A Study of Refined Economic Value Added Explanatory Power Associated with MVA & EPS in Tehran Stock Exchange

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Abstract
The current study aims to examine the relationship between Refined Economic Value Added and market Value Added as the independent variable and earnings of per share as the dependent variable in companies listed in Tehran Stock Exchange during five years 2004-2008. In order to measuring the correlation of the criterion toward market Value Added in relation to earnings per share. Hence, the main question of the study is that if Refined Economic Value Added has more explainability than market Value Added in explaining the earnings per share. According to the research objective, 97 companies were selected as the sample through systematic omittance method. Then, hypotheses were stated and two estimating regression models were used to test the hypothesis; and in order to select the superior model among the other models, Voung statistics was used. The results, according to the Voung statistics and R², indicate that in studied sample, market Value Added estimated in model has more correlation with earnings per share than Refined Economic Value Added.

Keywords: Refined Economic Value Added (REVA), Market Value Added (MVA), and Earnings per share (EPS).

1. Introduction
Long term value creation is one of the most important goals of companies (Monks and Minow, 2003). Gupta (2007) stated that the main goal of each organization is to create value for its owners. Undoubtedly, the purpose of investors of investing in companies is to earn returns on their investment proportionate to their investment. If companies or organizations are successful in value creation, it will be not only beneficial for investors and internal individuals, but also in a broader level, the community will profit from it. Therefore, finding a superior identifier in evaluating the enterprise performance is a significant characteristic of current financial researches. REVA in previous research constantly considered as an important complementary and efficient evaluating criterion toward EVA criteria and variety of research has been done by researchers in order to determine the ability of these criteria in evaluating the performance of companies. This criterion seeks to close the accounting profit and economic profit and with considering the market value of capital costs in calculation of accounting profit is trying to measure create value for enterprise better than the EVA, so that it could be better evaluating basis for performance of managers and investors in enterprise.

2. Theoretical Bases and Literature review
In most cases, the power and authority of decision making in company, is often provided by managers who have a conflict of interest with outside interest groups, particularly stockholders. This conflict of interest is the result of separating ownership from management, from the past has focused the attention of many. Several studies in the field of identify the problems from the separating ownership from the management and the stockholders, managers and researchers have paid to ponder the roots reasons for conflict of interest (Alchian and Demsetz, 1972). With the formation of separation the ownership and management topics a conflict of interest between owners and managers, evaluate the performance of companies and their managers from the considered topics of creditors, landlords, government and even the managers (Jensen & Meckling, 1976). In order to mitigate conflicts of interest, criteria for evaluating managers' performance and provide a basis for determining incentive payments are based on the findings is innovation and being used of this assessment (Jensen & Murphy, 1989). For many years investors and managers are seeking to timely and reliable identifier to measure of wealth for shareholders (Worthington & West, 2000). Currently measurement techniques are more have been based on economic theories than on the accounting framework (Shinder & McDowell, 1999).
2.1 Selecting Criteria for Performance Evaluation

Bacidore et al., (1997) state that, a scale for determining the appropriate criteria for evaluating performance, the selection criterion is the extent to which it is to create value for shareholders. A good tool to create a return commensurate with the amount of capital used in lead the company. According to many researchers, such as Dechow (1994), Lehn & Makhija (1997), Balsam & Lipka (1998), Chen & Dodd (2001) and Worthington & West (2004), profit of accounting is one of the most important criteria of performance measurement. Despite the importance and application of these criteria, there is a fundamental problem: the conflict Interests of By distorting numbers management accounting profit (Hill & Phan, 1991). Manipulation capabilities (Stewart, 1991; Bhattacharyya & Phani,1999), ignoring the time value of money and price level changes (Anand et al, 1999). The opportunity cost of investment (Chen & Dodd, 2001). Among the criteria based on profit, growth profit is counted as criterion for the status profit each company in future (Jackson, 1996) Is considered at the profit accounting with attention to price market shares at view is that shows expectations and predictions market future and profitability future. It is View Stewart (1991) growth profit also criteria misleading of operation company and the criteria to alone criteria appropriate for evaluation company performance and should not be cautious in applying it, and the amount of investment made to achieve this growth in mind.

2.2 Dividends

The dividend policy, the first time by Lintner (1956) was introduced. Lintner model by other researchers (Fama & Babaik, 1968; Correia el al., 1993; Noe & Rebello, 1996) was developed Wolmarans, 2003). Divided profit also criteria Inappropriate for evaluation operation companies most companies to two because section significant a profit more by the between shareholders own are divided. The as companies or plans profitable investment, no and or intent are the funds need own for growth and, investment, of resources foreign supply. said divided profit of lack possible investment at projects, profitable, correct is but if profit divided be and then funds necessary for growth of by increase capital supply, be policy divided profit with difficult is the increase capital for supply, financial most expensive type supply financial (Krolick, 2005; Stewart, 1991).

2.3 Free Cash Flow

The concept of free cash flow was introduced first time by Michael Jensen (1986). The cash free some of the cash is that if between shareholders divided, be Effect at power Profitability Company no. According to Stewart (1991), the free cash also to alone criterion sure for measurement operation company not and only can for purposes of Short case be use.

2.4 EPS

O’Hanlon & Peasnell (1996) on the believe that using EPS as the criterion for evaluating performance, encourages short-term behavior between managers and leaders and convince them that funds supply by shareholders, are free to attend. In the study of Jennings et al. (1997) also, the information content of different forms of profit accounting were evaluated that shows that the profit of each share at all forms of calculation, is useful for its users. EPS data is widely used in the evaluation of executive functions often as the only scale which is considered as the best performance method of a company. The amount of EPS, dividends per share compared to the previous period and the change in the trend, all important measures of success or failure of a company are considered. The EPS is of result divided profit (Loss), net so of fraction tax the average tunable ordinary shares of the company (Stewart, 1991).

2.5 The concept of REVA

The company’s value is a function of power profitability, priorities existing investments potential and difference rate efficiency and cost capital of company (Bausch et al. 2003). The value based on performance criteria is in an effort to overcome some limitations of traditional performance measures (Erasmus, 2008). The value added at the first time by Gillchrist (1970) was used in the census of GDP in North America (Van Staden, 2000). The concept of wealth creation in the literature value added accounting for the company by its owners and employees during a financial period is defined (Mandal & Goswami, 2008). Value Added for the first time by Stern Stewart's economic institute in 1989 to title outstanding criteria evaluation operation With the highest share price performance is compared to the traditional criteria, was introduced (Stephens & Bartunck, 1997). The concept of economic value is similar to the concept of residual income (Stark & Thomas, 1998) and creates more wealth for shareholders at all times been associated with (Fernandez, 2001; Ferguson et al., 2005).
2.6 Disadvantages of using EVA

Calculating the cost opportunity resources based on office value (Bacidore et al. 1997). Distorting the findings by swelling; therefore, in Length Courses Inflation not for Estimate Value Creation and profitability Real. Bkarbrd Company (Ferguson & Leistikow, 1998; Villiers, 1997). Inflation to the EVA: after reduction through taxation, investment and cost of capital (Warr, 2005). At conditions inflation and at form application EVA to title evaluation criteria performance operating company, it is better of version adjustment shdan for financial decisions be used for this purpose (Villiers, 1997). Deficiencies related to the economic value, EVAS another performance measurement tool in the study adjusted for the first time in 1997, was introduced by Bacidore. Economic value as a criterion for value creation for shareholders acting, but the refined EVA for a tool to better assess the financial performance for a company in the past has had or will provide. Refinded for the total economic value of a foreign operation is used (Bacidore et al. 1997).

The problem of EVA is depended on historical figures. It means that EVA uses more reliable data but this data does not necessarily relevant. In the other words to calculate the utilized resources opportunity cost REVA using market value and also EVA use office value. So, the investors expect returns on market value (Bausch et al. 2003).The advantage of REVA in compare with EVA is that, at any time Refind economic value. is positive for shareholder value creation is double the operating profit of the financiers at the end of the year is expressed in terms of percentage of the value of the capital market, it is more than the opportunity cost of capital. But in this situation There is no economic value because shareholders return on operating profit after subtracting the opportunity cost of capital do not get it, even when the calculated amount of economic value, is positive (Bacidore et al. 1997).

2.7 MVA

Stewart in 1991 introduced a measure of density for value creation for shareholders as the value-added market, the difference between market value and book value of the company (Poulain-Rehm, 2008). Maximizing the total market value is now one of the common objectives of all companies (Gapenski, 1996). Which is generally a domestic economic performance, value-added market criteria for performance is how the market performance of foreign companies based on market values of debt and equity, with investments made in companies measure (Reilly & Brown, 2004).

The results of Uyemura et al. (1996) and Milunovich & Tsuei (1996) very well represent the market value of the value created for shareholders has been introduced. A company's total market value is the sum of equity market value of the company and the market value of its liabilities. Accordingly, if the company will create value for shareholders of the company's market value Book value.( More capital is used (Medeiros, 2005). In fact, the market value equivalent to a present value of all economic value created by companies Additions (Hall & Brummer, 1999; Wet & Hall, 2004; Hawawini &Viallet, 1999; Weston  et al. 1992) and as accumulative measure of value created by management in excess of capital is used in exorcism (Rama, 2005). The market value is calculated as follows (Stewart, 1991): MVA = Market Value of Company - Invested Capital.

<table>
<thead>
<tr>
<th>Research result</th>
<th>Title</th>
<th>Researchers &amp; Research year</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVA and REVA both have a positive relationship with abnormal returns. REVA in explanation and prediction of abnormal returns acts better than the EVA. It would be wise to use REVA for evaluating the performance of high levels organization and EVA for evaluating the performance of low levels organization.</td>
<td>The Research for the Best Financial Perofmance Measure</td>
<td>Bacidore et al. (1997)</td>
</tr>
<tr>
<td>EVA to some extent predicts stock returns, while the REVA of the stock return is not predictable at all.</td>
<td>An analysis of the explanatory power of EVA and REVA for share returns in the mining sector</td>
<td>Pearson (1998)</td>
</tr>
<tr>
<td>REVA can lead to low investment in projects with positive net present value or</td>
<td>Is market value-based residual income a superior performance</td>
<td>Bausch et al. (2003)</td>
</tr>
</tbody>
</table>
excessive investment in projects with negative net present value. measure compared to book value-based residual income?

<table>
<thead>
<tr>
<th>REVA has higher explanatory power than EVA in predicting shareholder wealth.</th>
<th>REVA- An Indicator For Measuring The performances of the companies</th>
<th>Circiumaru &amp; Siminica (2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between EVA and REVA and operating cash flow or operating income with the information content did not achieve a significant relationship.</td>
<td>Relative and Incremental Information Contents of EVA and REVA used for Prediction of the Income</td>
<td>Panahian &amp; Mohammadi (2011)</td>
</tr>
</tbody>
</table>

3. Research Methodology

This study considering the purpose is an applied research and considering the method is a descriptive correlation research. In the present study during the 5-year period 2004 to 2008 data was performed from companies on the Tehran stock exchange (the Statistic). Tehran Stock Exchange Company were selected with the following conditions samples research method is screening (systematically removed) according to continuous activity in research period and similarity of fiscal period (except investment companies and financial intermediation). Size of the Statistical Society in this study is 316 companies and sample size was 97 active companies from Tehran Stock Exchange.

3.1 Hypothesis of the Study

According to the above mentioned literature as well the objective of the study the following hypothesis is postulated in the study:

1. Refinded economic value added, better explains the earnings per share than the market value.

3.2 Variables under Study

According to the research hypothesis refinded economic value and MVA as the independent variable and EPS as the dependent variables were determined.

REVA is calculated as follows (Bacidore et al. 1997):

\[ \text{REVA}_t = \text{NOPAT}_t - \text{WACC} \times \text{MCAPITAL}_{t-1} \]

\[ \text{NOPAT}_t = \text{Net operating profit after tax in } t \text{ end} \]

\[ \text{WACC} = \text{Weighted Average Cost of Capital} \]

\[ \text{MCAPITAL}_{t-1} = \text{market value at beginning of period } t \text{ (end of period } t-1) \]

(Stock market price in the first period × number of shares) – (book value of total liabilities - Interest free current liabilities)

For calculation capital used and operational net profit after Fraction the taxes two approaches can be used; operational and financial supply. Using each of two approaches will lead to similar results. In this study has been used operational approach. Effective tax rate according to direct law taxes in Iran is 22/5 percent. In calculating in this study apply the capital increase and reduce storage demands and the suspect store inventory devaluation. In calculating the weighted average cost of capital rate cost debt to form the calculation the Be:

\[ K_d = \text{The interest rate of loan (1-t)} \]

Where; \( K_d \): the rate of cost of debt and T: tax rate Iran shares of corporate stock outstanding and no preferred shares in the costs.

Cost of ordinary shares: Two methods for measuring Cost of issuing ordinary shares in the lining are: 1) Gordon Model. 2) Capital Asset Pricing Model (CAPM) (Bacidore et al. 1997). Gordon model has been used in this study. The Gordon model expectations capital investors of the profit future shares company estimate the Fibre of Price now Shares Normal to Purpose of Rate Efficiency Case Expectation Shareholders Use the: Be. At the expense of the ordinary shares is calculated by the following equation:

\[ K_e = \frac{D_p}{P_0} + g \]
Where; Kc: rate the cost of common stock, D1: The benefit is paid at the end of the first year, P0: Value of common stock at the beginning of the period and g: growth rate (in the model is assumed to be constant over time).

Finally, the weighted average cost of capital with the various components that comprise the company's capital such as debt and common equity is calculated (Stewart, 1991; Bacidore et al. 1997):

\[ WACC(K_{eq}) = (W_d \times K_d) + (W_c \times K_c) \]

Where; Wd, Wc: the percentage of the contribution (weight) in total debt and common equity capital and Kd, Kc: Debt and equity cost rate are normal respectively.

### 3.3 Testing of the Hypothesis

In this study, statistical analysis methods such as correlation analysis, regression analysis and statistics were used to Vuong. Common method for selecting the best model in terms of defining the regression model, comparing the coefficients of the model is that the model is chosen that has a higher coefficient of determination. The difficulty in choosing a model, it is possible that nature has no significant results, so in this study to determine which of the competing models is better able to explain power of one of the best and most powerful test to generalize the results of statistical models to explain the power of Vuong's statistic is used. Vuong (1989) a statistical test to determine which of these two models, the dependent variable better explains, can be provided. Difference test and other tests in the Vuong test, the likelihood ratio statistic distribution obtained with the assumption that none of the models is real. The likelihood ratio statistic Vuong, based on statistics of the null hypothesis without considering statistical evidence each model is calculated (Genius & Strazzera, 2000). Although this statistic for both models, considers power, but the shows which of the two models is closer to the actual process the data. In many studies of this test to measure a significant regression in contrast to other models by comparing the coefficient of determination is used. This statistic has a normal asymptotic distribution and less better model is that it represents. The two models are fitted:

\[ h_i = \frac{1}{2} \left[ (\log \sigma_2^2 - \log \sigma_1^2) + \left( \frac{\sigma_1}{\sigma_2} \right)^2 - \left( \frac{\sigma_2}{\sigma_1} \right)^2 \right] \]

And the order in which the residual mean square and the remaining two are related.. Is zero average residual standard deviation divided by the remnants of the standard results? K. However, the obvious difference between the standardized values of the second enlargement of the residual values of K, which indicates a difference in the two models, is explained. K. But it was the opposite of the values of K are zero: To evaluate this test for normal distribution using the mean and the statistics based on Vuong is defined as follows:

\[ w^2 = \text{Var}(K) = \frac{1}{n} \sum k_i^2 - \left( \frac{1}{n} \sum k_i \right)^2 \]

\[ z = \frac{K}{w} \sqrt{\frac{n}{n-1}} \]

In these test method the probability ratio for the selection of competing models is presented according to if the test statistic Vuong:

1) Is positive, the second model is superior to the first model.
2) Is negative, the second model is superior to the first model.
3) Is zero, none of the two models are better than another (Dechow, 1994). The following is a statistical hypothesis :

H0: Both models to describe the actual process of production data are similar.
H1: One of the two models explained the actual production process the data further.
According to the hypotheses the research regression models were have been fitted to the following relationships:

Hypothesis models:

\[ \text{EPS}_t = \alpha_0 + \beta_1 \times \text{MVA}_t + \varepsilon_t \] (1)
\[ \text{EPS}_t = \alpha_0 + \beta_1 \times \text{REVA}_t + \varepsilon_t \] (2)

4. Results of Testing the Hypotheses

4.1 Describing the values of research

Table (2) shows the descriptive statistics the variables study.

<table>
<thead>
<tr>
<th>Var.</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>Std.Dev</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVA</td>
<td>-25721416</td>
<td>797403</td>
<td>-617963</td>
<td>1992533</td>
<td>-6.802</td>
<td>64.151</td>
</tr>
<tr>
<td>MVA</td>
<td>-889.7</td>
<td>4840</td>
<td>344.8</td>
<td>722.2</td>
<td>2.950</td>
<td>10.479</td>
</tr>
<tr>
<td>EPS</td>
<td>-779</td>
<td>5418</td>
<td>816.5</td>
<td>895.9</td>
<td>2.302</td>
<td>7.603</td>
</tr>
</tbody>
</table>

4.2 Evaluation of Research Variables Normality

In Table 3 with using the kolmogorov-smirnov statistical method, the normality of variables of research has been examined. As can be seen, any of the research variables are not distributed normally and this issue can cause the non-establishment normality conditions is required in the remaining regressions.

<table>
<thead>
<tr>
<th>Var.</th>
<th>no (Year – Co)</th>
<th>K-S</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVA</td>
<td>485</td>
<td>9.894</td>
<td>0.000</td>
</tr>
<tr>
<td>MVA</td>
<td>485</td>
<td>6.367</td>
<td>0.000</td>
</tr>
<tr>
<td>EPS</td>
<td>485</td>
<td>3.788</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Regarding the absence of normal research variables by Box and Cox transformation trying to normalize the dependent variable for this purpose, distribution of the variable study below conversion (Table 4) was close to normal distribution.

<table>
<thead>
<tr>
<th>Var.</th>
<th>Box &amp; Cox transformation</th>
<th>K-S</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPS</td>
<td></td>
<td>1.109</td>
<td>0.171</td>
</tr>
</tbody>
</table>

4.3 Estimation of Regression Models

Before fitting the final models first of all research data has been converted for establishment the infrastructure conditions of regressions (Remainings independent, the normal and have constant variance) and before fitting Perth data regressions according to the standard deviation of the three out residues are eliminated.

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>( R^2 )</th>
<th>Adjusted ( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.473</td>
<td>0.224</td>
<td>0.222</td>
</tr>
</tbody>
</table>
Table 6. Analysis of variance in relation with MVA & EPS

<table>
<thead>
<tr>
<th>changing Source</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Squared</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>64896.821</td>
<td>1</td>
<td>64896.821</td>
<td>126.215</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>224694.455</td>
<td>437</td>
<td>514.175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>289591.277</td>
<td>438</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7. Estimation of parameters in relation with MVA & EPS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Std.Dev</th>
<th>T</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>41.376</td>
<td>1.271</td>
<td>32.564</td>
</tr>
<tr>
<td>MVA</td>
<td>0.671</td>
<td>0.060</td>
<td>11.235</td>
</tr>
</tbody>
</table>

According to the tables, 22% of the relationship between the variables is explained through the following equation:

\[
\text{EPS}_{it} = 41.376 + 0.671 \times \text{MVA}_{it} + \epsilon_{it}
\]

Table 8. Statistics regressions in relation with REVA & EPS

<table>
<thead>
<tr>
<th>Correlation coefficient</th>
<th>R²</th>
<th>Adjusted R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.158</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>0.023</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. Analysis of variance in relation with REVA & EPS

<table>
<thead>
<tr>
<th>changing Source</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean Squared</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7250.433</td>
<td>1</td>
<td>7250.433</td>
<td>11.222</td>
<td>0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>282340.843</td>
<td>437</td>
<td>646.089</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>289591.277</td>
<td>438</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10. Estimation of parameters in relation with REVA & EPS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Std.Dev</th>
<th>T</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>50.122</td>
<td>1.271</td>
<td>39.443</td>
</tr>
<tr>
<td>REVA</td>
<td>0.003</td>
<td>0.001</td>
<td>3.350</td>
</tr>
</tbody>
</table>

According to the above tables, 2.5% of the relationship between the variables is explained through the following equation:

\[
\text{EPS}_{it} = 50.122 + 0.003 \times \text{REVA}_{it} + \epsilon_{it}
\]

In each of above relationships prior relation confirmation between, appropriate models check was proved through the distribution curve. Also according to the Durbin-Watson test normality of remained and K-s statistic; lack of remaining correlation is confirmed and was proved table (11). Also absence of trend in the distribution charts and remained stable against the estimated residual variance proved for all models.

Table 11. Durbin-Watson & Kolmogorov-Smirnov statistic

<table>
<thead>
<tr>
<th>Model</th>
<th>p-value</th>
<th>K-S</th>
<th>D-W</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>0.066</td>
<td>1.305</td>
<td>2.21</td>
</tr>
<tr>
<td>(2)</td>
<td>0.223</td>
<td>1.047</td>
<td>1.97</td>
</tr>
</tbody>
</table>

4.4 Research hypotheses inferred

To examine the Research hypothesis according to the fitting of two regression equation (1) & (2) is insufficient to compare the Value determination coefficient of two equations.
That \( R_1^2 \) (determination coefficient of regression equation of REVA & EPS) and \( R_2^2 \) determination coefficient of regression equation of MVA & EPS or in other words:

\[ \begin{align*}
H_0 & : \text{REVA did not explain EPS better than the MVA.} \\
H_1 & : \text{REVA did explain EPS better than the MVA.}
\end{align*} \]

Results test related to hypothesis test are gathered in following table (12):

<table>
<thead>
<tr>
<th>Regression equation</th>
<th>Correlation coefficient</th>
<th>( R^2 )</th>
<th>Adjusted ( R^2 )</th>
<th>Voung statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{EPS}<em>{it} = 41.376 + 0.671 \times \text{MVA}</em>{it} + \epsilon_{it} )</td>
<td>0.473</td>
<td>0.224</td>
<td>0.222</td>
<td>10.783</td>
<td>0.999</td>
</tr>
<tr>
<td>( \text{EPS}<em>{it} = 50.122 + 0.003 \times \text{REVA}</em>{it} + \epsilon_{it} )</td>
<td>0.158</td>
<td>0.25</td>
<td>0.023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As is clear determination coefficient of MVA more than REVA and according to the p-value can be accepted that did not explain null hypothesis or this assumption that “REVA did not explain EPS better than the MVA “at the %5 level not be rejected.

5. Results and Discussion

The research hypothesis states that the refine economic value added, EPS is explained better than the MVA. The results indicate that the correlation coefficient between refine economic value added and EPS of 0.158 is much weaker than correlation between MVA and EPS of 0.473. Compared with the coefficients determination \( R_1^2 \) and \( R_2^2 \) can be inferred that according to the estimated regression equations for relationships between variables refined economic value added and MVA as a performance evaluation economic criterion for the ability to explain 0.023 and 0.222 Percent change in EPS as a have financial criterion for evaluation performance and decision making based on any of these criterion could lead to somewhat different results. Also according to the probability amount that could be admitted that null hypothesis in not rejected at 5% level thus the first research hypothesis is not confirmed. However, the positive value of the Voung statistic 10.783 and null hypothesis rejection these statistics in order to generalize difference results amount explain power of two rival models to the study population MVA in the first model than refine economic value added in the second model has more explanatory power in relation to EPS and better explain the dependent variable in the studied sample and is closer to the actual process of creating data in community than rival model the results of correlation in the selected model with the results Hall & Brummer(1999), Milunovich & Tsuei (1996), the results in the first model are consistent with Milunovich & Tsuei (1996) research.

Noteworthy that the data of refine economic value added in this study was the number of 365 (Year - Co.), of 485 (Year - Co) means 75% from the Refind economic value added has been calculated was negative that this matter could be due to the following factors:

i. The high cost of capital rate in Tehran Stock Exchange market.


iii. Lack of company entrepreneurship power in expectations shareholders or absence of enjoying optimal combination of capital structure and the high cost of financing.

iv. Negative Refind economic value added can also, is due to investment and effective information affecting the company market value that the effect of investment opportunities in the present and future strategies, future will be deprive company. The effect of these factors on net operating profit after tax and the effect of this new information on future cash flows affect the operating profit after tax and have solely effect reducing during the current period. Therefore compliance to opportunity costs of future with net operating profit after current period tax may result negative Refind economic value added.
References


