few samples

Hypotheses

In financing through banks, all financial operations and supervision and control and incentives are provided for entrepreneurs. Ownership of a part of investment hurts entrepreneurs motivation. When productivity is high, venture capital investors prefer

investment and when productivity is low, financing is done through banks (Etiyen, Brander, 2007).

Table 3. Studies done in this area.

	Researcher name	Research result
Internal background	Delavari (1998)	Results showed that although assets sum ratio to equity (lever ratio) has significant difference for companies that received loan in comparison with companies which increased capital, but the ratios of equity turnover and ratio of sales to assets sum and ratio of net profit to sale and the ratio of net profit to sale did not have significant difference. In other words, receiving loan by active companies of stock market did not result in favorable financial lever.
	Shafi'ee (2008)	Absence of an efficient capital market resulted in that banks become the only place for financing investment projects.
	Mahmoudi Alami (2010)	Internal financing method and capital financing method (equity) is not applied favorably but personal financing methods (private) and borrowing are used optimally in entrepreneurial plans of Mazandaran province cooperative sector.
	Aghajani et al (2010)	Personal capital method was in the top priority and borrowing, shares and internal resources were in the next ranks. Moreover, it was specified that the entrepreneurs under study did not have enough information about different financing methods and only used common and widespread methods.
	Applen, Lerner (2009)	VC investment comprises a large part of capital market. VC investment turnover does not show an unexpected change (variation) and is indicative of flourished market cycle. The studies show investment boom in 2009 and 2010.
External background	Atiyen, Brender (2007)	When productivity is high, venture capital investors prefer investment and when productivity is low, financing through banks is preferred.
	Palpo, Khannena (2010)	Investment through venture capital is a new method, but it is spreading in Asia rapidly. Newly-born economies are defined as low-income or average-income countries, countries with an increasing trend of economic privatization, but with organizational shortage. Results which have been achieved in the recent economic growth.
	Kiaou (2008)	Inadequate financing and inability to update machinery, shortage in energy, absence of access to skilled forces, increase in raw material price and cheap import goods have resulted in losing market share.
	Winoud and Fabouzi (2008)	It is tried to use assets which are able to create cash flow and increase their credit rank using different methods and mechanisms so that assets risk is transferred to investors and also financing is done more easily.
	Cho (2007)	Government must put investments related to entrepreneurial plans and their optimizations at top priority in order to maintain political resources.
	Kitao (2007)	Kitao's study in USA showed that reduction in tax on income results in increasing investment in stock market and investment in entrepreneurial plans.

First hypothesis: financing through borrowing from bank resources is one of the financing methods for SMEs in Ghazvin Province.

This hypothesis is related to Kitao's study in USA which showed that reduction in tax on income increases investment in stock market and investment in entrepreneurial plans (Kitao' 2007).

Second hypothesis: financing through stock market is one of the methods of financing in Ghazvin province SMEs.

This hypothesis is related to Rendovi and Gual's research. Their study showed that financing through personal financial resources is more efficient (Rendovi, Gual, 2003).

Third hypothesis: financing through cash flow (internal resources) is one of the methods of financing in SMEs in Ghazvin province.

This study is related to Kiao's study which showed that SMEs financing is one of the most important aspects of development plan in ASEAN

countries (Kiao, 2008).

Fourth hypothesis: methods of financing applied in Ghazvin SMEs have not been selected properly.

This hypothesis is related to the research conducted by Mahmoudialami which showed that internal financing and financing through capital (equity) are not applied favorably but personal (private) financing methods and financing through borrowing in are used optimally in Mazandaran province cooperative sector entrepreneurial plans (MahmoudiAlami, 2010).
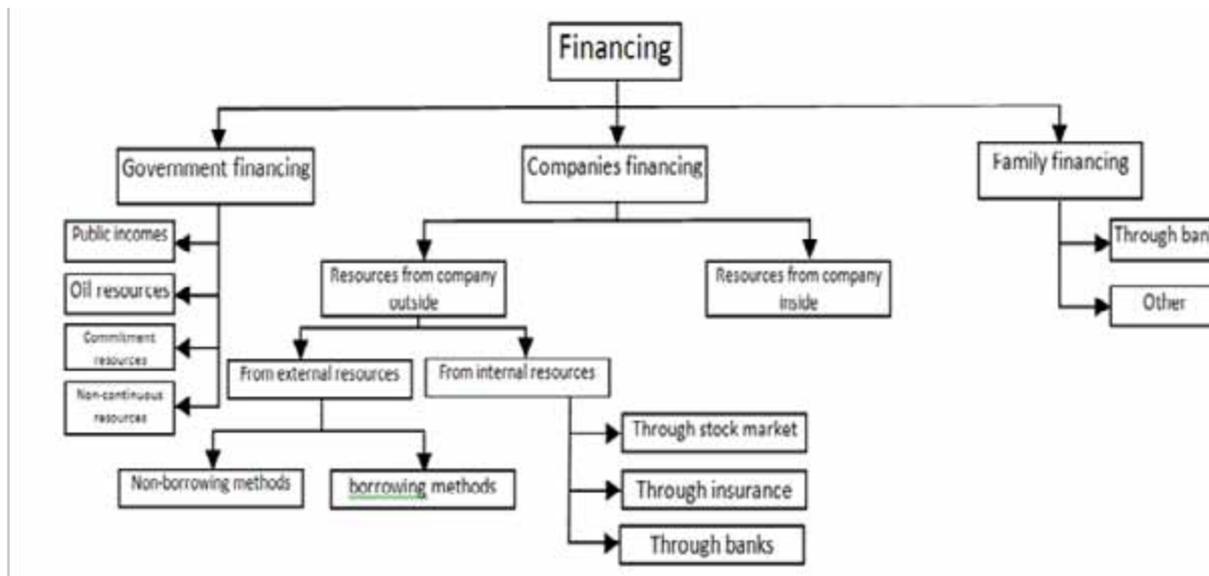

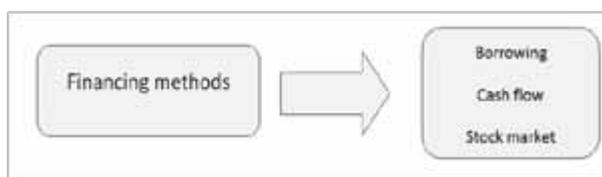**Figure 1. Different types of financing (Soltani et al, 2011)**

Figure 2. Research conceptual model.

Financing is an important step in achieving goals for SMEs. Study of financing methods is therefore of great importance. In this study, we try to propound some hypotheses for financing methods applicable to SMEs and the accuracy of such methods.

Methodology

The present study is a descriptive, survey and applied research because it deals with a real, objective, live and dynamic subject (Ghazvin province SMEs) and its results can be used practically. In other words, its results can be used in improvement of financing methods in SMEs in future.The present study is a sectional study in which data was gathered in a time period about 1 year. Population of the study included all industrial units having 10-99 employees in Ghazvin province which were 671 units according to statistical calendar distributed by Ghazvin Provincial Government in 2011. It was tried to select units which are similar to each other in terms of activity volume and company size. Morgan table was used to calculate sample size and 244 industrial units were selected by means of simple random sampling. Data was gathered through library studies and internet and also standard questionnaire. Questionnaires were distributed among the respondents through referring to managing directors, financial managers or owners of private businesses.

The result of hypotheses testing

In this section, conditions of 244 SMEs in Ghazvin province are described from different aspects. This investigation is related to 3 demographic questions and 4 sets of questionnaire questions which are dealt with separately in the following sentences:

About 78.7% of the companies under study (192

companies) were stock companies and 19.7% of the companies (48 companies) had individual ownership and 1.6% (4 companies) had Partnership ownership.

46.3% of the companies (113 companies) had 5-10 years of activity background and 35.7% of the companies (87 companies) had an activity background of 10-15 years and 8.2% of them (20 companies) had an experience of 15-20 years and 9.8% of the companies (24 companies) had a background of more than 20 years.

62.6% of the companies agreed with borrowing method (16.3% chose "completely agree" and 46.3% chose "agree"). This is while 22.9% did not have any idea about this. Furthermore, 14.5% were against using borrowingmethod to finance (11% disagreed and 3.5% completely disagreed).

49.5% agreed with using cash flow method (10% agreed completely and 39.5% agreed). This is while 27.7% did not have any idea about this method. Furthermore, 22.8% were against using cash flow method in financing (18% disagreed and 4.8% completely disagreed).

60.4% agreed to use capital market (stock market) (16% of the sample completely agreed and 44.4% agreed). This is while 24.2% did not have any special idea. Furthermore, 15.4% were against using stock market in financing (11.3% disagreed and 4.1% completely disagreed).

62.7% agreed to the selection of choosing proper financing methods (22.5% agreed completely and 40.2% agreed). This is while 26.5% did not have any special idea. Furthermore, 10.2% were against (8.8% disagreed and 2% disagreed completely). It can be concluded that the options in the questionnaire had important role in selecting proper methods of financing.

Inferential analysis of collected data

In this section, data gathered in relation to analysis of research hypotheses on the various methods of financing SMEs in Ghazvin province is analyzed. Statistical tests of Kolmogorov-Smirnov, Kruskal Wallis and Chi-square were used.

Kolmogorov-Smirnov test for matching samples distribution

In the present study, Kolmogorov-Smirnov test was used to investigate samples distribution. This test was calculated for all research hypotheses.

H0: distribution of data related to statistical sample is normal.

H1: distribution of data related to statistical sample is not normal.

Table 5. Results of Kolmogorov-Smirnov test for distribution of statistical sample

Parameter	Significance level	Z value in Kolmogorov-Smirnov test	Standard deviation	Mean
First hypothesis	Sig	6.467	0.448	3.04
Second hypothesis	0.0	4.389	0.710	2.64
Third hypothesis	0.0	5.89	2.463	3
Fourth hypothesis	0.0	5.431	0.579	3.12

According to the results of table above, sig level is less than error level (0.05) in all hypotheses and for all questions, therefore H0 is not verified. In other words, in 95% certainty level, it can be said that data related to statistical sample does not have normal distribution. Therefore, non-parametric tests were used.

Research hypotheses test with chi-squared test

First hypothesis: financing through borrowing from bank resources is one of the financing methods for SMEs in Ghazvin Province.

According to table above and using SIG which is less than 0.05, we conclude that the first hypothesis is accepted and this means that financing through borrowingfrom bank resources is a financing method in Ghazvin SMEs. This conclusion matches the results of Etyen and Brander (2007). They concluded that if productivity is low, financing is done through banks.

Second hypothesis: financing through stock market is one of the methods of financing in Ghazvin province SMEs.

Table 6. Results of chi-square test for each of the hypotheses

	Significance level Asymp. Sig.	Degree of freedom (DF)	Test statistic chi-square
First hypothesis	0.000	2	238.779a
Second hypothesis	0.000	3	137.724a
Third hypothesis	0.000	4	317.721a
Fourth hypothesis	0.000	2	116.418a

According to table above and using SIG which is less than 0.05, we conclude that the second hypothesis is accepted and this means that financing through stock market is a financing method in Ghazvin SMEs. This conclusion matches the results ofKitao's research (2007) in USA. His research showed that reduction in tax on income increases investment in stock market and entrepreneurial plans.

Third hypothesis: financing through cash flow (internal resources) is one of the methods of financing in SMEs in Ghazvin province.

According to table above and using SIG which is less than 0.05, we conclude that the third hypothesis is accepted and this means that financing through cash flow (internal resources) is a financing method in Ghazvin SMEs. This conclusion matches the results ofRendovi and Gual's research results in 2003. They concluded that financing through personal financial resources is more efficient.

Fourth hypothesis: methods of financing applied in Ghazvin SMEs have not been selected properly.

According to table above and using SIG which is less than 0.05, we conclude that the fourth hypothesis is accepted and this means that financing methods used in Ghazvin SMEs have not been selected properly. This result matches the results of a research conducted by Kiao(2008) in which he concluded that financing in SMEs is an important aspect of developing ASEAN countries. It was also concluded that absence of proper financing results in loss of market for SMEs.

Kruskal Wallis test

Investigation of relationship between hypothesis and activity background

H0: there is a significant relationship between hypothesis and activity background

H1: there is not a significant relationship between hypothesis and activity background

If significance level is less than 0.05, there is a significant relationship otherwise, there is no significant relationship.

Table 7. Comparison of relationship between hypotheses and activity background using Kruskal Wallis test

	First hyp.	Second hyp.	Third hyp.	Fourth hyp.
Chi-square	9.440	0.894	1.360	14.984
df	3	3	3	3
Signific. level	0.024	0.827	0.715	0.002

Because significance level of the first hypothesis is 0.024, therefore the first hypothesis is verified. This means that there is significant relationship between activity background and financing through borrowing from bank resources. Because the significance level of the second hypothesis is 0.827, therefore the second hypothesis is rejected. This means that there is not any significant relationship between activity background and financing through stock market (shares). Because significance level of the third hypothesis is 0.715, therefore the third hypothesis is rejected. This means that there is not any significant relationship between activity background and financing through cash flow. Because significance level for the fourth hypothesis is 0.002, therefore the fourth hypothesis is verified. This means that there is significant relationship between activity background and choosing the correct method of financing.

Investigation of relationship between hypotheses and ownership type

H0: there is a significant relationship between hypotheses and ownership type.

H1: there is not a significant relationship between hypotheses and ownership type.

If significance level is less than 0.05, there is a significant relationship. Otherwise, there is no relationship.

Table 8. Comparison of relationship between hypotheses and ownership type using Kruskal Wallis test

	First hypothesis	Second hypothesis	Third hypothesis	Fourth hypothesis
Chi-square	1.533	0.343	2.200	0.684
df	2	2	2	2
Significance level	0.465	0.843	.333	0.710

Because significance level of the first hypothesis is 0.465, therefore the first hypothesis is rejected. This means that there is no significant relationship between ownership type and financing through borrowing from bank resources. Because significance level for the second hypothesis is 0.843, therefore the second hypothesis is rejected. This means that there is no relationship between ownership type and financing through stock market (shares). Because

significance level is 0.333 for the third hypothesis, therefore the third hypothesis is rejected. This means that there is no significant relationship between ownership type and financing through cash flow (internal resources). Because significance level for the fourth hypothesis is 0.710, therefore the fourth hypothesis is rejected. This means that there is no significant relationship between ownership type and selection of proper financing method.

Conclusions

Results of investigations and statistical analyses showed that Concerning the first hypothesis on borrowing, it was concluded using Chi-square test that financing through borrowing from bank resources is one of the methods of financing in Ghazvin SMEs from financial mangers'' point of view. According to the gathered data and the analyses conducted, the first hypothesis is verified. Therefore, it is recommended that discounts be regarded in loans interests and exemptions be considered in taxes so that investment is encouraged. Results of this research are similar to the results of Mahmoudi Alami research. He found that borrowing is used optimally in entrepreneurial plans of cooperative sector in Mazandaran Province, therefore facilitation of receiving financial resources through borrowing improves entrepreneurs activity.

Concerning the second hypothesis on using stock market (shares), chi-square test and statistical analyses showed that financing through stock market is one of the methods of financing in Ghazvin SMEs from financial managers' point of view. According to the collected data and the analyses conducted, the second hypothesis is verified. Therefore, it is recommended that educational seminars be held and investors become familiar with financing methods through stock market. That is because SMEs are usually managed by families and they are less interested in selling shares and involving others in their projects. This result matches the result of Welch research (2008) in which he observed that companies change their capital structure due to changes in earnings per share.

Concerning the third hypothesis on financing through cash flow (internal resources) and using chi-square test, we concluded that financing through cash flow (internal resources) is a method used in Ghazvin SMEs. Therefore, the third hypothesis is verified. It is advised to authorities to plan for satisfying company's needs with cash flows

before granting loans to SMEs investors. This result matches the result of Aghajani research. He concluded that using internal resources was one of the important financing methods. It is also advised that Rendovi and Gual's result be considered in this case. They concluded that financing through personal resources is more efficient than stock market.

Concerning the fourth hypothesis on proper use of financing methods and using chi-square test, we concluded that proper methods of financing have not been used in Ghazvin SMEs. Therefore, the fourth hypothesis is verified. Therefore, it is recommended that necessary advices be given to SMEs owners so that the resources are not wasted and the resources are allocated well.

Results showed that borrowing and stock market are attractive for financial managers and owners. This is while interest rate of bank loans in industry and mining sector was 12% and interest rate expected by stock market investors was more than that in the recent years.

Based on financial theories, it can be said that the cost of fixing liabilities and confusion cost related to financing through bank loans and shares is pretty high. However, internal resources do not involve the above costs and do not reduce profitability. The difference between real value and nominal value of a share is something important and must be considered. According to regulations, all shares are given to investors with their nominal value which is usually very smaller than real value in secondary market and the shares earnings are transferred to brokers and not to companies.

It was also observed that borrowing resources had not been used properly. For instance, most companies blocked the cash received from this resource in their banks accounts and this results in inefficient use of resources in industries. In some other companies, loan resources were spent on purchasing machinery and equipment and they were used improperly and therefore, the companies' turnover reduced considerably.

Recommendations

Companies can use other financing methods like distribution of bonds, prize shares, capital rent, product pre-sale and other new methods.

In case of impossibility of using the above methods, companies had better use their internal resources for financing.

Banks had better supervise more properly on the consumption of loans and resources they grant so

that production capacity and real needs of companies are considered.

The law of distribution of shares with nominal price must be revised and limited to the start of company's activity and in other cases; shares should be distributed with their market or real price.

The government should exercise tax exemptions in order to encourage investors in production sectors.

Recommendations for future research

Statistical population can be enlarged in future works so that the results are closer to reality.

•   It is advised to investigate the relationship type between companies' different methods o financing and characteristics like company size, fixed assets and profitability in future studies.

•   Identification and prioritization of mangers'' decision-making criteria in selecting financing methods for their companies can also be considered in future studies.

•   Investigation of capital real cost for each of financing methods

•   Identification and prioritization of managers' decision-making criteria for selecting financing methods

•   Investigation of interest cost for companies which are financed through borrowing and its coordination with accounting standards

•   Investigation of financing methods in entrepreneurial plans in different economic sectors

•   Investigation of relationship between various financing methods with characteristics like company size, fixed assets and profitability

•   Investigation of various methods of financing in different life-cycle of companies

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