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EVALUATING ECONOMIC INDICATORS EFFECT ON THE EARNING PER SHARE (EPS) IN COMPANIES ACCEPTED IN TEHRAN STOCK EXCHANGE

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Abstract: *This study targets to evaluate the microeconomic indicators effect on every share profit in companies accepted in Tehran stock exchange. In this study, 100 companies from accepted companies in Tehran stock exchange have been selected as samples and their financial data (years 2008 to 2012) has been gathered.Based on the research history, four hypotheses have been compiled and tested. For data analysis, multivariate linear regression model and combined data have been used.To determine the data type, a combination of Limer and Hasmen and for hypothesis testing, F Fisher and t-test have been used.The research findings show that the index of GDP and economic growth impacted on per share aprofit and the relationship between them is positive, also unemployment and inflation indicators effect on profit per share and have a negative and reverse relationship.Also a model that in addition to economic indicators, includes financial ratio in comparison with the model that only includes economic indicators, is more effectivefor business units'performance evaluation.*

Keywords: *Economic indicators, GDP (Gross domestic product), inflation, economic improvement, lay off, per share profit.*

1. INTODUCTION

Evaluating each country economic situation is possible through economic indicators and economic indicatorsare the criteria for identifying positive and negative features economic characteristics of every country, therefore an indicator can be assumed as data benchmark that is used by investors and creditors. From previous years since now, evaluating the performance of business units has been one of the main issues raised in accounting, management, economics, etc.Basically there is a direct relationship between the target and performance. With the evaluation of performanceit will be determined thatto what extent the economic units have gained their predetermined goals. For predicting the future plansand also improve the strengths and weaknesses of business units, the results from performance evaluations are used.

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It should be noted that the performance of the business units assessment regardless of economic conditions and the conditions prevailing in the markets and services, and regardless of the place where the assessment unit has in the country's economic structure and system, will not be useful. (Modarres, 2009).

Since financial statements users, consider to the profit as management performance benchmark, but we will knowwell that economic conditions is an independent factor on companies operations, now the main purpose of this research is to find economic indicators' effect on companies' profit and hence evaluate companies each profit share (EPS) and in this regard, the main objectives of this research is to answer these questions that whether inflation indicators, GDP, unemployment and economic growth in the years 2008-2012 have had significant and undeniable on each share profit on the companies accepted in Tehran stock exchange?

2. THEORETICAL FOUNDATIONS AND RESEARCH BASIS

The ultimate country's economy goal is to maximize consumers' welfare. Achieving prosperity for a community requires a healthy economy and on the other hand a community economy growth and flourish depends on the safe investment and correct planning. (Nikbakht and colleagues, 2003). Investors need information for decision making; planning and right investment and this information can be evaluated through financial basis which is one of sources that supply investors and users' informational needs and they can improve their planning power using information specified in financial basis.One of the tools for financial statements 'analysisis use of financial ratios resulted from financial statements that this ratiocould be effective for decision-making just as each share profit (Soleimani Amiri, 2001). **Economic indicators**: Economic indicators are numerical values identifying countries' macroeconomic situation and the most famous ones are GDP (which is the basis for calculation of economic growth rate), inflation rate, unemployment rate, bank liquiditygrowth, interest rate, the commercial balance, Ginicoefficient and business environment index. (Faraji, 2013) **Gross assets production**: Among the macro economy indicators, GDP is of great importance. Because not only it is used as the most important economic performance indicators in the analysis and evaluation of data, but many other macro items economy of incidental products, are considered asits estimating. Gross domestic product or national, present economic size of a country in comparison with other countries and in a way specifies the economic strength of a country.Also well as changes in gross domestic product will be considered as GDP changes are referred as economic growth and represent economic improvement process and indicator of the national economy size growth during this period. **Inflation:** Most researchers define inflation as an economic conditionin which the price of goods and services, on the basis of unit count in the economy (money of the country currency) continues the

rise based on, while the Goods and service supply of decreases with backdrop of national money value. Inflation terminologically means lack of balance between two commodity indicator and money paid in return for it (Law terminology 2, p 1456).

Profit: Profit is the resultant of all changes in the owners' right over a financial period with the exception of the changes resulting from investments by owners and the distribution of resources between them. (Hindroksen, 1982).

Earning per share: earning per share represents the interest whichgoes to every ordinary share and often is used to evaluate the profitability and risk associated with the profit and stock prices judgment and is estimated according to gross profit attributable to stock holders (Standard 30).

With these items being raised, to achieve the main objective of this research the following hypothesis can be discussed:

First hypothesis: Gross domestic product rate, impacts on earning per share (EPS).

Second hypothesis: Inflation rate has impact on earning per share (EPS).

Third hypothesis: Economic growth rate has impact on earning per share (EPS).

Fourth hypothesis: Unemployment rate has impact on earning per share (EPS).

Altman (1968) has studied the financial ratio impact,analysis and prediction of corporate bankruptcy during years 1985-1961. His research results show that more than 65 percent of companies had losses for at least 2 or 3 years. 15 out of 66 selected companies were classified as bankrupt company and 51 remained ones, were classified as non-bankrupt company. Numbers of wrong classifications were 14 items that one of these companies was bankrupted after two years of this research performance. Adam F Tork and others (2006) studied the financial assets and drug market on short term stock price in 2005. Their research results show that there is a weak relationship between drug market and stock price in short term and even in different economic environments also drug market can be ineffective on stock price but there is a significant relationship between financial ratio and stock price. Girt Bekeeret and others (2009) studied the relation between inflation and stock market using Federal bank model. Their research results show that during the crisis period of years 2008-2009, there is a few correlations between the research two variables. Y ChingPoong and others in their studyevaluated the power of production growth prediction, inflation and interest rate and volatility in stock returns. The research results show that there are strong evidences of production growth and inflation and interest rate impact on stock returns fluctuations.

3. RESEARCH METHOD

This study is Experimental by fundamental purpose and because it reviews the relationship between the variables using the Regression analysis,is correlational in terms of the nature. The Statistical community of the research is companies accepted in Tehran stock exchange. Systematic deletion method has been used for sampling. Totally 100 companies of accepted ones in TSE, were selected.In this study, descriptive and inferential statistical methods will be used. Inferential statistical will be included of regression analysis.Due to the combined data, FLimer test for selection among combined and consolidated data method and in case of necessity, Hasman method for selectingamong fixed and random effects methodology will be used.

Fisher test will be used for validity of research regression model and Watson camera test will be used for observations independency.Library method will be used for collecting information on the theoretical basics and the research history. Also to collect the required data for hypothesis testing, documentation mining method will be used.In this regard, data will be extracted through stock exchange and securities organization reports and securities and Exchange organization sites. Either, in order to the initial analysis and the research's variables, 2013 Excell software and in order to perform statistical raised tests, Eviews software version 7.1 has been used. Also for data analysis, correlation analysis method and Regression analysis will be used and finally research hypothesizes will be tested through t test, F fisher and determining coefficient (R^2) in confidence level of 95 percent will be tested.

4. RESEARCH FINDINGS

In this part, research's hypothesis will be tested. This research includes 4 hypotheses as following.

Hypotheses are tested using Regression models. In Regression models, according to the amounts of p –value the decision will be made about accepting or denying zero assumption. If p- value is less than 0.05 significant levels, zero assumption will be denied and in other case, zero assumption will be accepted.

For hypotheses testing, following multi-variant model is used:

$$Y = \beta_0 + \beta_1 If + \beta_2 GDP + \beta_3 GE + \beta_4 UE + \varepsilon$$

F Limer and Hasmen test

As the data used in this study are combinational (year-company) and combined data are in two forms of grew and consolidated, therefore, in order to select among grew and consolidated data methods in model evaluation, F Limer test has been used. To study the results of F Limer, in case of F statistics probability being more than 0/05, combinational data method should be used. Otherwise, grew data method is used. F Limer test results summary is provided in table 1. As you can

see p- value amount equals to 0.02 and less than 0.05, therefore grew up data method is acceptable. In case of grew up data methodacceptance, Hasmen test should be then used for selecting between Random or fixed effects method. In Hasmen test, if K 2 statistics probability is more than 0/05T random effects method and in other case, fixed effects method should be used. As the p-value Hasmen test in table (1) is zero and less than 0/05T therefore fixed effects method is accepted.

Table 1
F Limer and Hasmen test

F Limer test			*Hasmen test*		
F Limer statistics	*possibility*	*result*	*K2 statistics*	*possibility*	*result*
1.3	0.02	Grew up	23.0	0.00	Fixed effects

Remainders' lack of self- solidarity test

In the present study, Watson-camera test has been used to diagnosis existence or lack of self-solidarity. If this amount is around 2, there is no self-solidarity. The summary of Watson-camera test results, are as follow in table (2):

Table 2
Watson-camera statistics

Lack of self-solidarity	*Watson-camera statistics*
1.69	1.5<DW<2.5

As you can see in table (2), regarding to Watson-camera statistics that equals 1.69, it was clear that mentioned model lacks self-solidarity.

Remaining's variancenon-anomaloustest

One of the main hypotheses of a suitable regression model is variance of remaining consistency.For evaluating this hypothesis, White test will be used. Zero assumption in this test is remaining's variance consistency. If the resulted amount of p-value for White test is more than significant level of (0-value>_/05), aero assumption (variance consistency) will be accepted that show there is no remaining's variance non-consistency.According to the following table and calculated p-value for White test that equals 0.10 and is more than 0.05 significant level (p-value>_0.05), zero assumption (variance consistency) is accepted which shows there is not the problem of remaining's variance non-consistency problem.

Table 3
Evaluating Model variance consistency evaluation

Statistic amount	*p-value*
F-statistic(1.15)	0.10

Variables fixity test

Prior to the regression model estimation on data, it is necessary to evaluate each variables' fixity because if the variables are non-fix, will causes false regression problem.In this study, for evaluating the variables fixity on combined data, ADF-Fisher test will be used.Zero assumption in this test, is a common base existence or equally, variables' non-fixity that if p-value amount is less than 0.05, zero assumption will be rejected and the variables are fixed. The summary of this test results for variables, shown in table 4.

Table 4
Model variables fixity test results

variablestatistic amount	*EPS*	*IF*	*GDP*	*GE*	*UE*
ADF - Fisher Chi-square	336.0	381.1	309.1	291.6	270.7
p-value	0.00	0.00	0.00	0.00	0.00

According to table 4, p-value amount of ADF-Fisher test for all variables is less than 0.05 (p-value<_0.05), so zero assumption is rejected and the variables are fixed.

Research hypotheses Testing

Table 5
Data analysis results from hypotheses tests

p-value	*statisticst*	*deviation standard*	*coefficient*	*variance*
0	24.96	0.04	0.96	*C*
0.01	-2.5	0.01	-0.02	*IF*
0	13.87	0.03	0.4	*GDP*
0	4.08	0.002	0.01	*GE*
0	-4.8	0.03	-0.12	*UE*
12.1	statisticsF	0.52	Determination coefficient	
0	Prob(F-statistic)	0.47	Decreased determination coefficient	

According to the amount of p-value obtained for the F statistic that is equal to zero, (p-value ≤ 0.05), H0 assumption is rejected and this shows that all regression coefficients are not simultaneously zero.Therefore, simultaneously there is a significant relationship between independent variables and dependent variable.

In order to achieve the objectives of the study, four hypotheses have been formulated that test results have been stated in the following:

Research's first hypothesis test results

The research first hypothesis test, targets to investigate the impact of gross domestic production rate on earning per share (EPS). According to table 6 and p-value, t statistics for gross domestic production rate variable (GDP) which equals to 0 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of gross domestic production rate ineffectiveness on earning per share (EPS) is rejected and as a result gross domestic production rate effects on earning per share. Therefore the research first hypothesis is accepted. Also according to gross domestic product rate variable coefficient that is positive and equals 0.40, it is concluded that gross domestic production has positive effect on earning per share. In other words, it can be said that gross domestic production, increases earning per share.

Table 6
Data analysis results from first hypothesis

p-value	*statisticst*	*Standard deviation*	*coefficient*	*variable*
0	13.87	0.03	0.4	*GDP*
12.1	statisticsF	0.52	Defining coefficient	
0	Prob(F-statistic)	0.47	decreased defining coefficient	

Research's second hypothesis test results

The research second hypothesis test, targets to investigate the impact of inflation rate on earning per share (EPS). According to table 7 and p-value, t statistics for inflation rate variable (IF) which equals to 0.01 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of inflation rate ineffectiveness on earning per share (EPS) is rejected and as a result inflation rate effects on earning per share. Therefore the research second hypothesis is accepted. Also according to inflation rate variable coefficient that is negative and equals - 0.02, it is concluded that inflation rate has diverse effect on earning per share. In other words, it can be said that inflation rate, decreases earning per share.

Table 7
Data analysis results from second hypothesis

p-value	*statisticst*	*Standard deviation*	*coefficient*	*variable*
0.001	-2.5	0.01	-0.02	*IF*
12.1	statisticsF	0.52	Defining coefficient	
0	Prob (F-statistic)	0.47	decreased defining coefficient	

Research's third hypothesis test results

The research third hypothesis test, targets to investigate the impact of economic growth rate on earning per share (EPS). According to table 8 and p-value, t statistics

for economic growth rate variable (GE) which equals to 0 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of economic growth rate ineffectiveness on earning per share (EPS) is rejected and as a result economic growth rate effects on earning per share. Therefore the research third hypothesis is accepted. Also according to economic growth rate variable coefficient that is positive and equals 0, it is concluded that economic growth has positive effect on earning per share. In other words, it can be said that economic growth, increases earning per share.

Table 8
Data analysis results from third hypothesis

p-value	*statisticst*	*Standard deviation*	*coefficient*	*variable*
0	4.08	0.002	0.01	*GE*
12.1	statisticsF	0.52	Defining coefficient	
0	Prob (F-statistic)	0.47	decreased defining coefficient	

Research's fourth hypothesis test results

The research fourth hypothesis test, targets to investigate the impact of unemployment rate on earning per share (EPS). According to table 9 and p-value, t statistics for unemployment rate variable (UE) which equals to 0 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of unemployment rate ineffectiveness on earning per share(EPS) is rejected and as a result unemployment rate effects on earning per share. Therefore the research fourth hypothesis is accepted. Also according to unemployment rate variable coefficient that is negative and equals -0.12, it is concluded thatunemployment rate has diverse effect on earning per share. In other words, it can be said that unemployment rate, decreases earning per share.

Table 9
Data analysis results from fourth hypothesis

p-value	*statisticst*	*Standard deviation*	*coefficient*	*variable*
0	-4.8	0.03	-0.12	*UE*
12.1	statisticsF	0.52	Defining coefficient	
0	Prob(F-statistic)	0.47	decreased defining coefficient	

Decreased R^2 amount equals to 0.47 which shows that 47 percent of dependent variable changes is described by independent variables: in other words 47 percent of dependent variable changes relates to independent variables.

Then, to compare the performance of a model that includesfinancial ratios in addition to financial indicators, comparing a model which specifically evaluates

economic indicators (studied model for hypotheses), we use determining two model comparison coefficients. The model with more decreased definition coefficientis the character model.

A model which includes financial ratios other than economic indicators is as follow:

$$EPS_{i,t} = \beta_0 + \beta_1 GNP_t + \beta_2 Growth_t + \beta_3 UN_t + \beta_4 \ln f_t + \beta_5 BEM_{i,t} + \beta_6 BAM_{i,t} + \beta_7 CADE_{i,t}$$

The results of model 2 fitting are as follow:

Table 10
Second model fitting results

p-value	*statisticst*	*standard deviation*	*coefficient*	*variable*
0.01	2.52	1.72	4.34	*C*
0.01	-2.45	0.0003	-0.001	*GNP*
0	-3.11	2.86	-8.91	*GROW*
0	3.94	13.36	52.59	*UN*
0.06	-1.86	2.56	-4.76	*INF*
0	27.24	1.37	37.42	*BAM*
0.21	1.24	0.72	0.9	*BEM*
0	-6.81	1.69	-11.52	*CADE*
26.4	statistics F	0.74	determination coefficient	
0	Prob (F-statistic)	0.71	Decreased coefficient determination	

Comparing two models and decreased determination coefficient amount of them and as second model's decreased determination coefficient amount is more than the first model, it can be concluded that second model includes more descriptive power and is he character model comparing the first one.

CONCLUSION

This study targets to evaluate the microeconomic indicators effect on every share profit. For this purpose, 100 companies'data from accepted companies in Tehran stock exchange have been selected. Their financial data has been used to calculate the financial ratios and their EPS. Also to check the research hypothesis, the most importantmacro-economic variables information such as inflation, unemployment, economic growth and production were entered in to analysis.At the beginning through a pattern of econometrics, macro variables effect on earning per share was measured. Then to check the model performance that includes financial ratios in addition to the economic indicators, compared with a model that includes purely economic indicators, the second pattern was estimated and the results were analyzed.

According to table 5 and p-value, t statistics for gross domestic production rate variable (GDP) which equals to 0 and is less than error level of 0.05 (p-value<_ 0.05), zero assumption (assumption of gross domestic production rate ineffectiveness on earning per share (EPS) is rejected and as a result gross domestic production rate effects on earning per share. Therefore the research first hypothesis is accepted. Also according to gross domestic product rate variable coefficient that is positive and equals 0.40, it is concluded that gross domestic production has positive effect on earning per share. In other words, it can be said that gross domestic production, increases earning per share.

According to table 5 and p-value, t statistics for inflation rate variable (IF) which equals to 0.01 and is less than error level of 0.05 (p-value<_ 0.05), zero assumption (assumption of inflation rate ineffectiveness on earning per share (EPS) is rejected and as a result inflation rate effects on earning per share. Therefore the research second hypothesis is accepted. Also according to inflation rate variable coefficient that is negative and equals - 0.02, it is concluded that inflation rate has diverse effect on earning per share. In other words, it can be said that inflation rate, decreases earning per share. Also according to table 5 and p-value, t statistics for economic growth rate variable (GE) which equals to 0 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of economic growth rate ineffectiveness on earning per share (EPS) is rejected and as a result economic growth rate effects on earning per share. Therefore the research third hypothesis is accepted. Also according to economic growth rate variable coefficient that is positive and equals 0, it is concluded that economic growth has positive effect on earning per share. In other words, it can be said that economic growth, increases earning per share

Either, according to table 5 and p-value, t statistics for unemployment rate variable (UE) which equals to 0 and is less than error level of 0.05 (p-value ≤ 0.05), zero assumption (assumption of unemployment rate ineffectiveness on earning per share (EPS) is rejected and as a result unemployment rate effects on earning per share. Therefore the research fourth hypothesis is accepted. Also according to unemployment rate variable coefficient that is negative and equals -0.12, it is concluded that unemployment rate has diverse effect on earning per share. In other words, it can be said that unemployment rate, decreases earning per share.

RESEARCH SUGGESTIONS

It is recommended to the administrators that earning per share is as a criterion for judging the company paying capability of company stock profit, therefore reviews the opportunities before investment.Because if the managers face with favorable investment opportunities which results to economic growth and an increase in the gross domestic product and eventually lead to the company's profitability, should pay less profit so can use better of investment opportunities and increase earning per share.

A complete strategy of economic growth on the basis of production and productive services should be edited that hence it investments in production session and productive services decreases and finally causes increase in companies1 profit.

As earning per share is of the information which will be used by decision makers such as managers, investors and ….so they should be in accordance with the economic realities so decision makers can decide better. Therefore historical information should be decreased according to inflation rates and being more real.

As far as unemployment rate has an important role in Iran economy and hence can be effect on companies and productive institutions 'activities improvement or stop it, so it is recommended to the politicians and responsible people to have a special look at this variable in their economic policy appliance.

Financial reports' users should be aware that each company's earning per share is an effective factor in that company performance evaluation. Therefore it is necessary that mentioned users pay attention to earning per share in their decisions relating to investment.

It is suggested that information relating to the effective factors of earning per share being broadcasted more.

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