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Investigating the Procedure of Financial Factors in Successful Companies

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Abstract

The purpose of this study is to investigate the characteristics of increasing earnings firms which in this study is called successful companies. To this end, price to earnings ratio(P/E) of increasing earnings firms and other firms were compared, and also this claim that there is a significant difference between financial factors of these two types of firms was investigated. The participants were 75 firms during the years 2007-2011. To test the hypothesis, the data merger model, the least-squares model and also the variance analysis were used. It was concluded that increasing earnings firms were more consistent compared to other firms. This study also investigated the features of increasing earnings firms and other firms by using variance analysis. The result of the study showed that increasing earnings firms have higher Sales to total assets, Net income to total assets, Market value of equity to book value of debt, Operating income total assets, Working capital to total assets, and current assets to current liability.

Keywords: Successful companies, increasing earnings firms, other firms, price to earnings ratio (P/E), Tehran stock exchange.

Introduction

Since profit is one of the important factors in estimating the operating result of economic enterprises, investigating the impact of accounting profit always interests scientists who study financial and accounting profession. Accounting profit is an important instrument in predicting the stock price or expected profit, therefore it has a great value for investors. By using statistical and quantitative techniques, accounting would be able to provide necessary information for financial decision makers[1].

When an investorenters a capital market, at first seeks ways to plan andapply strategies to help him overcomethe market and achieve extra returns. In addition to this managers of the companies tend to report continuous rise in profits[2]. Job security of managers is considerably depends on increasing wealth of shareholders. Increasing wealth which means increasing price is function of current and past earning of companies[3]. According to the findings of some studies there is a strong relationship between increased earnings expectations and stock price increase. On the basis of Information processing theory by individuals ,board of directors avoids paying the costs imposed on investors due to the contracts, and while stockholders are aware that the earnings of the firms are increasing, these costs decrease. Consequently transaction costs will be reduced for stockholders due to not selling stock[4].

There aren't many studies about the increasing earnings phenomenon. Barth, et al conducted an experimental research and investigated the relationship between stock price and increasing earnings. Barth et al. mentioned that increasing earnings firms are those firms that do not have any decreasing earnings for five years or more. They investigated market rewards for increasing earnings firms and compared them to other firms. The results showed that increasing earnings firms significantly had higher prices to earnings ratio (P/E). Also this result supported the Wall Street managers' view which believed that there is a significant relation between increased earnings expectations and stock price[5,6].

Kothari on the basis of the research which was about the effect ofincreasing earnings firmsof acquiring companies concluded that stock price is high in acquiring companies; this is because of the increasing earnings firms caused by merger. The result of his study showed that if the profit increases, the stock price will increase too[7]. Bao and Bao by investigating the relationship between increasing earnings and stock price in Taiwan founded the same results[8].

Barth, et al. and Kothari in their study showed that increasing earnings are very important for U.S. investors. Of course how much the profits and increasing earnings are important, is different in markets of other countries, due to the differences between investment institutions, characteristics of the investors, rules of those markets, economic, social, and cultural conditions[9].

There are different experimental studies on the relationship between stock price and accounting information in Tehran Stock Exchange market, the results of some of them were compatible with western studies, and the results of the others were different. For example the results of the studies on the effects of companies' specific features on relationship between stock returns and accounting figures showed that in Tehran Stock Exchange market, investors don't pay attention to cash flow information, despite this, experimental evidences showed that

there is a significant relationship between profit and stock price, so the result of the study may not be applicable to Tehran Stock Exchange market[10,11,12].

The purpose of the current study is to investigate the relationship between increasing earnings and stock price. This study also explored the financial features of increasing earnings firms and other firms. The result of this study intends to show whether there is any significant difference between increasing earnings firms and other firms, with respect to liquidity, profitability, leverage and activity. To make this comparison, companies' financial ratios were used to investigate the financial factors of them. The results of this study can help the investors, brokers and analysts to recognize increasing earnings firms listed in Tehran stock securities exchanges market which have reasonable and favorable return and better financial and operational position. Achieving reasonable and favorable return by investors will be encouraging for the investors, and it will cause optimal allocation of recourses and finally expansion and development of capital market and also the economic growth of the country.

Methodology and design of the research: Increasing earnings firms are those companies which have increasing earnings for five years or more, but according to the definition Increasing earnings firms are few. So to increase the number of increasing earnings firms the following model which was presented by Bao&Bao (2002) was used [8].

$$E_t = \alpha_1 + B_1 t + \varepsilon_t \quad (1)$$

In this relationship: E=Earningafter tax, T =2007, 2008, 2009, 2010, 2011.

According to this model, if for five years regression coefficient (B_1) is positive and statistically significantat the of level of a=5%,the company will be considered as Increasing earnings firms.If not, itwill be considered as other firms.

During the year 2007 up to the end of 2011, 75 companies were chosen. According to the collected data, and the examination, by using model(1), this study indicated that in Tehran stock exchange, Increasing earnings firms are fewer than other firms. Samples were presented in table (1) and they were classified by industry.

Table 1 shows the result of the companies' classification on the basis of regression model and types of industry. In this classification, 24 of firms were increasing earnings firms and 51of them were other firms. In these 10 industries which were investigated, 3 of them didn't have any Increasing earnings firms. More than 45 percent of increasing earnings firms were in pharmaceutical industry. In the other words, among the 24 increasing earnings firms 11of them were in pharmaceutical companies.

Hypothesis: It was predicted that increasing earnings firms had better financial, operational, and liquidity position than other firms. Since there is a link between stock price and performance of the companies, increasing earnings firms had higher price to earnings ratio (P/E)than other firms. So the first hypothesis in this research was identified as follows:

H_1=Increasing earnings firms had higher price to earnings ratio (P/E) than other firms.

There are a lot of studies on analysis of financial statements by using numbers of ratios to classify companies of different groups like companies that are going bankrupt and other companies. These studies haven't found any link between ratios and specific features of companies.

Ratios for this study were chosen on the basis of studies which have been done by Altman, Hopwood, Kane and SoleimaniAmiri[12-15].

H_2=Financial ratios in increasing earnings firms are significantly different from other firms

In this study to investigate whether increasing earnings firms have significantly different financial ratios in comparison to other firms, seven ratios were used: i. SALSTA= Sales to total assets, ii. NITA = Net income to total assets, iii. EQDEBT = Market value of equity to book value of debt, iv. OITA = Operating income total assets, v. WCTA = Working capital to total assets, vi. LTDTA = Long - term debt to total assets, vii. CACL = current assets to current liability.

Table -1
Distribution of increasing earnings firms which were classified by industry

Industry	Companies			
	Number of the companies	Increasing earnings firms	Other firms	Percent of increasing earnings firms
Cement	9	4	5	44.4
Pharmaceutical companies	29	11	18	38
Non-metallic mineral products	3	0	3	0
Electrical Machinery	8	3	5	37.5
Chemical products	8	1	7	12.5
Food and Beverage products	3	0	3	0
Car and manufacturing itsparts	3	0	3	0
Other financial intermediary	5	2	3	40
Metal products	4	1	3	25
Multi-disciplinary metal companies	3	2	1	66.7
Total	75	24	51	32

According to the items mentioned above the second hypothesis was changed to seven subordinate hypotheses: i. Increasing earnings firms have higher sales to total assets than other firms. ii. Increasing earnings firms have higher net income to total assets than other firms. iii. Increasing earnings firms have higher market value of equity to book value of debt than other firms. iv. Increasing earnings firms have higher Operating income total assets than other firms. v. Increasing earnings firms have higher working capital to total assets than other firms. vi. Increasing earnings firms have higher Long - term debt to total assets than other firms. vii. Increasing earnings firms have higher current assets to current liability than other firms.

Methodology

The first hypothesis in this study was "Increasing earnings firms had higher price to earnings ratio (P/E) than other firms". To test the hypothesis merger data, cross sectional and time series data were used for all firms. Starting point for analysis was least-squares regression and also the following model was used.

$$P_{it} = a_2 + B_2 EARN_{it} + B_3(D_i * EARN_{it}) + \varepsilon_{it} \quad (2)$$

In this relation: P_{it}= Market value of i company at the end of t year which became homogeneous by dividing it by market value of the company at the beginning of each year $EARN_{it}$= Earnings after tax of i company for t year which became homogeneous by dividing it by market value of the company at the beginning of each year D_i=Artificial Variable which is 1 for increasing earnings firms and for other firms is zero.

Since for estimating the earning per share, the effects of increased stock during the period of time wasnot considered but, instead of the price of each stock and also earning per share, market value of the company and also earnings after tax of the company were used. According to the examination mentioned above, the model for increasing earnings firms are as follows:

$$E(P_{it}) = a_2 + (B_2 + B_3)\, E(EARN_{it}) \quad (3)$$

And for other firms expected price model according to the expected profit of other firms is as follows:

$$E(P_{it}) = a_2 + B_2\, E(EARN_{it}) \quad (4)$$

So the difference between two groups of the companies was showed by B_3. If the increasing earnings firms have higher (P/E) than other companies, B_3 will be positive and significant.

Since to test the hypothesis the merger data was used and factor of time might destroy the results, so the regression line will fit from the origin of the coordinates, and the following model was used:

$$P_{it} = a_{2007} y_{ij} + a_{2008} y_{ik} + a_{2009} y_{il} + a_{2010} y_{im} + a_{2011} y_{in} + B_4 EARN_{it} + B_5(D_i * EARN_{it}) + \varepsilon_{it}$$

In this relation: y_{ij} =1 if t=2007 and zero for other cases, y_{ik} =1 if t=2008 and zero for other cases, y_{il} =1 if t=2009 and zero for other cases, y_{im} =1 if t=2010 and zero for other cases, y_{in} =1 if t=2011 and zero for other cases.

If B_5 is positive and significant the first hypothesis will be proved. Model (2) and (5) is on the basis of the level model. To test the second hypothesis, one way variance analysis was used. As a matter of fact, earnings are the topic which was analyzed as increasing earnings and non increasing earnings.

Results and Discussion

The result of the first hypothesis which was on the basis of profit level model (2)and (3) was presented on table (2). Regression ratio for profit is always positive and statistically significant. The result of this regression is compatible to the result of the previous studies which showed that Increasing earnings are always positively and significantly related to the price stock. B_3 Regression ratio in model (2) and B_5 in model (5) for D*EARN was positive and significant. This result strongly showed that increasing earnings firms have higher price to earnings ratio than other firms.

Table -2
Merger Model of consistent effects

P variance	Coefficient Ratio	t- test
Earn	0/26	5/64**
D * Earn	0/16	3/44**
Consistent–2007	0/76	17/14**
Consistent–2008	0/65	14/54**
Consistent–2009	0/52	11/17**
Consistent–2010	0/82	17/07**
Consistent–2011	0/49	10/77**
Total Ratio	0/84	

**are significant at p<0/01.

The second hypothesis investigated the differences between features of increasing earnings firms. To test this hypothesis, companies' financial ratios of 2 groups which were mentioned above were compared with each other by using bar graph presented in table-3.

As it is shown, almost in all the cases financial ratios of increasing earnings firms are greater than financial ratios of other groups, the only exception is sales to total assets. Generally the greater average was related to the market value of equity to book value of debt, and the lowest average was related working capital to total assets and long - term debt to total assets.

Table-4 shows the result of the second hypothesis which was changed to seven subordinate hypothesis, and they were analyzed by variance analysis. Among these 7 financial ratios which were tested, the results of 6 ratios sales to total assets, net income to total assets, market value of equity to book value of debt, operating income total assets, working capital to total

assets, current assets to current liability, were similar to the previous studies. It means that companies increasing earnings firms have higher sales to total assets, net income to total assets, market value of equity to book value of debt, operating income total assets, working capital to total assets, current assets to current liability than other firms. The results of another financial ratio test, long - term debt to total assets in increasing earnings firms in Tehran stock exchange market was different from the result of the previous studies. In the other words, the financing ratio was not different in increasing earnings firms and other firms, but in western companies it was significantly different in increasing earnings firms and other firms. Table-5 was comparing the averages of ratios of increasing earnings firms and other firms and investigated the difference between them. The result showed that increasing earnings firms have better ratios than other firms. In other words, increasing earnings firms have higher Sales to total assets, Net income to total assets, Market value of equity to book value of debt, Operating income total assets, and Working capital to total assets and current assets to current liability than other firms.

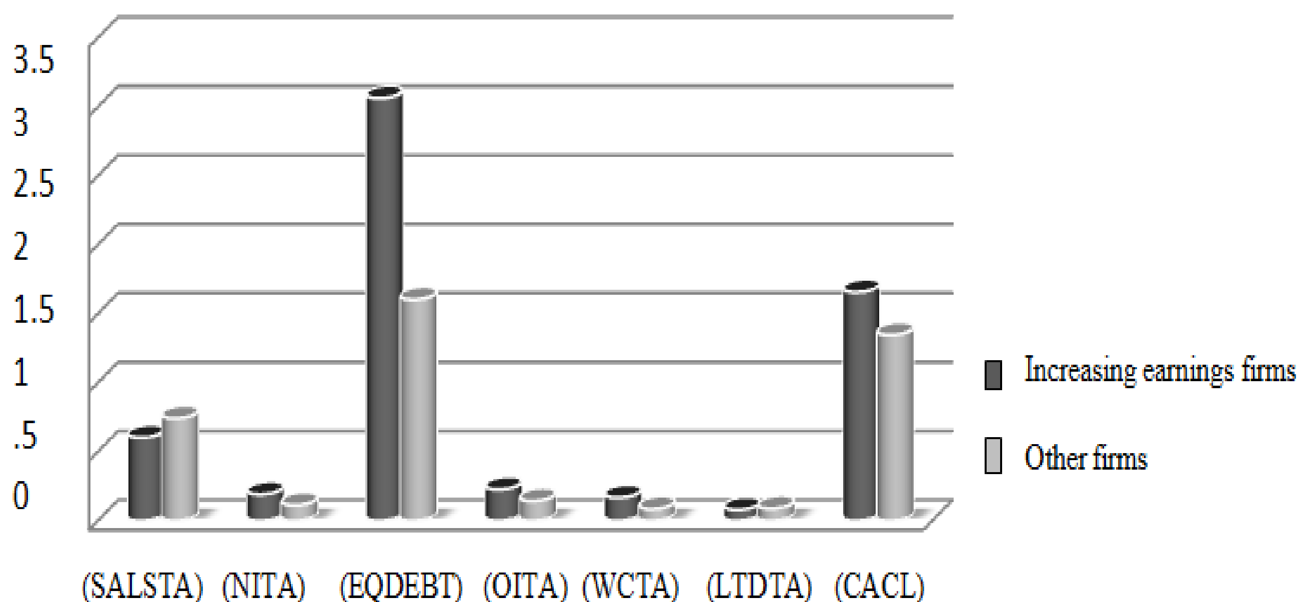

Figure-1
Comparison of financial Ratios of companies

Table -4
The result of variance analysis of second hypothesis and its subordinate hypothesizes

Result of the Hypothesis	Sig	F statistics	Mean of Squares	Degree of freedom	Sum of Squares	Source of the changes	The type of Ratio
Approved	0.0019 **	9.78	1.61 16.	1 373	1.61 61.53	internal external	SALSTA
Approved	0.000**	47.30	50. 01.	1 373	.50 4.00	internal external	NITA
Approved	0.0002**	14.62	173.98 11.89	1 373	173.98 4437.64	internal external	EQDEBT
Approved	0.000**	51.09	57. 01.	1 373	57. 4.20	internal external	OITA
Approved	0.0008**	11.51	55. 04.	1 373	55. 18.02	internal external	WCTA
Rejected	0.4871	0.43	0067. 0140.	1 373	0067. 5.23	internal external	LTDTA
Approved	0.0117*	6.41	7.890 1.230	1 373	7.890 458.90	internal external	CACL

****are significant at p<0/01, * are significant at p<0/05**

Table -5
Ratio analysis of increasing earnings firms and other firms

The type of Ratio	Increasing earnings firms average (n=24)	Other firms average (n=51)	Sig
SALSTA	0/60	0/74	0/002**
NITA	0/19	0/11	0/000**
EQDEBT	3/06	1/60	0/000**
OITA	0/23	0/14	0/000**
WCTA	0/17	0/08	0/000**
LTDTA	0/08	0/09	0/474
CACL	1/66	1/35	0/012*

**are significant at p<0/01, * are significant at p<0/05

Conclusion

The result of this study showed that Iranian increasing earnings firms have higher prices to earnings ratio in comparison to other firms. The result of this study was compatible with the study carried out by Barth, et al (1999)[6] and Bao and Bao (2002)[8]. Also this study showed increasing earning firms have different features in comparison to other firms. These firms have higher sales to total assets, net income to total assets, market value of equity to book value of debt, operating income total assets, working capital to total assets, current assets to current liability than other firms. The results of another financial ratio test, long - term debt to total assets in increasing earnings firms in Tehran stock exchange market was different from the results of the previous studies. In other words, the financing ratio was not different in increasing earnings firms and other firms, but in western companies it was significantly different in increasing earnings firms and other firms.

On the basis of the results, this study offered the following suggestions: investors, brokers, and analysts can use sales to total assets, net income to total assets, market value of equity to book value of debt, operating income total assets, and working capital to total assets and current assets to current liability to identify firms which have potential ability to perform well in stock. Investors can achieve higher price to earnings ratio by investigating in increasing earnings firms. Creditors can identify increasing earnings firms which are in better financial, liquidity and profitability position to estimate the liquidity and profitability position of the firms in order to ensure that they would be able to get back the money and the interest of their granted loans.

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