IRJABS

Study on the Effect of REVA and RMVA on financial reporting quality in accepted companies in Tehran stock exchange

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ABSTRACT: The present research evaluates the companies operation effect (emphasizing modern economic criteria) on financial reporting . The population of this research is the accepted companies in Tehran stock exchange that using systematic omission method 102 companies of them were selected as sample . In order to investigation of correlation between aforementioned variables the regression analysis and correlation were used. Also in order to measuring normality of statistic data of research variables , Jarqu –Bera test indicate that data distribution is normal . The first hypothesis of research is that the adjusted economic added value has positive and significant effect on financial reporting. The second hypothesis of research is that adjusted market added value has positive and significant effect on financial reporting quality. Considering the obtained results of the first and second hypothesis test and correlation coefficient and significance level of statistic F in each hypothesis we can say that adjusted economic added value and adjusted market added value don't have any positive and significant effect on financial reporting quality .
*Key words***:** Adjusted economic added value –adjusted market added value – Financial reporting quality

INTRODUCTION

The investigation of companies operation is one of the cases that nowadays along with investment markets , have attracted investors and government's and other operators of stock exchange attention to itself . The investors want to know whether the certain economic unit has suitable power in using supplied resources by investors or not and the existence of representative problem and separation of ownership from management add to this curious .

According to this viewpoint of different theorists , managers operation evaluation can be done based on net benefit or stock price or a mixing of both of them , also during time we have observed criteria evolution accordingly manager's and two of most important of these.

Criteria are adjusted economic added value and adjusted market added value. The accounting data quality is one of the cases that many researches have been done about it and usually this quality is according to the relevancy and reliability of accounting data , of course it the most of performed researches during recent year the accounting researchers have considered accounting data precise in cash flow prediction as a financial reporting quality so that define a numerical index for accounting data quality and measure it's relationship with other variables .

Certainly the users of accounting data specially the initial uses that are investors and creditors need to information for their economic decision marking and the major part of this information is provided through financial reporting in the form of financial statements.

Considering this subject we can argue that if other things be fixed and reasonable the mere the quality of present data by economic units accounting system the more precise the made decisions. On the other hand there is a common though flow in community that if a company has good performance it's presented financial reports has high quality . It's certain that this though flow is common between some of decision markers and should be analyzed so that be accepted or rejected. As a result this question is presented that whether companies performance has positive and significant effect on financial reporting quality or not. Therefore for replying this question the companies performance effect should be examined . In this research we have tried to gain this end .

The orical basisand literature
Research theorical basis

The present research theorical basis is related to companies performance and it's evaluation and also relevant financial reporting quality that in the continue of this paper we will describe it.

Companies performance criteria and in this regard

For evaluating of companies performance different approaches have bee presented that the most important of them are as follows : Accounting approach – mixed approach – economic approach and financial management approach .The economic criteria try to with converting accounting data through some of adjust to their economic data determine them as companies performance evaluating bases and these criteria include economic added value and market added value and adjusted market added value. In evaluation of economic approach and business unit performance economic added value by emphasize on company asset profitability power and considering output rate and investment cost rate are evaluated .

One of the most important economic approaches in business unit performance evaluation is economic added value that was introduced by Stoon Stwart and was accounted by the following method :

$$EVA=NOPAT – WACC\times Capital$$

The economic added value indicate that the company value is directly dependent on company performance while other measuring criteria can not do this operation . Economic added value is a method for business economic value measurement considering investment cost that include liability cost and equality.

A weak point of economic added value criteria , the reliable information is used but these information necessarily are not relevant.

In effort for removing this deficiency the theorists have presented a mitigated criteria under the title of mitigated economic added value. Adjusted economic added value criteria is accounted as follows :

$$REVA=NOPAT-(WACC\times MCAPITAL)$$

REVA= The adjusted economic added value   NOPAT= operational net interest after tax

MCCAPITAL= the company market value in the beginning of period

Other economic criteria that indicates the difference between company market value and the used investment in company is market added value . The added value of net market is the present value and future benefit making opportunities of company and show that how the company has predicted it's benefit making and programmed for obtaining them . Form theorical viewpoint the company market added value equals to present value of company added value or remind interest that is expected to be existed in the future (Stuart - 1997)

MVA= company stock market value - operational investment value

If we adjust the company operational investment from inflation viewpoint the other economic criteria is obtained from business unit operation evaluation unded title of adjusted market added value :

RMVA= company stock market value -The adjusted operational investment value because of inflation

In this relationships the market added value and adjusted market added value are MVA and RMVA.

financial reporting quality

The bureau of financial accounting standards in their declaration No. 2 has explained accounting data quality as Follow :

The accounting data quality is regarded as accounting data quality And include understand ability , relevance , reliability and comparison abilityand stability. The relevance means the effectiveness of data in decision making , that has three in decision making , that has three characteristics of proficiency in prediction and timely , and the reliability include three characteristics of conformability , reliability and impartiality.

In the accounting the researchers have could measure accounting data quality by means of accounting data prediction error and generalization principle . Accordingly the accounting data error has revise relationship with accounting data quality in future period operational cash flow and as a result the less the error rate the more quality of the accounting data and vise versa. As a result if the accounting data error in future period operational cash flow is measure operational cash flow is measure in a measurement suitable model it's symmetry can be regarded as accounting data quality.

Literature

The performed research in the field of management performance examination criteria and accounting data quality inside and outside of country according year sequence is described in the following table.

Table 1. background of researches

conclusion	Title of research	year	Researcher
MVA and EVA are positively correlated with stock returns and the correlation is better than the traditional	Investigate the relationship between MVA, EVA and measures Traditional stock returns	1996	Len and mykhha
The degree of correlation and the ability to measure the economic value added Adjusted predicted values than the benchmark EVA is	The ability to evaluate economic value added deflator And economic value added in the forecast Value Creation	1997	Basydor
EVA is a measure of the stock return Prior to seeing the EVA Adjusted return on equity did not anticipate .	Strong predictive value Economic Value Added Economic Adjustment To return	1998	Pearson
The quality of financial reporting and the volatility of stock returns are negatively related to	The relationship between financial reporting quality and volatility of stock returns	2005	Raj goupal
Between financial reporting quality and investment efficiency , there is a positive relationship	The relationship between financial reporting quality and investment efficiency	2005	maodares
Between profit margins and performance management, financial reporting quality , there is a significant positive relationship	Provide a model for the assessment of Quality Factors in Financial Reporting	2008	Badavar nahandi

Research hypothesizes

In the present research there are two hypothesizes as follows :

H1 : The adjusted economic added value (REVA) has positive and significant effect on financial reporting quality (Q)

H2 : The adjusted market added value (RMVA) has positive and significant effect on financial reporting quality (Q).

RESEARCH METHODOLOGY

The present research from objective point of view is an applied research since it's result is used by a users of companies financial statements .

From nature aspect or performance method this research is a correlational research.

The present research from data gathering perspective is a Liberian research since data gathering in this research documents of sample members has been used.

research scop

Research subjective scope : conservatism effect on mitigated economic added value .

Time scope : Time span 2006-2011.

Research place scope : That in this research is Tehran stock exchange and it's accepted companies .

sampling in the present study

The population in this study is all listed companies in Tehran Stock Exchange by the end of Year 2011, for sampling of the population, with regard to the criteria of the systematic removal method used. Thus, companies that did not meet the criteria were excluded. The research summarized in the table below:

Table 2. sampling in the present study

471		listed companies in Tehran Stock Exchange in 2011
	151	Being active in the research period(2006-2011)
	108	Companies that end of their financial year is end of march
	33	Companies with investments & brokerage activities
	77	Availability of accounting information
(369)		All companies excluded from the study
102		All remaining companies based on research criteria

According to the table, it is noted that among 471 companies listed in Tehran Stock Exchange in 2011, only 102 companies met criteria for the desired gain, as a result of other companies were eliminated systematically.

DATA GATHERING METHOD

In the present research documents of accepted companies stock exchange include basic financial statements and explanational remarks along with financial statements and also Novin Rahavard Software were used for data gathering.

Used software of data analysis
for statistical data analysis and research variables measurement and finally hypothesis test softwares Excel , EVIEWS and SPSS were sued.

Research variables and models
Research variables and the method of measuring them.
Independent variable : are adjusted market added value (REVA) and adjusted market added value (RMVA) that is measured as follows :
REVA= Nopat- (Wacc × Mcapital)
RMVA= company stock market value -The mitigated operational investment value because of inflation
REVA= adjusted economic added value
RMVA= adjusted market added value
Nopat= operational net interest after tax
Mcapital= company market value in the beginning of period

Dependent variable : In this research is financial reporting quality (Q) that is measured as follows :
$CFO_{i,t} = \alpha_0 + \beta_1 CFO_{i,t} + \beta_2 \Delta AR_{i,t} + \beta_3 \Delta INV_{i,t} + \beta_4 \Delta AP_{i,t} + \beta_5 DEPR + \beta_6 OTHER_{i,t} + \varepsilon_{i,t+1}$

OTHER = OP – (CFO + ΔAR +ΔINV - ΔAP -DEPR)

$Q = - |\varepsilon_{i,t+1}|$
ΔAR: changes in receivable accounts
ΔAP: changes in payable accounts
CFO: cash follow of opration
ΔINV: Change in inventories
DEPR: tangible and intangible assets amortization expense
ε: the amount of data prediction error
OP: Operating Profit
Q: quality of accountung information
It should be mentioned that in the present research the financial reporting quality has revise relationship with accounting data prediction error . As a result the financial reporting quality is considered regression equation reminder absolute value . (Modares – Hesarzadeh – 2009).
Control variables : In the present research is company size and book value to stock market ratio (MB) at is evaluated as follows :
$SIAZE = \log (ASSTBV_{i,t})$
$MB = \frac{BV}{MV}$
ASSTBV= Book value of company asset in the End of year   SIZE= company size
BV= book value in the end of year   MB= book value to stock market value ratio
MV= company market value in the end of year
The models that are used for hypothesis test

in the present research we have used of regression analysis and correlation coefficient.
The reason of using these method s is effect for expression of the relationship between variables in this research .
The used model for sub hypothesis (1) Test is :
$Q_{i,t}=a_{i,t}+\beta_1 REVA_{i,t}+\beta_2 MB_{i,t}+\beta_3 SIZE_{i,t}+\varepsilon_{i,t}$
The used model for sub hypothesis (2) Test is :
$Q_{i,t}=a_{i,t}+\beta_1 RMVA_{i,t}+\beta_2 MB_{i,t}+\beta_3 SIZE_{i,t}+\varepsilon_{i,t}$
5. data analysis and research hypothesizes test
 data analysis of the first and the second hypothesizes of test are presented in the following table
hypothesis 1 test
Hypothesis 1 : The adjusted economic added value (REVA) has positive and significant effect on financial reporting (Q)
H_0 : The adjusted economic added value (REVA) don't has any positive and significant effect on financial reporting (Q)
H_1 : The adjusted economic added value (REVA) has positive and significant effect on financial reporting (Q)

Table 3 . Descriptive statistics

SIZE	MB	Q	REVA	Variable
14.650	2.284	- 54200	-0.090	average
14.312	1.903	-28810	-0.034	median
1.269	3.21	88300	0.727	var
0.712	4.821	-5.100	5.211	skewness
4.10	37.760	30.510	51.125	elongation
19.310	28.16	-30600	9.210	max
11.740	1.210	-727000	-0.826	min
7.57	26.95	696400	10.036	domain
39421.7	4984.6	4276.91	5233.1	jarque
0.234	0.543	0.076	0.285	Significant

Table4 . Summary of regression model

R	0.06	-statistic	449.5
Dorbin-watson	2.3	'rob F- statistic	0.236
R-squared	0.089	Adjusted R-squared	0.089

Table 5. The coefficients of the regression model

Coefficient	l_0	l_1	l_2	l_3
T-statistics	2.4453	7.1318	-7.3966	-1.0918
Probability	0.0182	0.000	0. 22	0.34

Normality pre hypothesis of statistical data
By regard to table 3 it is observed that Jarque –Bera statistical contingency in relevant to financial reporting quality (Q) and also adjusted economic added value (REVA) and control variables of book value to market value ratio(MB) and company size (size) is more than 0.05 . As a result the relevant statistical data the first hypothesis variables of research doesn't follow of a normal distribution.

the pre hypothesis of errors independence of each other
 Durbin –Watson test is used and as it is presented in table 4 the amounts of this statistic equal to 2.3 and because it is placed in the range of 1.5 to 2.5 thus we can say that the errors independence pre hypothesis of each other is accepted in relation to the first hypothesis.

The pre hypothesis of the correlation between dependence and independence variables
By regard to table 4 it is observed that the correlation co efficient (R) is equal to 0.06. According to contract if this co efficient be between 0 to ±0.3 the correlation rate is low and is this coefficient be between ±0.3 to ±0.6 the correlation rate is in average rate . Also if correlation coefficient be between ±0.6 to ±1 the correlation rate will be high. Considering correlation coefficient in table 4 we can say that there is a weak positive correlation between dependent and independent variables .

The model explanation pre hypothesis

In order to ovulation the model explanation pre hypothesis the determination coefficient in table 4 this coefficient rate is equal to 0.08 . As a result we can say that 0.08 of changes in dependent variable (financial reporting quality) is explained by independent variable and control variables.

The pre hypothesis of existence of a linear relationship between dependent variables

In order to significance evaluation or linear relationship between independent and dependent variables , the statistic (F) is used. As the table 4 shows the significance level of this coefficient equal to 0.236. Because this rate is more than 0.05 so we can say that there is not any relationship dependent variable and significant independent variable.

Also it should be mentioned that if statistic contingency in relation to independent variables and control variables is less than 0.05 this variable can participate in equation . considering table 5 it is showed that the statistic t contingency in relation to equation fix amount and control variables MB , the size is more than 0.05 and as a result these variables can not participate in equation.

Considering the investigation of pre hypothesizes and tables in relation to First hypothesis we can say that there is a weak relationship between adjusted economic added value (REVA) and financial reporting quality (Q) but this relationship is not significant.

hypothesis 2 test

Hypothesis 2 : The adjusted Market added value (RMVA) has positive and significant effect on financial reporting (Q)

H_0 : The adjusted Market added value (RMVA) don't has any positive and significant effect on financial reporting (Q)

H_1 : The adjusted Market added value (RMVA) has positive and significant effect on financial reporting (Q)

Table 6 . Descriptive statistics

SIZE	MB	Q	RMVA	Variable
14.650	2.284	-64000	-0.310	average
14.312	1.903	-29100	-0.212	median
1.269	3.21	76400	0.196	VAR
0.712	4.821	-3.211	-0.345	skewness
4.10	37.760	12.733	2.838	elongation
19.310	28.16	-993	-0.009	MAX
11.740	1.210	-743000	-0.821	MIN
7.57	26.95	742007	0.812	Domain
39421.7	4984.6	5367.7	4324.3	jarque
0.876	0.322	0.652	0.635	Significant

Table7 . Summary of regression model

R	0.03	F-statistic	449.5
Dorbin-watson	1.91	Prob F- statistic	0.477
R-squared	0.26	Adjusted R-squared	0.0259

Table8. The coefficients of the regression model

Coefficient	$_0$	$_1$	$_2$	$_3$
T-statistics	.4453	.1318	7.3966	1.0918
Probability	.182	.000	.36	.58

Normality pre hypothesis of statistical data

By regard to table 6 it is observed that Jakiro –Bera statistical contingency in relevant to financial reporting quality (Q) and also mitigated market added value (RMVA) and control variables of book value to market value (MB) ratio and company size (size) is more than 0.05 . As a result the relevant statistical data the second hypothesis variables of research doesn't follow of a normal distribution.

the pre hypothesis of errors independence of each other

Durbin –Watson test is used and as it is presented in table 7 the amounts of this statistic equal to 1.91 and because it is placed in the range of 1.5 to 2.5 thus we can say that the errors independence pre hypothesis of each other is accepted in relation to the second hypothesis.

The pre hypothesis of the correlation between dependence and independence variables

By regard to table 7 it is observed that the correlation co efficient (R) is equal to 0.03. According to contract if this co efficient be between 0 to ±0.3 the correlation rate is low and is this coefficient be between ±0.3 to ±0.6 the correlation rate is in average rate . Also if correlation co efficient be between ±0.6 to ±1 the correlation rate will be high. Considering correlation coefficient in table 7 we can say that there is a weak positive correlation between dependent and independent variables .

The model explanation pre hypothesis

In order to ovulation the model explanation pre hypothesis the determination coefficient in table 7 this co efficient rate is equal to 0.02 . As a result we can say that 0.02 of changes in dependent variable (financial reporting quality) is explained by independent variable and control variables.

The pre hypothesis of existence of a linear relationship between dependent variables

In order to significance evaluation or linear relationship between independent and dependent variables , the statistic (F) is used. As the table 7 shows the significance level of this coefficient equal to 0.47. Because this rate is more than 0.05 so we can say that there is not any relationship dependent variable and significant independent variable.

Also it should be mentioned that if statistic contingency in relation to independent variables and control variables is less than 0.05 this variable can participate in equation . considering table 8 it is showed that the statistic t contingency in relation to equation fix amount and control variables MB , the size is more than 0.05 and as a result these variables can not participate in equation.

Considering the investigation of pre hypothesizes and tables in relation to second hypothesis we can say that there is a weak relationship between adjusted market added value (RMVA) and financial reporting quality (Q) but this relationship is not significant.

CONCLUSION

The obtained result of first hypothesis
The first hypothesis of research is that
«   The adjusted economic added value should has positive effect on financial reporting quality and this effect should be significant and positive . By regard to the results of the first hypothesis we can say that there is the first condition for accepting the first hypothesis . But there is not the second condition that is effect significance.
As a result the hypothesis (7) is rejected. Thus if operation of a company be measured though adjusted economic added value in a high level it dose not mean that the financial reporting quality of that company is in a high level.
As a result the first hypothesis is rejected .

The obtained result of second hypothesis
The second hypothesis of research is that
«   the adjusted market added value has positive and significant effect on financial reporting quality » . For accepting this hypothesis the adjusted market added value has positive effect on financial value has positive effect on financial reporting quality and this effect should be positive and significant .
Considering the obtained result of the hypothesis 2 we can say that there is the first condition for accepting the hypothesis 2 . thus the hypothesis 2 is rejected . so is a company function be measured in a high level through adjusted market added value this dose not mean that the company financial reporting quality is higher.
General conclusion : By regard to the obtained results of this research hypothesis we can say that there is not any positive and significant relationship between companies function and their financial reporting , we can not judge about companies financial reporting quality according to their function.
And it is necessary that the companies financial reporting be investigated independent of their operation.

The applied recommendation of research

We recommend to investors , creditors , governments , financial analyzers and all of the share holders that use of companies accounting data in their economic decision data in their economic decision making don't judge about financial reporting quality according to companies function and the presented financial reports by companies should be measured as a separate subject because according to the obtained results of this research there is not any positive and significant relationship between companies operator and financial reporting quality . As a result before using the accounting information in decision making these information should be evaluated from quality aspect so that their using lead to suitable economic decision making.

Research limitations

The present research has been done in time span of 2006 to 2011 thus it is possible that the change of time span lead to the change of research results.

In the present research the company size and book value to market value ratio are used as control variables thus it is possible that after inserting of the other control variables in to the process the research results be changed.

In the present research because of time limitation , 102 company were used as sample thus the result of research may canted with increasing the sample volume increase.

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