

Full Length Research Paper

The Relationship between Capital Structure and Profitability in Commercial Banks: Evidence from Iran

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This study aims to investigate the relationship between the profitability and the capital structure of banks. The statistical population of this research consists of all public and private banks for a decade from 2003 to 2012. Using the screening method, the sample is comprised of 18 public and private banks. In this study, return on assets, return on equity, and committed net interest margin are selected as dependent variables and debt-to-equity ratio and debt-to-assets ratio are considered as independent variables. This research exploits compilation and panel (board) data with random and fixed effects and data analysis results at the 95% confidence level shows that Debt-to-equity and debt-to-assets have a direct and significant relationship ($p < 0.05$) with return on equity and return on assets. Moreover, results indicate that there is no significant relationship between debt-to-equity and debt-to-assets ratios and the committed net interest margin of the banks.

Keywords: return on equity, return on assets, committed net interest margin, Debt-to-equity, debt-to-assets.

INTRODUCTION

Profits are considered important information in economic decisions. Previous studies regarding profits constitute one of the largest and highest research efforts in the history of accounting. Profit, as a guide to dividends payments and a means of evaluating the effectiveness of management and predicting and assessing decisions, has always been utilized by financial analysts, managers, and investors (Saghafi, Ali and Aghayi, Mohammad Ali, 1994, 15). Therefore, many researchers have tried to identify the effective factors of companies' profitability. From the view of financial management, the capital structure (the combination of long-term debts and the equity of the shareholders) is one of the most important study subjects in two decades. Today, the ranking of companies regarding credibility is mostly dependent on their capital structure and in fact, production and service provision are based on proving and consuming financial funds. The capital structure of companies is an early warning regarding their financial difficulties and it is necessary for their strategic planning to seriously focus on determining the effective factors of the financial provision efficiency. It is claimed that an optimal capital structure can lead to more profitability of institutions and companies.

Different organizations, who seek to achieve a superior position and unique advantages in the competition, are aware of the importance of providing superior services in satisfying customers by offering services beyond their expectations (Collins & Maydew, 1997, 45). Organizational activities and process of banks that are related to their profitability are of significant importance. The institutional framework of banks' organizational activities and processes is the capital structure which is directly or indirectly related to their profitability activities. An appropriate debt and equity structure for shareholders is more sensitive in service providing organizations like banks, transportation industry, medical services, insurance, hotel management, and etc. society expects from the bank system to make an effort in attracting savings and properly allocate them to useful economic activities, which eventually leads to the profitability of banks and legal institutions, as well as progressing in line with the comprehensive economic and social advances, maintaining debts at a reasonable level, and coordinating with social requirements. There is practically no such thing as a bank with no debts, whose capital structure is formed by equities of its shareholders (a combination of long-term debts and shareholders' equities) (Vives, 2006, 178).

Bank investors believe that a constant interest guarantees higher profit payments in comparison to fluctuating interests. Moreover, fluctuating interests are considered as important risk measure for bank investors and banks with more constant interests pose fewer risks (Cornett et al., 2009, 420). Therefore, banks with higher profit margins are more interested in investing and are considered more suitable for investment. Bank managers, as representatives of the stockholders and the people, should continuously try to adjust the bank's capital structure to minimize the cost of bank capital and maximize the profitability (Bose, 2002, 94). Furthermore, through income smoothing, bank managers are highly motivated to provide a desirable image of the banks' profitability process and keep creditors and stakeholders satisfied. Banks and legal institutions aim to focus their organizational activities and processes on profitability and providing the best services to customers, which is crucial for the long-term survival of the

organization (Barker, 20, 1995). The organization has also understood the increasing importance of using long-term credits and realized that they should always control the amount of debt and payment facilities (Cornett et al., 2009, 43). That is why it is necessary to study the relationships between the capital and debt structure and banks' profitability to increase the power of bank managers in making proper and optimal analyses and efficient and effective decisions. Theorists consider the emergence of the profitability concept a result of the increasing growth of organizations and the government of a highly competitive environment on economic units. On the other hand, recently, several patterns of increasing productivity and profitability, as well as novel investments, have developed according to banks' managerial policies, requirements, customer behaviors, and the national organizational cultures. According to the investigations, since the private banking industry is still in its rudimentary stages, it was found that no comprehensive research has been conducted regarding the relationship between banks' capital structure and profitability. Therefore, this research aims to study the effect of the capital structure on the profitability of the private banks listed in Tehran stock exchange. More specifically, the relationship between the capital structure and banks' profitability is measured through factors like Debt-to-equity ratio, return on assets, net accrual income margin, return on equity, and debt-to-assets ratio. In order to clarify the subject, some relevant studies are first introduced and then the findings and conclusions are presented.

In a study called "the capital structure, equity ownership, and company's performance", Dimities & Psillaki (2010) concluded that the contradictory effects of productivity on the capital structure in summarized in two hypotheses: 1) return-risk and 2) the right of using commercial brand. Using regression, the effect on productivity and consequently the empirical validity of the two hypotheses were tested, the role of the ownership structure, the type of the capital structure and the companies' performance was analyzed, and it was found that the ownership structure and the capital structure have a direct relationship with the performance of the company.

In a study called "the capital structure, revenue policies of multinational companies", Aggarwal & Kyaw (2010) have shown that due to external risks, we can expect a reduction in the debt capacity of companies. There is a relationship between the debt ratio and the revenue and in comparison to internal companies, multinational companies have considerably lower debts and a debt ratio decreases with the increase of multinational companies.

In a study called "the capital ratio and the cross-section of bank stock returns: evidence from Japan", Sichong Chen (2011) concluded that the capital ratio is an index to evaluate banks' risks. Cross-sectional changes in the ratio of the capital market to the values of a systematic pattern of productivity indicate that regarding the capital market value, the market makes constant signals about poor profitability. Eventually, evidence showed that the market value of investments can be a powerful predicting measure for the performance of bank stocks during the financial crisis of late 1990.

In a study called "the capital structure and bank profitability in Sri Lanka", Niresh (2012) showed that banks' capital structure is particularly related to debts and the financial provision literature of the companies and has long been the focus of company managers. In the banking industry, there are a small

number of studies regarding the concept of the capital structure and profitability. Decisions about the capital structure are vital to the concept of banking profitability and directly affect the decisions about banks' profitability. Therefore, achieving high profits require determining and modeling an appropriate capital structure. More specifically, Niresh studied the effect of the capital structure on the profitability for a sample of banks in Sri Lanka during 8 consecutive years from 2002 to 2009. He concluded that there are different key points regarding these two variables and the great importance of the debt ratio in determining different profitability factors, including return on equity, market value of stocks, and the growth rate of investment, can be proved in the banking industry of Sri Lanka. Moreover, this research increased the theoretical knowledge about the relationship between banks' capital structure and profitability in Sri Lanka.

Setayesh et al. (2011) have investigated the "effective factors of the capital structure from the view of the agency theory". Results of testing the research hypotheses using the panel data regression model indicate that corporate management mechanisms, including ownership concentration, percentage of non-executive board members, and the independence of the board have a significant effect on the book leverage and the market leverage of the companies studied. Therefore, there is a significant and positive relationship between agency costs and the book and market leverages. Moreover, results indicate that return on assets ratio, dividends paid per share, and Tobin's Q ratio are effective factors on the book leverage. Finally, considering the obtained results, we can understand that in both book and market leverages, the effect of agency cost factors is stronger than other variables.

Haghighat, Hamid and Bashiri Vahab (2012) conducted a research called "the relationship of financial flexibility and the capital structure". The results of this research show that new-born companies should distribute less risky funds and debts and maintain balanced leverage ratios. Developing companies should use debt financing and maintain high leverage ratios. Adult companies should rely on intra-organizational financing and maintain lower leverage ratios. The findings of this research are in line with the trade off theory; however, it does not correspond to the pecking order theory regarding the new-born companies.

METHODOLOGY

This study is an applied research regarding objective, a descriptive research regarding method, and a survey regarding implementation.

Data Analysis and Collection Tools

In this study, "Rahavard Novin" and "Tadbirpardaz" databases were used to collect the necessary data to compute the research variables and in cases where the data was missing, we referred to manual library archives of the stock exchange organization, the research management website, and the Islamic development and studies of the stock exchange organization. The data collection method exploited was the library method which consists of two stages:

First stage: in order to develop the history, subject literature, and research theories, we used the evidence and dissertations in the library in the research and sciences management faculty, articles, and online scientific search databases.

Second stage: the library method was employed to collect the theoretical information and the research literature which included English and Persian books, dissertations, and particularly English articles of credible financial journals of Science Direct, Prequest, SSRN, etc.

In this study, the multi-variable regression method was employed. The main goal of the regression model is to investigate whether there is a relationship between dependent and independent research variables. Moreover, the data were analyzed in the descriptive statistics section by computing central tendency, measures, e.g. mean, median, and dispersion measures, e.g. standard deviation, skewness, and kurtosis. Furthermore, compilation data were used to test the hypotheses in which F test was employed to select between panel and pooling methods. In case of selecting the panel method, Housman test is used to select between random or fixed effect methods. In addition, in order to test the stationarity of variables, Dicky-Fuller's test is used in case of selecting the pooling method and Hadri's test is used in case of selecting the panel method. Using Excel, The collected data is modified and categorized based on the study variables, inserted into Eview, SPSS, and Minitab to perform the final analysis, and finally the hypotheses are confirmed or rejected using the results.

Definition of Research Variables

The research variables are divided into two categories:

Dependent variables: return on assets, return on equity, and net accrual income margin.

Independent variables: Debt-to-equity ratio and debt-to-assets ratio.

The Operational Definition of Variables

The Operational Definition of Dependent Variables

Return on Assets (ROA_{i,t}):

Return of assets is computed according to Abor (2005) as follows:

$$ROA_{i,t}$$

Return on Equity (ROE_{i,t}):

Return on equity is computed according to Titman (1984) as follows:

$$ROE_{i,t}$$

Net interest Margin (NIM_{i,t}):

Committed net interest margin is computed based on Vives (2006) as follows:

$$NIM_{i,t}$$

We should note that despite the meaning of the word "Interest", the most important principle in Islamic banking is dividing the profit and loss resulting from a deal; therefore, in the Islamic banking system, facilities are paid through Islamic contracts and according to directive 772 of the credit and money council,

2005⁴, the revenue of the granted facilities of banks is based on commitment. Thus the interest of the granted facilities is predicted based on the expected profit in the form of Islamic contracts and the commitment of the receiver of these facilities is computed in the contracts and recorded in the accounts. On the other hand, regarding the interest of timed investment deposits, banks make a commitment about the interest resulting from the integration of the aforementioned resources in granting facilities, according to contracts matching the duration and the amount of the deposit and pay this interest beforehand. At the end of the period, after subtracting the honorarium, any additional profits will be paid to depositors as absolute interest.

Accordingly, in this study, which relates to the banks of the Islamic Republic of Iran and the Islamic banking system, we use accrual net interest margin instead of the term "net interest margin".

Definitions of Independent Operational Variables

Debt-to-equity Ratio (Debt/Equity Ratio_{i,t}):

Debt-to-equity ratio is computed based on Pandey (2009) as follows:

$$\text{Debt-to-equity Ratio}_{i,t}$$

Debt-to-assets Ratio (Debt/Total Assets Ratio_{i,t}):

Debt-to-assets ratio is computed according to Taub (1975) as follows:

$$\text{Debt/Total Assets Ratio}_{i,t}$$

Population, Sample, and Sampling Method

The statistical population of this study consists of all private and public banks of Iran from which the required data from 2003 to 2012 is available. The actual data of this research are collected from the real information of banks' financial transactions published in Tehran stock exchange and the website of the central bank of Iran from which the data up to the end of 2012 from 18 banks was selected as the final sample as follows:

Table1. The names of the banks in the statistical sample

	Bank name
1	Sanaato Maadan
2	Eghtesad Novin
3	Iran Zamin
4	Parsian
5	Pasargad
6	Tejarat
7	Refah Kargaran
8	Saman
9	Sepah
10	Sarmayeh
11	Sina
12	Saderat Iran
13	Keshavarzi
14	Maskan
15	Mellat
16	Melli
17	Mehr Iran
18	Postbank Iran

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Research Hypotheses and Relevant Models

First Hypothesis:

There is a significant relationship between debt-to-equity ratio and return on assets.

$$ROA_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

Second Hypothesis:

There is a significant relationship between debt-to-equity ratio and return on equity.

$$ROE_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

Third Hypothesis:

There is a significant relationship between debt-to-equity ratio and committed net interest margin.

$$NIM_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

Fourth Hypothesis:

There is a significant relationship between debt-to-assets ratio and return on assets.

$$ROA_{i,t} = \beta_0 + \beta_1 \text{Debt-to-assets Ratio}_{i,t} + \varepsilon_{i,t}$$

Fifth Hypothesis:

There is a significant relationship between debt-to-assets ratio and return on equity.

$$ROE_{i,t} = \beta_0 + \beta_1 \text{Debt-to-assets Ratio}_{i,t} + \varepsilon_{i,t}$$

Sixth Hypothesis:

There is a significant relationship between debt-to-assets ratio and committed net interest margin.

$$NIM_{i,t} = \beta_0 + \beta_1 \text{Debt-to-assets Ratio}_{i,t} + \varepsilon_{i,t}$$

Research Findings

Table 2 presents the descriptive statistics of the research variables during the investigation period. The descriptive statistics of the research variables are measured using the banks' data during the testing period (2003-2012), including mean, median, standard deviation, minimum, and maximum.

Table 2. Descriptive statistics of the research variables

Variables		Mean	Median	Standard Deviation	Minimum	Maximum
ROA	Return on assets	0.2571	0.2528	0.0481	0.1629	0.3413
ROE	Return on equity	0.3251	0.3236	0.0604	0.2006	0.4414
NIM	Net interest margin	0.0944	0.0934	0.0247	0.0439	0.1413
Debt/equity	Debt-to-equity Ratio	0.7751	0.7816	0.1159	0.5399	1.0497
Debt/total assets	Debt-to-assets Ratio	0.5898	0.5945	0.0735	0.4342	0.7394

In table 2 for instance, regarding return on assets, means, median, standard deviation, minimum, and maximum are respectively 0.2571, 0.2528, 0.0481, 0.1629, and 0.3413. Since the median of return on assets is less than the mean return on assets, the distribution of return on assets for the sample is skewed to the right. Regarding return on equity,

mean, median, standard deviation, minimum, and maximum are respectively 0.3251, 0.3236, 0.0604, 0.2006, and 0.4414. Since mean is slightly larger than median, we can say that the distribution of return on equity for the sample is skewed to the right.

In what follows, the main hypotheses are tested.

Testing the First Hypothesis:

“There is a significant relationship between debt-to-equity ratio and return on assets.”

$$ROA_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

After testing the regression premises and making sure they are satisfied, results of fitting the above regression equation is

presented in table 3. The value of the f-test (13.909) indicates the significance of the entire regression model. The determination coefficient and the adjusted determination coefficient of the above model are respectively 42.8 and 38.1. Therefore, we can conclude that in this regression equation, only about 38.1% changes of return on assets are explained by the independent variable.

Table 3. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Intercept	B ₀	1.789	2.411	0.045
Debt-to-equity Ratio	B ₁	0.887	0.231	0.042
Coefficient of determination	0.428	F-test		13.909
Adjusted coefficient of determination	0.381	Significance (P-value)		0.008
		Durbin-Watson		2.018

Test Result

According to table 3, the significance level of debt-to-equity ratio is less than the considered significance level of this research (5%). Moreover, the absolute value of the t-test related to these variables is larger than the t-test obtained from

the table with the same freedom degree. Therefore, hypothesis H₀ is rejected at the 95% confidence level and hypothesis H₁,

i.e. there is a significant relationship between debt-to-equity ratio and return on assets”, cannot be rejected.

Testing the Second Hypothesis:

There is a significant relationship between debt-to-equity ratio and return on equity.

$$ROE_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

After testing the regression premises and making sure they are satisfied, results of fitting the above regression equation is

presented in table 4. The value of the f-test (9.876) indicates the significance of the entire regression model. The determination coefficient and the adjusted determination coefficient of the above model are respectively 41.7 and 35.2. Therefore, we can conclude that in this regression equation, only about 35.2% changes of return on equity are explained by the independent variable.

Table 4. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Intercept	B_0	0.651	0.223	0.823
Debt-to-equity Ratio	B_1	0.709	2.876	0.026
Coefficient of determination	0.417	F-test		9.876
Adjusted coefficient of determination	0.352	Significance (P-value)		0.023
		Durbin-Watson		2.134

Test Result

According to table 4, the significance level of debt-to-equity ratio is less than the considered significance level of this research (5%). Moreover, the absolute value of the t-test related to these variables is larger than the t-test obtained from the table with the same freedom degree. Therefore, hypothesis H0 is rejected at the 95% confidence level and hypothesis H1, i.e. there is a significant relationship between debt-to-equity ratio and return on equity", is confirmed.

Testing the Third Hypothesis:

There is a significant relationship between debt-to-equity ratio and committed net interest margin.

$$NIM_{i,t} = \beta_0 + \beta_1 \text{Debt-to-equity Ratio}_{i,t} + \varepsilon_{i,t}$$

After testing the regression premises and making sure they are satisfied, results of fitting the above regression equation is presented in table 5. The value of the f-test (17.791) indicates the significance of the entire regression model. The determination coefficient and the adjusted determination coefficient of the above model are respectively 35.9 and 32.6. Therefore, we can conclude that in this regression equation, only about 32.6% changes of committed net interest margin are explained by the independent variable.

Table 5. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Intercept	B_0	0.892	2.311	0.034
Debt-to-equity Ratio	B_1	0.453	1.073	0.509
Coefficient of determination	0.359	F-test		17.791
Adjusted coefficient of determination	0.326	Significance (P-value)		0.00065
		Durbin-Watson		1.427

Test Result

According to table 5, the significance level of debt-to-equity ratio (0.509) is higher than the considered significance level of this research (5%). Moreover, the absolute value of the t-test related to these variables is smaller than the t-test obtained from the table with the same freedom degree. Therefore, hypothesis H0 is confirmed at the 95% confidence level and hypothesis H1, i.e. there is a significant relationship between debt-to-equity ratio and committed net interest margin", is rejected.

Testing the Fourth Hypothesis:

There is a significant relationship between debt-to-assets ratio and return on assets.

$$ROA_{i,t} = \beta_0 + \beta_1 \text{Debt to total assets Ratio}_{i,t} + \varepsilon_{i,t}$$

After testing the regression premises and making sure they are satisfied, results of fitting the above regression equation is presented in table 6. The value of the f-test (10.911) indicates the significance of the entire regression model. The determination coefficient and the adjusted determination coefficient of the above model are respectively 38.5 and 35.1. Therefore, we can conclude that in this regression equation,

only about 35.1% changes of return on assets are explained by

the independent variable.

Table 6. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Constant number	B_0	0.943	3.167	0.011
Debt-to-total assets Ratio	B_1	1.107	2.753	0.032
Coefficient of determination	0.385	F-test		14.765
Adjusted coefficient of determination	0.351	Significance (P-value)		0.013
		Durbin-Watson		10.911

Test Result

According to table 6, the significance level of debt-to-assets ratio is less than the considered significance level of this research (5%). Moreover, the absolute value of the t-test related to these variables is larger than the t-test obtained from the table with the same freedom degree. Therefore, hypothesis H0 is rejected at the 95% confidence level and hypothesis H1, i.e. there is a significant relationship between debt-to-assets ratio and return on assets", is confirmed.

Testing the Fifth Hypothesis:

There is a significant relationship between debt-to-assets ratio and return on equity.

$$ROE_{i,t} = \beta_0 + \beta_1 \text{Debt-to-total assets Ratio}_{i,t} + \varepsilon_{i,t}$$

After testing the regression premises and making sure they are satisfied, results of fitting the above regression equation is presented in table 7. The value of the f-test (8.321) indicates the significance of the entire regression model. The determination coefficient and the adjusted determination coefficient of the above model are respectively 40.9 and 37.1. Therefore, we can conclude that in this regression equation, only about 37.1% changes of return on equity are explained by the independent variable.

Table 7. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Intercept	B_0	1.254	2.489	0.038
Debt-to-total assets Ratio	B_1	0.638	4.112	0.0029
Coefficient of determination	0.409	F-test		8.321
Adjusted coefficient of determination	0.371	Significance (P-value)		0.026
		Durbin-Watson		1.427

Test Result

According to table 7, the significance level of debt-to-equity ratio is less than the considered significance level of this research (5%). Moreover, the absolute value of the t-test related to these variables is smaller than the t-test obtained from the table with the same freedom degree. Therefore,

hypothesis H0 is rejected at the 95% confidence level and hypothesis H1, i.e. there is a significant relationship between debt-to-assets ratio and return on equity", is confirmed.

Testing the Sixth Hypothesis:

There is a significant relationship between debt-to-assets ratio and accrual net interest margin.

$$NIM_{i,t} = \beta_0 + \beta_1 \text{Debt-to-assets Ratio}_{i,t} + \varepsilon_{i,t}$$

Table 8. Results of fitting the regression equation

Variable name	Variable coefficient	Coefficient value	T-test	Significance level
Intercept	B_0	1.592	2.132	0.047
Debt-to-assets Ratio	B_1	0.705	0.911	0.342
Coefficient of determination	0.348	F-test		15.101
Adjusted coefficient of determination	0.307	Significance (P-value)		0.000
		Durbin-Watson		1.427

Test Results

According to table 8, the significance level of the debt-to-assets ratio is higher than the considered significance level of

the research (5%). Moreover, the absolute value of the t-test related to this variable is smaller than the t-test obtained from the table with the same freedom degree. Therefore, hypothesis H0 is confirmed at the 95% confidence level and hypothesis H1, i.e. there is a significant relationship between debt-to-assets ratio and the accrual net interest margin is rejected.

DISCUSSION AND CONCLUSIONS

The phrase "capital structure" refers to the type and percentage ratio of different types of stock exchange published by the private unit. The optimal capital structure also consists of ratios (various stock exchanges) which can maximize the total value of the private unit. The maximum value for stockholders is in the range of the maximum value of the company. Management should use the ratio of debt to total value (or the amount of financial leverage) to maximize the value of the company, since this ratio creates the highest financial return for the company's shareholders. The value of stocks and the total value of the stock exchange increases with the amount of debt. Increasing debt is only desirable to a specific extent. After exceeding the optimal limit, increasing debt reduces the value of the company (Fakhari Hosein and Taghavi Seyyed Rouhollah. 2009, 89).

However, the question is how can we determine the maximum value of a private unit?

Considering the position and the importance of the capital and what was mentioned, in order to answer this question, identifying key effective factors of decision making regarding the capital structure is critically important.

Generally, a desirable state in a company corresponds to two groups of issues. The first group includes internal issues of the company which is affected and controlled by the company's management and the second group consists of external issues which is usually independent from the company's management. One of the issues which is necessary to achieve a desirable financial state in a company is determining the capital structure of the company.

As it was mentioned, there are different theories and perspectives about the presented capital structure some which focus on the intrinsic factors of the company. These factors include capital cost, company's risk-taking, the size of the company, factors related to profits, sales, and returns. However, as it was mentioned, extrinsic factors like social, cultural, political, and economic conditions are extensively and sensitively effective in the process of success (Antoniou et al., 2002, 81).

Studies, which investigate the variables affecting the capital structure have found that selecting the capital structure of a company is affected by the particular characteristics of the company, as well as the surrounding environment and factors like the general economic health, existence of financial markets, and the banking section credits of the country. Moreover, Drobetz et al. (2007, 14) have shown that there is a relationship between economic variables and the capital structure. This indicates that the fluctuations of each major economic variables can rapidly affect the determination companies' capital structure. They have also shown that changes in major economic policy making can be tangibly effective in financial provision costs of companies and the

reduction or increase of this cost depends on the recession or the prosperity of the economy.

Another study regarding the effectiveness of major economic variables in the capital structure is Song Shin and Adrian (2009, 2). They have shown that desirable or undesirable economic conditions and the major economic variables of a country is effective in the development of the companies' capital structure. Furthermore, in order to determine the optimal capital structure, not only the internal factors of a company, but the economic state of the fluctuations related to major economic variables, as well as relevant policy makings should be taken into consideration.

In addition, the goal of this study is to investigate the relationship between the capital structure and profitability of the bank and thus all 18 private and public banks of the country were studied during a decade from 2003 to 2012. In this study, return on equity, return on assets, and banks' committed net interest margins were considered as dependent variables and Debt-to-equity and debt-to-assets ratios were selected as independent variables. Moreover, compilation and panel (board) data with random and constant effects were used and data analysis results at the 95% confidence level showed that there is a significant direct relationship between return on equity, return on assets, Debt-to-equity ratio, and debt-to-assets ratio. Furthermore, results indicated that there is no significant relationship between committed net interest margin, Debt-to-equity, and debt-to-assets which are lined with the previous research.

Finally, according to the results of this study, we can provide recommendations to exploit these results:

- The attention of legislating institutions, including the central bank, as well as manager and decision makers of all private and public banks to the effect of debt-to-assets ratio on profitability indices of banks, including return on assets, return on equity, and committed net interest margin.
- The attention of legislating institutions, including the central bank, as well as manager and decision makers of all private and public banks to the effect of Debt-to-equity ratio on profitability indices of banks, including return on assets, return on equity, and committed net interest margin.
- According to the findings of this research, it is recommended to potential and actual creditors and investors of banks and financial institutions to pay a special attention to the effect of Debt-to-equity and debt-to-assets ratios on the profitability of banks, which was explained in this study, since these important factors lead to optimal decisions with minimum risk and maximum returns.

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