The Relationship between Economic Indicators to Evaluate Performance and Profit Forecasts at Companies in Tehran Stock Exchange

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Abstract

Earnings are widely used in stock assessments and evaluate the performance of management and the debt is used. So it is important profit forecast and investors Based on this information for sales or stock keeping decide. Them, based on profit forecasts in their pricing. So important is the ability to profit forecasts and investors in their decision-making. The aim of this study was to determine the relationship between economic performance measurement and profit forecasts at companies listed on Tehran Stock Exchange has taken place. For this purpose, three hypotheses, and the relationship between economic value added, market value and cash value added was studied with profit forecasts. Data needed to test the hypothesis, the financial statements of 170 listed in the Tehran Stock Exchange during the period from 1387 to 1393 and collected via the official website of the Stock Exchange and after data preparation software in Excel, analysis and hypothesis testing was done by software Eviews8. To test the hypothesis of this study is to estimate the model, the model using panel data of listed companies in Tehran Stock Exchange and multivariate regression analysis estimated. The results show that of economic value added and market added value have significant positive correlation with earnings forecast, the results show that significant cash value with no earnings forecast.

Keywords: Economic Value Added, Market Value Added, Cash Value Added, The Earnings Forecast.

Introduction

Timeliness earnings in the accounting literature with the amount of information available is higher than in the profits reported expression is evaluated. The lack of reported accounting earnings valuable and timely information for decision-making investment. Profit forecasts show the entrepreneurial talent is a company's profit in predicting future changes. Investors accounting information to study and predict the performance of a company are its future prospects. Therefore, disclosure of information which investors and financial analysts the company needs to be able to have better prediction of future perspective of the company. In fact, earnings predictability, the ability of investors to predict future earnings is included so the extent of this capability to benefit from predicted higher profits in the future would - unit profit is the closer. The profit forecast represents the ability of investors to predict future changes in a company's profits.

On the other hand, create value and increase shareholder wealth over the long term as the most important companies align goals and increase wealth will be achieved only as a result of favorable performance. Since the economic performance measurement is due to its association with wealth created for shareholders is more efficient criteria for evaluating company performance. According to the encyclical, the present study the influence of economic criteria for evaluating the performance and predictability of profits of listed companies on Tehran Stock Exchange has taken place.

Literature Study

Assess the financial performance of the factors that has long been in the field of management, financial management, management accounting and economics have been addressed. Bhtnasb advances in every area of technology and information growth and complexity of industry and trade, new methods for assessing the company's financial performance is raised.

To evaluate performance of business units and different criteria have been proposed indicators. One of these new standards, economic value added. The benchmark for the first time by a management consulting firm Stern Stewart to name is mentioned. Stewart believes that other elements of the measure and assess performance such as profits, earnings per share, dividend per share and measured indicators are not perfect and economic added value compared to them is more and more feasible because of economic added value created for shareholders is due to its association with wealth efficient criteria for evaluating the performance of the company.

A recent innovation in the field of evaluating the performance of internal and external professional events, create a standard dividend of surplus (net operating cash interest expense minus cash) is known as cash value added. As a starting point, claims the inventor and main supporting (1996) operating profit and net profit and the earnings per share. Growth of the company's performance metrics are misleading and the best measure of performance as it is applicable, the cash value added.

Therefore, this study aimed at evaluating the performance of the influence of economic criteria (economic value added, market value added and cash value added) and the profit forecast is based on listed companies in Tehran Stock Exchange. In fact, we sought to examine the issue whether due to new criteria for assessing the profitability of the company can be predicted or not?

Krayzs and Nastazys (2007) explain the content of the information to check the strength and relative economic value added increased in comparison with accounting variables (net revenue and operating income) on stock returns and value-added market companies in Greece 's capital market. The results showed that the relative information content and increasing net income and operating income, compared to market value and economic value better explain.

Asdkhan et al (2012) study on the relationship between stock returns and economic value in comparison with other variables such as net income and operating cash flow in the capital market of Pakistan that the results of their study showed that the share of operating cash flow compared with greater economic value and there is a negative relationship between EVA and stock returns.

World et al (2013) study examined the relation between Tobin's Q and economic added value with their profit forecast error. The study of 106 companies listed in Tehran Stock Exchange during 2004 and 2010 have been used. To test the hypotheses of multivariate regression model was used. The findings show that there is an inverse relationship between Tobin's Q and profit forecast error, the results show that there is an inverse relationship between the value-added economic and earnings forecast error.

Shvbyta (2014) study on value-added content and interest payments remaining on the Stock Exchange Jordan. In this study, data from 39 companies listed on the Stock Exchange Jordan in 2002 and 2010 have been used. The results show that the economic added value greater ability to predict yields and stock prices relative to earnings and free cash flow is.

Hypotheses

1. The economic added value and predictability profits of listed companies on Tehran Stock Exchange there is a significant relationship.

2. The value added markets and predictability profits of listed companies on Tehran Stock Exchange there is a significant relationship.

3. Cash and predictable earnings between the added value of listed companies in Tehran Stock Exchange there is a significant relationship.

Methods

This study is a quantitative research that uses scientific method and experimental verification, and based on pre-defined hypotheses and research projects done. This category is used when research is a quantitative measure of data, and statistical techniques are used to extract results. In order to collect data and information, the library method is used. The collected data and theoretical study of books, magazines and specialized sites have been used Persian and Latin. The companies also plan required information through the application process and the official website of

the Stock Exchange have been collected. Finally, the data using Excel software is ready and then use the software Eviews8 final analysis is conducted.

The Statistical Population, Sampling and Sample

All Companies listed on Tehran Stock Exchange, constitute the research population and hypotheses considered in relation to the population studied and tested. Because of the breadth and volume statistics and some inconsistencies among members of the community, the following conditions have been subjected to a statistical sample selection.

1. All participants must be present before 1387 and by the end of 1393 in exchange of their shares were traded in the stock exchange.

2. During the years 1387 to 1393 should have considerable operational interruptions.

3. Fiscal year has not changed over the years and the information required for extracting data is available.

4. Companies are banks and financial institutions, investment companies and holding companies and leasing intermediary and not because they have different reporting structure.

5. Their fiscal year 1/1 to 29/12 (the beginning of the year).

Given the limitations outlined above statistics are ultimately the systematic elimination of 170 companies were selected as examples.

Model Test Research Hypotheses

To test the hypothesis multivariate regression model is used.

$$CFO_{it+1} = \alpha_0 + \alpha_1 EARN_{it} + \alpha_2(EARN \times EVA)_{it} + \alpha_3(EARN \times MVA)_{it} + \alpha_4(EARN \times CVA)_{it} + \alpha_5(EARN \times SIZE)_{it} + \alpha_6(EARN \times LEV)_{it} + \alpha_7(EARN \times GROW)_{it} + \varepsilon$$

In the model: EVA= economic Value Added, MVA= market value added and CVA= Cash value added (independent variables), SIZE= size of the company, LEV= financial leverage and GROW= company growth (the control), EARN= net income before unusual items (variable adjustment) and CFO_{it+1} = cash flows for anticipated profits (dependent variable).

Measured Variables

Independent Variables

Economic Value Added:

Since investors are responsible for providing financial resources and incur the risk reward trade are expected, operating profit of the company must create value for shareholders, exceed the cost of capital. This is the underlying philosophy of economic value added, expressed through the following equation:

$EVAt = NOPATt - (WACCt \times Capital\ t-1)$

EVA= Economic Value Added

Capital= Capital employed was

NOPAT= Net operating profit after taxes

WACC= Weighted average cost of capital

To calculate the cost of capital rate used is the weighted average cost of capital for companies listed on the Tehran Stock Exchange is calculated as follows:

$WACC = (Wd*Kd)1(-t)(+Ws*Ks)$

where in:

Wd and Ws = The weight of debt and equity normal

Kd and kS = The rate of cost of debt and cost of equity rate were normal.

t= Tax rate

Market Value Added:

Market value added shows how the company has successfully applied its funding opportunities and future profitability is anticipated and planned. Market value added can be obtained from the following equation:

MVA= Market Value - Working capital used in the enterprise

Market Value= (Market price per share) (number of shares outstanding by)

Working capital used in the enterprise= Book value of equity + The book value of debt

Cash Value Added:

Cash added value, surplus cash is said that after deducting the cost of capital is obtained cash from operating cash profits. Sometimes this surplus cash, cash dividend refers.

CVA= Cash cost of capital - Operating cash profit after tax

Cash cost of capital= Interest payments + Dividends paid

The operating cash interest, cash from operating activities in the cash flow statement has been prepared according to accounting standards (2) of Iran. In summary:

Operating cash dividend= Profit (operating losses) + Commitments + Non-cash expenses

Dependent Variable.

Ability to profit forecasts:

The profit forecast, using a baseline regression slope coefficient between the current interests of future cash flows and the ability to predict future cash flows shows the earnings numbers, has been tested. The profit forecast model

is presented as follows:

$$CFO_{it+1} = \alpha_0 + \alpha_1 EARN_{it} + \varepsilon$$

CFO it+1, Cash flow from operations is the company i in year t + 1. EARN, Net profit before extraordinary items for company i in year t. An important and positive sign for $\beta 1$, suggesting more of a profit forecast, while a significant negative sign for $\beta 1$, a forecast of lower profit.

Control Variables

Size of the company:

By total assets at the end of the fiscal year are calculated. To increase the variables in the model used the logarithm of total assets.

Financial Leverage:

This variable is the ratio of total assets to total liabilities to be measured.

Company growth:

In this study, to measure the company's sales growth, the difference between total sales and total assets of the end of the last financial end of the current period, divided by the sum of the previous period are used.

Results Research

Descriptive Statistics

In this study, using the raw data, the calculated variables and the dependent and independent variables of the study was descriptive statistics including mean, median, maximum, minimum, and standard deviation is calculated research data in table (1-1) is provided. The amounts mentioned overview of the research will provide data distribution.

Table (1-1): Results of the research descriptive statistics

Standard deviation	minimum	Maximum	Middle	Average	Variables
0.19	-2651533	2406533	481069	811897	Cfo_{t+1}
0.88	-720497	549273	801469	849513	Earn
0.35	-79031	495187	136620	272835	Earneva
0.39	-1728571	4443297	-1810743	1861027	Earnmva
0.67	-59622632	1026902	-1394347	-385647	Earncva
0.61	-40148	345988	478368	524174	Earnsize
0.82	-52980	651018	438332	461709	Earnleve
0.13	-4481495	7410983	508290	536385	Earngrowth

Source: Calculations researcher

Regarding the variable of future cash flows can be observed an average of 811897 and this shows that the majority of data on these variables are around this value. 481069 middle of this variable and variable data suggests that about half of this amount and half were less than this amount. Standard deviation of 0.19 was obtained, which shows that the fluctuation of data round the average was 19 hundredths. Other variables are also interpreted in this way.

Correlation Coefficient

Correlation study, statistical tool that can be used by the degree to which a variable to another variable in terms of the related line is measured. Correlation between the variables in Table (2-1) is provided. The correlation coefficient between independent variables used in a model not to excess. Because the correlation between the independent variables in a regression model is corrupt. According to the table if a significant level of correlation between two variables (p-value) is less than 0.05 correlation between two variables significant at the 5% level and if it is less than 0.01 correlation between two variables is significant at 1%.

Table (2-1): The results of Pearson correlation coefficients between variables

Probability	Cfot	Earn	Earneva	Earnmva	Earncva	Earnsize	Earnleve
Cfot	1						
P.V	-----						
Earn	0.08	1					
P.V	0.00	-----					
Earneva	0.25	0.09	1				
P.V	0.00	0.00	-----				
Earnmva	-0.13	-0.20	0.16	1			
P.V	0.00	0.00	-0.11	-----			
Earncva	-0.19	-0.12	-0.12	-0.26	1		
P.V	0.00	0.00	0.00	0.00	-----		
Earnsize	0.07	0.01	0.14	0.19	-0.04	1	
P.V	0.00	0.00	0.00	0.00	0.00	-----	
Earnleve	0.08	0.02	0.09	0.17	-0.12	0.09	1
P.V	0.002	0.00	0.00	0.00	0.00	0.00	-----
Earngrowth	0.08	0.03	0.04	0.19	-0.03	0.18	0.09
P.V	0.003	0.00	0.00	0.00	0.00	0.00	0.00

Source: Calculations researcher

The Model by Pooling Data

To test sections for different time periods combined data model, the F -Limer test (Chow) is used. As the table (3-1) can be seen , the results of this test Chow test the null hypothesis that the intercept is similar in all of them, for models of research has confirmed the strong (error level of 5 %). Therefore, panel data estimation method (Pooled data) model to test hypotheses, is a more appropriate option. According to this method, all the data together and by ordinary least squares regression (OLS) estimates.

Table (3-1): Chow test results (F tie) in the model hypotheses

Type of test	Chow test result	p-value	Statistics F	Model	Chow test
Data Integration **Pooled data**	Not **H0** rejected	0.35	1.17	first model	**The same intercept : H0** **sections**
Data Integration **Pooled data**	Not **H0** rejected	0.75	0.57	مدل دوم	**The same intercept : H0** **sections**

Source: Calculations researcher

As a result of the Research Model Test

The results of the study model combines the data in the table (4-1) can be expressed as follows:

Figure (4-1): The results of the research model combine the data

Watson camera	F-static p.v	p-value	Student T	coefficient	Description
1.93	480.6 0.000	0.00	5.34	446607	Fixed the β_0 equation
		0.00	3.38	0.43	Earn
		0.00	3.02	4.02	Earneva
		0.01	2.49	7.85	Earnmva
		0.18	1.32	2.12	Earncva
		0.01	2.36	3.60	Earnleve
		0.03	2.16	7.92	Earnsize
		0.009	-2.60	-2.56	Earngrowth
	0.79			(R^2)	Adjusted coefficient of determination

Coefficients of regression and the significance of test results for the years 1387 to 1393 in Table (4-1) is visible. As can be seen in the table, the F statistic is significant at 95 %. So, it follows that The model was significant and independent variables and the dependent variable of the model is able to explain their control. In addition, the adjusted coefficient of determination of the test model, was 0.79. This figure shows that approximately 80% of the dependent variable, ie the earnings forecast, due to the independent and control variables in the model, and 20 percent of its changes caused by other factors.

To check the remaining autocorrelation Durbin-Watson test was used in the model. The results coincide with the estimates obtained by regression in the software Eviews. The second is desirable for its lack of solidarity. If this statistic is between 1.5 to 2.5, autocorrelation in the model error values can be rejected. Durbin -Watson statistic regression models in Table (4-1) is visible, is 1.93. According to the Durbin-Watson statistic obtained by the autocorrelation in the model error values can be rejected.

Significant test of the coefficients is the same thing that the researcher is looking for. In fact, this test is a significant addition to identifying factors to its effect on the dependent variable coefficients as sets. Statistics to determine the significance of coefficients, t -test statistic is.

The first hypothesis

According to the results table (4-1) statistics related to the independent variable t interactive coefficient of profit and economic value added (earneva) and its significance level (p-value) were, respectively, 4.02 and 0.00. Given that a significant level considered for this study is 05/0 , so changing economic value have a significant effect on the profit forecast and the first research hypothesis is confirmed in the 95% confidence level . Variable coefficient (earneva) is positive. As a result, the type of relationship between the economic value and the expected profit is positive and direct relationship.

The second hypothesis

According to the results table (4-1) statistics related to the independent variable t interactive coefficient of profit and market value added (earnmva) and its significance level (p-value), respectively, 2.49 and 0.01, respectively. Given that a significant level considered for this study is 05/0, so variable market value had a significant effect on the profit forecast and the second study also confirmed the 95% confidence level. Variable coefficient (earnmva) is positive. As a result, the relationship between the market value and the profit forecast is positive and direct relationship.

The third hypothesis

According to the results table (4-1) statistics related to the independent variable t interactive coefficient profit and cash value added (earncva) and its significance level (p-value) were, respectively, 1.32 and 0.18. Given that the level of error for this study 05/0 was intended, so the relationship between the cash value and cannot be confirmed profit forecasts the third research hypothesis at 95 % and therefore will not be approved. Variables also control the size, growth and financial leverage increases the predictability of profit.

Conclusion

The Results of the First Hypothesis

According to the test and analysis of regression, and as shown in Table (4-1) is observed, we concluded that the positive correlation between economic value and earnings predictability, the type of relationship between the economic value and the expected profit is positive and direct relationship . In other words, by increasing the value-added economic benefit will also increase predictability.

Today, due to the low quality of financial reporting and the related lack of information environment, have been criticized. This is the traditional criteria such as profit to be rethought. One of the criteria recently as an alternative to profit the companies, accounting environments academic and policy makers' economic value added is located. Economic Value Added is defined as operating income minus the cost of capital that is used to create it. In measuring performance based on traditional accounting profit, the only costs to be financed through debt, while in the calculation of economic value added, cost of debt and equity financing, both considered. As the first research hypothesis test results showed a positive relationship between EVA and profit forecasts and there is significant potential, so it could be argued that the economic value added Stewart is one of the best criteria to evaluate the performance was approved.

Second Hypothesis Results

According to the test and analysis of regression , and as shown in Table (4-1) is observed, we concluded that the positive correlation between market value and earnings predictability, the type of relationship between the market value and the profit forecast is positive and direct relationship. In other words, by increasing the market value, also increased earnings predictability.

Investors profit status by examining the firm's investment or disinvestment decisions. Performance evaluation and reward their managers enamel profit is calculated based on it. Therefore, understanding the factors that affect the predictability of profit, provides useful information to management and shareholders. The market value of a company is equal to the present value of all economic value added or residual profits that are expected to be created in the future. According to EVA, internal criteria for evaluating the performance of managers is to create added value market as a result of external criteria. As the second hypothesis test results showed that, between the market value and the profit forecast is positive and significant relationship; so one could argue that the market value added Stewart is one of the best criteria to evaluate the performance was approved.

The Third Hypothesis Results

According to the test and analysis of regression, and as shown in Table (4-1) can be seen, to the conclusion that the value added there is no significant relationship between cash and earnings predictability, in other words, by increasing the value added of cash, earnings predictability does not change.

The concept is very similar to the cash value added economic value , with the difference that the economic value of the wealth created by a company over a period of financial estimates, but the added value of cash , cash only part of it is calculated. . In other words, the cash value added economic value that its non-cash items have been removed As the results of three studies showed hypothesis, the cash value and the profit forecast no significant relationship; so we can say the overall economic value and market value added to the cash value added to profit forecasts provide a better indicator.

Research Proposals

Proposals in Line with Results

According to the results and review of the literature, the following recommendations to investors, corporate executives, agency and brokerage of securities offered:

1. Profit behavior over time is of utmost importance. Investors to check the status of the company's profitability to investment or disinvestment decisions. So, understanding the factors that affect the predictability of profit, provides useful information to management and shareholders. As the results showed that EVA and MVA has a significant positive correlation with earnings forecast, so the investors are suggested to pay special attention to these two indicators to assess their performance.

2. According to information capabilities and increasing the content of EVA and MVA in assessing and evaluating the performance of companies, investors and shareholders are recommended the results of this indicator in conjunction with other indicators of accounting simultaneously for performance assessment of managers and companies use their real value. To discontinue the use of the results of these studies will be useful in decision-making processes of managers.

3. Preparation for value-added financial report, along with other financial information user's access to information beyond profits and cash flows provides information and they can use this measure in conjunction with other financial measures to assess performance and in particular assess the company's performance and financial benefit analysis. The drafters of accounting standards and the Stock Exchange can require companies to provide cost-benefit report to check for added value.

Future Research Proposals

Based on the results of research and to promote the use of value added measure orientation of investors, shareholders and managers with these criteria and identify other aspects of the impact of these criteria on the performance of firms, other complementary studies are suggested in the following areas:

1. Examine the relationship between performance evaluation of other economic measures (including adjusted EVA, etc.) with the ability to profit forecasts.

2. Comparison of traditional performance evaluation criteria and economic criteria for evaluating the performance of the earnings forecast.

3. Check the relationship between economic performance measurement and smoothing in the companies listed on the Tehran Stock Exchange.

4. Use as a measure of economic value added and market value added bonuses of directors and its effect on the future performance of companies.

References

International Accounting Standards Committee (1385), the theoretical concepts of financial reporting, auditing organizations.

Hemmati, Hassan Kazemi, Hossein Babaei, F. (1392) The Information Content of partial differential economic value, earnings and operating cash flows and stock returns, new research in accounting, No. 2, pp. 49-57.

Salehi, R. Worm (1393) decisions on financial issues, Islamic Azad University, MasjedSoleiman.

Asad Khan, M., Hussain Shah, N. &Rehman, A. (2012). The Relationship between Stock Return and Economic Value added. Working paper Institute of Management Science.

Charoendeesawat, S. (2011). The Explanatory Power of Accounting Measures, EVA and MVA on Stock Returns: Evidence from Thailand Stock Market. Business Management, 8: 29.

Jahani, A. Zalghadr-Nasab, R, and Soofi, F. (2013) A Survey of the Relation between Tobin's Q with Earnings Forecast Error and Economic Value Added in TSE. Advances in Environmental Biology, 7(10) Oct 2013, Pages: 2795-2802

Kyriazis, D. &Anastassis, Ch. (2007). The Validity of The Economic Value added Approach: an Empiric a application. European FinancialManagement, 13(1): 71.

Machuga S. M., Peeiffer P. J and K. Verma (2005). "Economic ValueAdded, Future Accounting Earnings, and Financial Analysts' Earnings Per Share Forecasts", Review of Quantitative Finance and Accouting, Vol. 18, pp. 59-73 .

Shubita. F (2014) . The Information Content of Economic Value Added and Residual Income - Evidence from Jordan. Journal of Economics and Sustainable Development. Vol.4, No.13. www.iiste.org.