

The Impact of Public Offering of Stock on Return on Equity and Their Leverage

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ABSTRACT

Financial operation is one of the most important criterions of deciding about purchase, sale or holding stocks of corporation. Interring corporations to securities exchange can affect lots of financial factors because of changing in stockholders. Because of this, the purpose of this research is an investigation of the Impact of Public Offering of Stock on Return on Equity and their Leverage. Hence all corporations that has been entered to securities exchange during 2004 to 2010, (exception investment companies, banks and insurance) have been studied with the marital t test. Such that the average of variables listed during last 3 periods and 3 future periods has been evaluated. Result of study shows that public offering of stock has no effect on these variables.

KEYWORDS: Public Offering, stock, Financial markets

1- INTRODUCTION

Financial markets exist wherever financial transactions are conducted. Financial markets can be defined as the transfer of financial assets. The stock exchange is an official and organized capital market in which purchase and sale of stocks or governmental bonds or bonds of reliable private institutes are carried out under special regulations and legalized arrangements. One of the important characteristics of the stock exchange is the legal protection of owners of savings and stagnant capital as well as legal requirements for capital applicants [8].

Attracting the stagnant savings of people and pushing them towards manufacturing units as well as providing opportunities for public participation in the development of productive activities and sharing them in factories are considered among the main objectives of participation securities, which is one the roles of the stock exchange. Going public marks an important watershed in the life of a young company. In fact, it provides access to public equity capital and so may lower the cost of funding the company's operations and investments. It also provides an avenue for trading the company's shares and enables its existing shareholders to diversify their investments [13].

In the stock exchange, due to the concentration of capital which is aimed at participation in the rights of accepted companies and has formed a targeted market, the possibility of increasing capital is much easier than the case where companies take this action out of the stock exchange, because they will have to seek new partners to raise capital, which is sometimes associated with bargaining and would lead to increased costs related to the development. The entrance to the stock exchange reduces the quality of financial reporting; hence, companies manipulate financial variables after entering the stock exchange.

Without manipulation of real operations and cash flows of the company, directors can show the economic performance of companies more or less than the actual amount through applying their power in the field of financial reporting [1].

Managers and experts of accreditation are two groups for whom the information of financial performance is of utmost importance. In this regard, they assess the company position by taking into consideration the information such as financial ratios and make the appropriate decision based on it. So, considering the importance of financial performance, the present research investigates the factors affected by public offering of stock.

2- The research theoretical foundations and literature

2-1- Leverage

One of the ways used to maximize the value of the company and the wealth of shareholders is the appropriate selection or combination of long-term financial resources, so that the financial resources can obtain more rate of

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return through features such as low cost of capital; hence, the theory of capital structure is closely related to the company's cost of capital. Deciding on the type of financing and capital structure of a company plays a vital role in its welfare and financial position. A wrong decision in relation to the financing and capital structure can lead to the financial constraints, liquidation, and bankruptcy of the company [9].

Companies must implement strategies that lead to a reduction in the marginal cost of capital; and in this way, the economic efficiency and thereby the value of the company will increase [11].

To achieve an optimal capital structure and minimize the cost of capital, companies should use a combination of different financial sources such as bonds, issuance of stock, funds, and internal sources such as retained earnings. Managers of companies choose different levels of financial leverage to achieve an optimal capital structure [11].

2-1-2- Capital

Capital can be contracted in two main groups: loans and stocks [3].

- Loans and financial facilities

Medium- and long-term liabilities are defined as debts that are repaid within a few years. This type of debts is of utmost importance in company's financing structure and cost of capital. Generally, to develop a financing strategy based on the source and amount of funds, it is necessary to take into consideration cases, some of which are as follows [2]:

- 1- Costs and risks of different financing strategies
- 2- The current ratio of debt to equity
- 3- The maturity date of current debts
- 4- Restrictions on loan contracts
- 5- The type and amount of collateral demanded by long-term lenders
- 6- The profitability and cash position of the company

And so on.

Sources of debt include bank loans, loans of insurance companies and other credit institutions, equipment financing, mortgage money, bonds, participation bonds, and so forth.

- Financing through stocks

Financing through common and preferred stocks is a method of long-term financing whose costs are higher than the long-term debt.

2-2- Return on equity

Generally, shareholders of a company are divided into two broad groups: common and preferred shareholders.

Owners of preferred stock, compared to common stockholders, have a greater claim to dividends; in other words, preferred shareholders are paid off before common shareholders, then the remaining net income is divided between common shareholders. ROE is considered as one of the most important profitability ratios. There are several criteria for calculating the return on equity; such as return on total equity, return on common equity, earnings per share, dividend per share, dividend payout ratio (dividend ratio), earnings and dividend yield, and price to earnings ratio.

ROE reveals how much profit a company can produce by the money that shareholders have invested in the company. Also, ROE is known as return on net worth (RONW).

2-2-1- Earnings per share

Profit is the main source of finance, providing cash flow, and wealth generation. Determining the level of profit relevant to the financial analysis is a complex process. Due to the difference between profit figures of different companies as well as the change in a company's profit figures during different time periods, the comparability of profit figures is somewhat difficult. One of the methods used to standardize the profit figure is to convert it into an amount of earnings per share. EPS (earnings per share) is one of the most important financial statistics that is of interest to investors and financial analysts. ESP is calculated by dividing a company's after-tax profit by the total number of shares; in fact, EPS shows the profit that the company has earned for a common stock in a specified period [5].

The first major component of EPS is earnings or, more precisely, earnings owned by the common shareholder. Earnings attributable to common shareholders are the profits left over after the company has paid all of its employees, suppliers, service providers, creditors and preferred shareholders.

The second EPS component is the share count, or the number of common shares issued by the company and still in circulation. It should be noted that share count is considered as a component of EPS to measure the common shareholder's claim to income on a per-unit basis. In other words, EPS is the amount of income attributable to one share of common stock. By examining the company's earnings in this way, investors can measure the value of earnings that they own in addition to the company's earnings as a whole.

2-2-2- Dividend per share

Each year, companies retain a portion of net income according to law and based on the needs of the company and divide the rest among shareholders. The issue how much of realized profit per share is distributed in cash and how much is remained in the company is a decision that is offered to the council by the board of directors at the annual general meeting and then approved by the shareholders. According to the commercial law, in the case of being approved at the annual general meeting, the approved dividend should be paid within 8 months from the date of being approved by shareholders. Also, it should be noted that dividend per share (DPS) only is paid to shareholders who have owned the same amount of shares at the time of annual general meeting.

2-3- Studies inside Iran

Talebnia and Mohammadzadeh S. (2005) in a study as “The impact of privatization of public companies listed in the Tehran stock exchange on their stock returns” investigated the stock returns of companies in periods before and after privatization as well as in a similar period for companies subject to privatization and companies remained state-owned. The results of this study showed that the stock return of companies has significantly changed after privatization, but the change has not been positive in general. Also, in a similar 3-year period, there has been no significant difference between companies, whether remained state-owned or privatized [6].

Salehnejad and Ghayoor (2009) in a study as “The impact of ROA, ROE, and financial leverage on the stock prices of companies listed in the Tehran Stock Exchange” investigated stock price changes as a result of ROA, ROE, and financial leverage and found that at the level of all companies, ROA and ROE ratios are effective on stock prices, but financial leverage has no significant effect; and at the level of separated industries, the impact of financial ratios on stock prices in each industry is different from other industries, which indicates industries’ being independent of each other [4].

2-4- Studies outside Iran

Tseng et al. (2007) examined the relationship of financing and firm performance (return on equity) with income smoothing in companies with great variation in their total profits. In this study, they focused on income smoothing related to changes in assets and liabilities and structures affecting the relationship. These structures include the interest coverage ratio and return on equity. To measure income smoothing, they used the modified Jones model and then sorted companies based on the income smoothing between 0 and 1 as well as based on the negative correlation between changes in discretionary accruals proxy (ΔDAP) and changes in pre-discretionary income (ΔPDI). The results of this study showed that companies with smoother income have lower interest coverage ratio and return on equity. Also, the results showed that there is a strong and negative relationship between income smoothing and profitability. In addition, the four factors of profitability, debt, interest rate and firm size were introduced as incentives for income smoothing [12].

Eckbo and Norli (2000) in a study as “Leverage, liquidity, and long-run IPO returns” investigated the leverage, liquidity, and long-run performance of initial public offerings (IPO). This study examines companies whose IPO on the Nasdaq Stock Exchange has been in the period from 1973 to 1996. The results of this study showed that the companies with IPO have experienced reduced financial leverage and increased liquidity in the early years after the IPO [10].

In Kenya, Kinyua et al. (2013) in a study as “Effects of initial public offering on performance of companies listed on the Nairobi Stock Exchange” investigated the impact of three variables of liquidity, financial leverage, and profitability (earnings per share) on the performance of companies listed on the Nairobi Stock Exchange in the period from 2006 to 2011. They examined the changes in the variables after initial public offering and concluded that stock inventories, receivables, prepayments, cash in hand, cash in bank, payables, accruals, dividends, and payable tax increase after IPO. According to the literature of this research, Jain and Kini (1994) were the first researchers who investigated the operating performance of US IPOs in the first three years after going public [13].

3- The research objectives and importance

Considering the need of investors for a measure to buy and maintain capital in companies newly listed on the stock exchange, the results of this research can help them in this regard. To grant facilities to companies, banks also need to be aware of their ability to repay debt; hence, they can use the variables discussed in this research and act based on the results obtained regarding the impact of IPO and changes in the research variables. Thus, according to what discussed so far, different groups such as investors, credit and financial institutions, banks, and even stock exchange can find the variables “return on equity” and “leverage” useful to design regulatory factors.

4- The research methodology

Considering the purpose of this study, it is deemed to be an applied research while it is a correlational study in terms of the method and nature. In fact, the present study aims to determine the relationship between the research variables; for this purpose and considering the scales used to measure the variables, it was attempted to apply appropriate indices. The research method is deductive-inductive in terms of reasoning, so that library studies and

review of sites and articles have been performed based on the deductive reasoning while the data collected to confirm or reject the research hypotheses have been based on the inductive reasoning.

The research population consists of companies listed on the Tehran Stock Exchange in the time period 2004-2010. Due to the limited number of companies listed in the Stock Exchange in the period under study, all of the companies included in the population have been selected; however, it should be noted that banks and insurance and investment companies have been excluded from the companies listed in the Stock Exchange; and instead, the companies that are active in manufacturing industry have been selected. This study examines the differences between the variables in two periods: a period when the companies have been listed in the Stock Exchange and the other period when the companies have not been listed in the Stock Exchange; however, the average of the three periods before entering stock and the average of the three periods after entering the stock have been considered.

The library method has been used to collect data about research literature and formulas for extracting the research variables. Statistical data related to the hypothesis of the research have been extracted from the financial statements of companies; and the data of variables have been calculated based on the statistical data and considering the research hypotheses. Accordingly, the research data have been gathered using computerized databases, visiting the library and website of Securities and Exchange Organization (www.rdis.ir), and using the Rahavard Novin software. In this research, to examine the variables of hypotheses and the information of sample companies, initial calculations have been firstly performed in Excel software to prepare data for analysis; and then, the data have been analyzed using the SPSS19 software.

5- The research hypotheses

Considering the research theoretical foundations and literature as well as in line with the research objective, the research hypotheses are expressed as follows:

The first hypothesis: there is a significant relationship between the entrance of companies into the stock exchange and their return on equity.

The second hypothesis: there is a significant relationship between the entrance of companies into the stock exchange and their leverage.

6- The research variables

Return on equity: it shows the profit that a shareholder earns as the result of investing in the company. ROE is calculated using the shareholders' equity; accordingly, ROE is calculated as follows:

$$\text{ROE} = \text{Net Income/Equity} \quad (1)$$

Leverage: it is defined as the ratio of debt to the total book value of assets. The higher the leverage is, the greater the financial risk will be for the company. Here, the following equation has been used to calculate the financial leverage:

$$\text{Leverage} = \text{Total Debts/Total Assets} \quad (2)$$

6- The analysis of the results

6-1- The descriptive statistics

After collecting and recording the research data, the massive data should be summarized and classified by specific methods. Summarizing the data and explaining their characteristics is usually known as descriptive statistics.

Here, tables 1 and 2 show the descriptive statistics of the research.

Table 1: the descriptive statistics (before public offering of stock)

Variables	Mean	Median	Minimum	Maximum	Standard Deviation	Coefficient of Skewness	Coefficient of Kurtosis
ROE	0.3916	0.2700	-1.1000	4.6600	0.8141	3.973	20.765
Leverage	0.5642	0.5600	0.12	0.95	0.1839	0.109	-0.312

Source: findings of the researcher

According to table 1, before public offering of stock, the mean and median of ROE for companies are respectively equal to 0.3916 and 0.2700, showing that the mean of ROE is higher than its median. The minimum and maximum values of ROE for these companies are respectively equal to -1.1000 and 4.6600. Also, the value of standard deviation is reported equal to 0.8141. The coefficient of skewness is reported equal to 3.973, showing that data are to be right-skewed and very different from a normal distribution in terms of symmetry; thus, the mode of data is lower than median; and the median is lower than mean as well. The coefficient of kurtosis (or peakedness) is

reported equal to 20.765 for ROE, showing that the distribution of variable “ROE” is more peaked (less dispersed) than a normal distribution as well as greater than it.

Also, according to table 1, before public offering of stock, the mean and median of financial leverage for companies are respectively equal to 0.5642 and 0.5600, showing that the mean of financial leverage is higher than its median. The minimum and maximum values of financial leverage for these companies are respectively equal to 0.12 and 0.95. Also, the value of standard deviation is reported equal to 0.1839. The coefficient of skewness is reported equal to 0.109, showing that data are to be right-skewed and very different from a normal distribution in terms of symmetry; thus, the mode of data is lower than median; and the median is lower than mean as well. The coefficient of kurtosis (or peakedness) is reported equal to -0.312 for financial leverage, showing that the distribution of variable “financial leverage” is less peaked (more dispersed) than a normal distribution.

Table 2: the descriptive statistics (after public offering of stock)

Variables	Mean	Median	Minimum	Maximum	Standard Deviation	Coefficient of Skewness	Coefficient of Kurtosis
ROE	0.3207	0.3000	-0.1900	0.7600	0.1920	0.391	1.134
Leverage	0.5423	0.5500	0.17	0.86	0.1844	-0.073	-0.940

Source: findings of the researcher

According to table 2, after public offering of stock, the mean and median of ROE for companies are respectively equal to 0.3207 and 0.3000, showing that the mean of ROE is higher than its median. The minimum and maximum values of ROE for these companies are respectively equal to -0.1900 and 0.7600. Also, the value of standard deviation is reported equal to 0.1920. The coefficient of skewness is reported equal to 0.391, showing that data are to be right-skewed and very different from a normal distribution in terms of symmetry; thus, the mode of data is lower than median; and the median is lower than mean as well. The coefficient of kurtosis (or peakedness) is reported equal to 1.134 for ROE, showing that the distribution of variable “ROE” is more peaked (less dispersed) than a normal distribution as well as greater than it.

Also, according to table 2, after public offering of stock, the mean and median of financial leverage for companies are respectively equal to 0.5423 and 0.5500, showing that the mean of financial leverage is lower than its median. The minimum and maximum values of financial leverage for these companies are respectively equal to 0.17 and 0.86. Also, the value of standard deviation is reported equal to 0.1844. The coefficient of skewness is reported equal to -0.073, showing that data are to be left-skewed and slightly different from a normal distribution in terms of symmetry; thus, the mode of data is higher than median; and the median is higher than mean as well. The coefficient of kurtosis (or peakedness) is reported equal to -0.940 for financial leverage, showing that the distribution of variable “financial leverage” is less peaked (more dispersed) than a normal distribution.

6-2- Testing the normality of variables’ distribution

The Kolmogorov-Smirnov test has been used to ensure the normality of values’ distribution. Since the probability of the Kolmogorov-Smirnov test for the research variables is greater than five percent, the normality of data is confirmed with a 95% confidence interval

6-3- The results of testing hypotheses

The first hypothesis:

To test the first hypothesis, the null and alternative hypotheses can be proposed as follows:

H_0 : Before public offering of stock, the mean of ROE is equal to its mean after public offering of stock

H_1 : Before public offering of stock, the mean of ROE is not equal to its mean after public offering of stock.

$$H_0: \mu_d = 0$$

$$H_1: \mu_d \neq 0$$

Table 3: the paired comparison test

	Paired Comparison Test				
	t-statistic	Degrees of Freedom	Significance Level	95% Confidence Interval	
				Lower Limit	Upper Limit
ROE	0.589	38	0.559	-0.1726849	0.3144182

Source: findings of the researcher

In table 3, due to the significance level (sig=0.559) higher than 5% and a negative lower limit as well as a positive upper limit, it can be concluded that the null hypothesis is confirmed and the alternative hypothesis is rejected; in

other words, at the error level of 5%, there is no significant difference in ROE of companies before and after public offering of stock; so the second hypothesis of the research is rejected.

The second hypothesis:

To test the second hypothesis, the null and alternative hypotheses can be proposed as follows:

H_0 : Before public offering of stock, the mean of financial leverage is equal to its mean after public offering of stock

H_1 : Before public offering of stock, the mean of financial leverage is not equal to its mean after public offering of stock

$$H_0: \mu_d = 0$$

$$H_1: \mu_d \neq 0$$

Table 4: the paired comparison test

	Paired Comparison Test				
	t-statistic	Degrees of Freedom	Significance Level	95% Confidence Interval	
				Lower Limit	Upper Limit
Financial Leverage	0.750	38	0.458	-0.03724	0.08109

Source: findings of the researcher

In table 4, due to the significance level (sig=0.458) higher than 5% and a negative lower limit as well as a positive upper limit, it can be concluded that the null hypothesis is confirmed and the alternative hypothesis is rejected; in other words, at the error level of 5%, there is no significant difference in financial leverage of companies before and after public offering of stock; so the third hypothesis of the research is rejected.

7- The conclusion and suggestions

The present research has investigated the available empirical evidences to discover how much the existing realities are consistent with the views and reasons presented regarding the impact of public offering of stocks on ROE and their leverage. In fact, it is expected that the research findings can aid legislative institutions (Auditing Organization, Tax Organization, Securities and Exchange Organization, and so forth), capital market participants, financial analysts, and potential and actual investors in the stock exchange to make optimal decisions, because taking into consideration this important factor doubles the transparency of decision making and the results.

Statistical tests at the confidence level of 95%, which examined the impact of public offering of stock on ROE and financial leverage, showed that there is no significant difference in ROE and financial leverage of companies before and after public offering of stock; in other words, it can be stated that public offering of stock has no effect on these variables. Actually, the results of this study can be used as a criterion for financial managers of companies, investors, initial purchasers of shares, and creditors including banks, credit and financial institutions, and the stock exchange.

The results of this study can be compared with the results of Kinyua's study aimed at investigating the effects of three variables of liquidity, financial leverage, and profitability (earnings per share) on the performance of companies listed on the Nairobi Stock Exchange. Kinyua et al. examined the changes in the variables after initial public offering and concluded that stock inventories, receivables, prepayments, cash in hand, cash in bank, payables, accruals, dividends, and payable tax increase after IPO.

7-1- The practical suggestions

Considering the research findings, the following suggestions are provided:

It is recommended to the authorities of Securities and Exchange Organization to provide appropriate grounds for investors and other users to become familiar with ROE and financial leverage. Also, it is recommended to investors, analysts, and other beneficiaries to take into consideration these variables in their analysis and decision-making models.

7-2- Suggestions for future studies

1- Due to the specific characteristics of each industry, it is recommended to separately compare the variables discussed in this research for various industries.

2- It is recommended to include other variables in future studies.

REFERENCES

- [1]- Ebrahimi K., Ali; Hassani A., (2006), "Investigating earnings management during IPO in companies listed on the Tehran Stock Exchange", *Accounting and Auditing Studies*, No. 45, pp. 3-23
- [2]- Modares, Ahmad; Abdollahzadeh, (1999), "Financial management", Vol. 2, First Edition, Tehran, Commercial Publishing Company
- [3]- Brigham, Eugene F.; Gapenski, Louis C.; Daves; Phillip R., (2003), "The middle financial management", Tehran, translated by Ali, Parsaeian, Pub. Azhang
- [4]- Salehnejad, Hassan; Ghayoor, (2009), "The impact of ROA, ROE, and financial leverage on the stock prices of companies listed in the Tehran Stock Exchange", *Journal of Management*, 7th year, No. 18, pp. 17-27
- [5]- Raymond P., Nuevo, (2006), "Financial management", Tehran, translated by Dr. Ali, Jahankhani; Dr. Ali, Parsaeian, Pub. Samt
- [6]- Talebnia, Ghodrattollah; Mohammadzadeh, Saleteh, "The impact of privatization of public companies listed in the Tehran stock exchange on their stock returns", *Financial Research*, No. 19, pp. 97-115
- [7]- Moemeni, Mansour; Faal Gh., (2011), "Statistical analyses using the SPSS software", pp. 65-82
- [8]- Taghavi, Mahdi; Ghafari; Gheibi, (2010), "The impact of West financial crisis on the Tehran Stock Exchange", *Journal of Financial Studies*, No. 5, pp. 137-160
- [9]- Eriotis, N.; Vasiliou; Ventoura; Neokosmidi, (2007), "How firm characteristics affect capital structure: An empirical study", *Managerial Finance*, 33(5): 321–331
- [10]- Espen Eckbo; Norli, (2000), "Leverage, Liquidity, and Long-Run IPO Returns", February, 1-38
- [11]- Suhaila, Mat Kila; Wan Mahmood; Wan Mansor, (2008), "Capital Structure and Firm Characteristics: Some Evidence from Malaysian Companies", MPRA Paper 14616, University Library of Munich, Germany, April, pp. 1-16.
- [12]- Tseng, L. J.; Chien, (2007), "The Relationship between Income Smoothing and Company Profitability: An Empirical Study", *International Journal of Management*, Vol. 24, No. 4, pp. 727-733.
- [13]- Kinyua, John; Machuki Nyanumba; Njagi Gathaiya; Wambua Kithitu, (2013), "Effects of initial public offer on performance of companies quoted at the Nairobi stock exchange", Vol. 3., pp. 81-84.