# Analyzing the Relationship Between Economic Value Added (EVA) and Accounting Variables with Share Market Value in Tehran Stock Exchange (TSE)

[1]Habibollah Nakhaei and [2]Nik Intan Norhan Bnti Hamid

[1]Department of Accounting, Birjand Branch, Islamic Azad University, Birjand, Iran
[2]Department of Accounting and Finance,Faculty of Management
Universiti Teknologi Malaysia (UTM), Skudai, Johur, Malaysia

**Abstract:** The purpose of this study is to examine the relative explanatory power of the economic value added (EVA) model with respect to share market value (MV) compared to recognized accounting variables (net profit and operational profit) in the context of Tehran Stock Exchange (TSE). The sample involves 87 non-financial companies listed in Tehran Stock Exchange (TSE) over the period 2004–2008. Pearson correlation coefficient and regression method was employed to analysis the scondary data. The results show there are more relationship among accounting variables (NP and OP) and share market value (MV) than economic value added (EVA). Although, the relationship between EVA and share market value is significant.

**Key words:** Economic value added · Net profit · Opertional profit · Share market value · Cost of capital

## INTRODUCTION

The fundamental change in economic situation and rate relations between countries have been witnessed in the past two decades. In this new state of economy, the managers of business faced with new challenges. Shareholder wealth maximization is the main purpose of each company and performance evaluation of companies is the most important subject that is considered by investors, managers, and government. Recently, activity of stockholders has reached unparalleled levels and led to raised needs on companies to maximize stockholder [1]. In order to ensure optimal allocation of limited resources, evaluating of the companies' performance is vital. Suitable criteria for evaluating performance of enterprise or shareholder value must be used, if the value of company do not propel toward real value, the funds are not allocated properly [2].

Economic value added is one of the newest criterions of operation measurement and determining the value of the company. This measure was first introduced by a consulting company of management called Stern Stewart Co. in 1991. Stewart (1991) believes that the other criterions of measurement and evaluation of operation such as profit, earning per share, and dividing of profit are not perfect indexes of measurement and economic value added in compare to them is more complete and practical. The reason is that economic value added due to its relation with changes made to the shareholder's wealth is more relevant measure to evaluate the operation of an enterprise. On the basic of this criterion, the value of a company depends on two factors:

- What a turnover of company can gain from employed capital,
- What expenses it should pay for the employed capital.

Therefore the difference between economic value added and other evaluation measures of performance lays on the fact that in its determination efforts are made to consider the expenses of all financial resources. EVA has a close relationship with net present value (NPV). EVA is compatible with this theory, that the market value of company will increase if the company chooses the projects with positive of NPV. The economic value added (EVA) is influenced by the all decisions of firm such as: investment decision, devidends, return on equity (ROE), financing decision, and weighted average cost of capital (WACC). EVA has association with share

---

**Corresponding Author:** Nik Intan Norhan Bnti Hamid, Department of Accounting and Finance, Faculty of Management Universiti Teknologi Malaysia (UTM), Skudai, Johur, Malaysia.

market value of company, because share value is function of the projected future economic value added (EVA). EVA shows the real performance of firm compare to predicted performance of firm is increased or decreased. EVA is economic performance measure and prediction. EVA is compatible with other measures such as cash value added, stockholders value added, and return on cash flows investment. Finally, EVA as a criterion of measurement of operation is exposed less to accounting distortion [3]. EVA is a method of measuring the economic value of a business after considering cost of capital including debt cost and equity cost [4]. EVA encoureges managers to optimize the use of resources. EVA helps investments to choose low-risk options. EVA calculates the opportunity costs of sources used. It shows resources allocation, Create value in the company, and increase shareholder wealth [5].

The purpose of this study is to examine the relative explanatory power of the economic value added (EVA) model with respect to share market value compared to recognized accounting variables (NP and OP) in the context of Tehran Stock Exchange (TSE). In other words, the purpose of this study is to investigate, whether EVA has better relationship with stock market value compare to accounting variables (NP and OP). The results show there are more association between accounting variables (NP and OP) and share market value than economic value added (EVA). Although, the relationship between EVA and share market value is significant.

**The Remainder of the Study Is Organized as Follows:**
The second section provides a summary review of prior literature. Research variables are reported in the third section. The fourth section presents the research Hypotheses. Methodology and testing the hypotheses are reported in section five and six respectively. The seventh section presents the research conclusion.

**Litrature Review:** Stewart (1991) [4] first provided evidence of the correlation between EVA and market value added (MVA). Lehn and Makhija (1997) [6] analyzed the correlation degree between various performance measures and share market returns. The consequence point out that there are most highly associated between EVA and share market returns and that this correlation was slightly better than with traditional performance measures such as ROA, ROE and ROS. Biddle, Bowen,

and Wallace (1997) [7] investigated whether EVA have more highly relationship with stock return and firm value than accounting earning and component of EVA. Relative information content test shows earning was more highly related with stock return and firm value than EVA, residual income (RI), and operational cash flow (OCF).

Nazaryeh (2000) [8] explores a research with the title "evaluation of the relation between earning per shares (EPS) and EVA in the companies of non-metal inorganic products accepted in Tehran Stock Exchange (TSE) during the years 1993 to 1998." The results of his research indicates that there is no significant correlation between EVA and the earning per share (EPS). The measure of EVA from the efficiency point of view for studying the operation of non-metal inorganic companies is more appropriate from the earning per share (EPS).

Peixoto (2002) [9] in a research tested the relationship between operating profit (OP), net profit (NP), and economic value added (EVA) with company's market value (MV). His statistical sample included 39 listed companies in Lisbon Securities Stock Exchange, Portugal, during the years 1995 to 1998 which overall included 156 year-company. The correlation coefficient among EVA, OP,and NP with market value (MV) was 72.1% , 70.87%, and 70.84% respectively. The main results suggest that EVA does not have more information content than traditional performance measures in explaining equity market value. The relationship between EVA and MVA, however, is statistically significant.

Izadinia (2003) [10] made a research with the title "evaluation of business units with the use of economic value added models and free cash Flows and determining price rip and shares value." The results of this research indicates that in the capital market of Iran, share prices, market value of companies, and market value added have significant relationship with value making factors, such as economic value added and Free cash Flows (FCF). Firer (2004) [11] studied about relative an incremental information content of value added and earning in South Africa. He used a capitalization market model and found that value added concept dominates earnings in terms of relative information content, while earnings dominate value added in terms of the incremental information content. However, value added is statistically significant in respect of explaining and predicting company performance.

Wong (2005) [12] studied the association among EVA, ROA, ROE, and EPS with stock return in Bursa Malaysia over the period 1990-2000. The 2-step and 4-step hierarchical regression models with firm size, firm risk

and sector controlled–revealed that ROA, ROE, and EPS have significant influence on stock returns. EVA was found to be the worst performer in predicting stock returns regardless of in which economic period it is investigated. As such, this study did not find a strong ground for the assertion by Stewart, let alone championing the claim of Stewart in abandoning earnings per share and forget (about) ROA, ROE and ROI'. It proves that EVA is not as best as what Steward claimed.

Kim (2006) [13] examined the relative and incremental information content of EVA and traditional performance measures (earning and cash flow) with hospitality firm value. Relative information content test shown earning is more beneficial than cash flow in explanation the market value of hospitality firms. EVA has very small descriptive itself. Incremental information content test indicated that EVA compares to earnings and cash flow, makes only a marginal contribution to information content. Generally, the results do not uphold the suggestion that EVA is better than earning and cash flow in relationship with market value of equity.

Kyriazis and Anastassis (2007) [14]in a research examined the relative explanatory power of economic value added (EVA) with share returns and market value of company, compared to recognized variables of accounting; net income (NI) and operating income (OI), in the context of a small European developing market, namely the Athens Stock Exchange (ASE). The results do not support the claim of Stern Stewart that EVA is more associated with stock return and market value. Relative information content tests showed that net income (NI) and operating income (OI) have more correlated with stock return and market value than EVA. Moreover, the results revealed that EVA does not outperform relationship significantly with firm's market value added compare to net income (NI) and operating income (OI).

Paula and Elena (2009) [15] examined the association between EVA, EPS, OCF, and DPS with market value added (MVA) during the period of 1994 to 2004. The results shown there are stronger relationship between MVA and operational cash flows (OCF) but EVA did not show the strongest association with MVA. The results also revealed very little relationship between MVA and EPS, or between MVA and DPS.

**Research Variables:** In this study, economic value added (EVA), net profit (NP), and operational profit (OP) are independent variables, and share market value (MV) is dependent variable.

**The concept of EVA:** Economic value added (EVA) has a close relationship with net present value. EVA is consistent with this theory that the value of company increases only with the selection of projects with positive net present value. EVA makes the top managers of the company responsible to the measures which are more under their control, (Such as rate of return and ratio of capital cost) and not those which are not (such as share market value). EVA is influenced by all company's decisions such as decisions related to investment, dividing of profit, rate of capital return and decisions related to finance and cost of capital ratio. As an internal measure, operation measurement at the company's success helps in the best manner the investment value of stock holders. EVA shows that the value of company depends directly to it management performance. EVA is in relation to market value of the company because share value is a tributary of future predicted economic value added. EVA is a measure which shows whether the real operation of the company in compare to it predicted operation has decreased or increased. Positive EVA means that the value of the company has increased with respect to the employed capital cost. EVA is an appropriate method in order to determine the objectives of operation measurement, evaluation of strategies, allocation of capitals, designing reward systems, capital increase and pricing. EVA as a measure of evaluation of economic operation and prediction is consistent with other measures such as cash value added (CVA), stockholders value added (SVA), and return of cash flows on investments. Finally, EVA as a criterion of measurement of operation is exposed less to accounting distortion [16].

EVA is a method of measuring the economic value of a business after considering capital cost including debt cost and equity cost [4]. On the basis of accounting standards in calculation of typical accounting indexes only cost of debt capital is considered, while in calculation of EVA, in addition to cost of debt capital also the cost of equity capital is deducted [17]. The key point of the EVA is that value is created when the rate of investment return is more than the rate of total capital cost, which means the cost of capital, encompasses the risk of investment [18].

In order to calculate the EVA, the total employed cost of capital is deducted from operating profit after tax [19].

$$EVA_t = NOPAT_t - (WACC_t \times Capital_{t-1}) \qquad (1)$$

Where: EAV is economic value added, NOPAT is net operational profit after tax, WACC is weighted average cost of capital.

Also we can attain EVA from the difference between return on invested capital (ROIC) and cost of capital and its product on the economic cash value of capital which the company has employed.

$$EVA_t = (ROIC_t - WACC_t) \times Capital_{t-1} \qquad (2)$$

Where: ROIC is return on invested capital. Return on invested capital, measures the productivity of employed capital without regard to method of financing and accounting deviations Which is originated from accrual records, conservative concept, and no consideration of unsuccessful attempts to capital and this rate may be compared directly to the rate of capital cost so that the creation or vanishing of value in the company is specified. For the calculation of rate of invested capital, net operational profit after tax is divided to the total employed capital.

$$ROIC = \frac{NOPAT}{Capital} \qquad (3)$$

The capital assets pricing model (CAPM) is used for the calculation of economic value added:

$$R_I = R_{F+}[(R_M - R_F) \times \beta] \qquad (4)$$

Where: $R_I$ is rate of expected shares return, $R$ is rate of return without risk, $\beta$ (Beta) is systematic risk or share market or level of return surplus sensitivity of company in relation to market return surplus which is calculated as follows:

$$\beta = \frac{COV(R_i, R_m)}{VAR(R_m)} \qquad (5)$$

$R_M$ is expected return of the market which will be calculated as follows:

$$R_M = \frac{I_t - I_{t-1}}{I_{t-1}} \qquad (6)$$

Where: $I_t$ is common index of market in the end of the term-t, $I_{t-1}$ is common index of market in the beginning of the term-t.

**The Components of EVA:** The key components that are considered in calculation of EVA involving, net operational profit after tax (NOPAT), weighted average cost of capital (WACC), invested capital, and accounting adjustments.

**Net Operational Profit after Tax (NOPAT):** Means operational profit after tax which in its calculation the effect of non-cash transactions is removed and tax saving originated from finance expenses is deducted from profit. In order to reach the real NOPAT, It is necessary to do some adjustments. Thus in calculation of NOPAT, Two financial and operational approach are considered [4]. In the present research the operational approach is used in calculation of NOPAT.

NOPAT = Net operational profit after tax + (interest expense-saving originated from interest expense) + increases in the reserves of capital equivalent (7)

Saving originated from interest expense = interest expense × effective rate of tax (8)

Increase in the reserves of capital equivalent which is calculated in order to remove the effects of accounting non-cash entries, change NOPAT to every real measure for measuring the created cash return for investors on the account of company's continuous activities.

There is an exception in calculation of NOPAT in the section of accounting non-cash entries and its depreciation. In order to reach NOPAT, depreciation expense should be deducted from operational income, because this expense is acceptable economically. Assets used in company's operation should be replaced by investors before acquiring investment return. Therefore depreciation expense is considered as equivalent of cash expenses. In order to coordinate with NOPAT, accumulated depreciation is also deducted from capital [20].

**Weighted Average Cost of Capital (WACC):** Cost of capital includes the cost of constituting components of capital, which constitutes the total capital structure of the company. In order to determine the company's cost of capital, it is necessary first to calculate each of the capital components independently, and on the basis of their ratio in the total structure of capital the average of company's cost of capital is attained.

$$WACC = \left(\frac{D}{D+E}\right)R_D + \left(\frac{E}{D+E}\right)R_E \qquad (9)$$

Where: WACC is weighted average cost of capital, D is debits, E is stockholder's equities, $R_D$ is cost of debt rate, and $R_E$ is cost of equity.

**Invested capital (IC):** The concept of capital in the model of calculation is more an economic concept and it is different with what is defined in accounting. In this definition capital is all assets minas debts of the beginning of the period, plus capital equivalent. In the other words, debt capital includes Interest-bearing liabilities, equities and capital equivqlent which show the employed economic value by the company.

**Accounting Adjustments:** One of the characteristics of EVA is the consideration of accounting adjustments in calculations to achieve economic income and capital. This adjustments leads to a capital that investors expect a return for it. Adding periodical changes of these adjustments to net operational profit after tax makes it a more realistic measure of real cash return.

Of course, some scholars like Zimmerman (1997) [21] underrate the effects of these adjustustments and believe that the cost of doing these adjustments with considering their less effect is not justifiable. Zimmerman (1997) [21] argues in this regard that many of these adjustments have legal costs in a way that makes someone to claim that financial statements are not correct and fair, and also have high executive costs. Hence, most of the expenses originated from doing these adjustments is higher than their benefits.

Young and O'Byrne (2001) [22] has also mentioned the accounting adjustments in regard to cases like research and development, marketing research and research expenses, reserve of estimated uncollectible accounts receivable, accumulated deprecation of goodwill, complete costing against successful efforts, LIFO saving, training expenses, other provisions and other equivalent of capital. In the below table capital equivalent for calculation of NOPAT and capital is shown:

**Net profit (NP):** Net profit (NP) is calculated by subtracting the total expenses of company from total revenues. It shows what the firm has earned (or lost) in a given period of time (usually one year). Furthermore, it is called net income (NI) or net earnings (NE). On the other hand, net incomerepresents the amount of money remaining after alloperating expenses, interest,taxes andpreferred stockdividends (but not common stock dividends) have been deducted from a company's total revenue [23-25].

**Operational prifit (OP):** This profit is the result of company's major activities and is attained after subtracting operating costs of sales [4]. Earnings before interest and taxes(EBIT) oroperating profitequals sales revenue minus cost of goods sold and all expenses except for interest and taxes. This is the surplus generated by operations. It is also known as operating profit before interest and taxes (OPBIT) or simply profit before interest and taxes (PBIT).

**Share Market Value Added:** In this study share market value is a dependent variable. Share market value is total stock market value and book value of interest-bearing liabilities.

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

Table 1: Capital equivalents to caculation of NOPAT and capital employed

| *Capital equivalents for calculation of capital:* | *Capital equivalent for calculation of NOPAT:* |
|---|---|
| 1. Tax reserve | Increase in tax reserves |
| 2. Existing valuation reserve with LIFO method | Increase in LIFO reserves |
| 3. accumulated depreciation of goodwill | Amortization expense of goodwill |
| 4. Unregistered good will | -------------------- |
| 5. Net intangible fixed assets | Increase in net intangible fixed assets |
| 6. Allowance for doubtful accounts | Increase in the allowance for doubtful accounts |
| 7. Reserve of employee and service benefits | Increase in the reserve of employee and service benefits |
| 8. Reserve of reducing value of investments | Increase in the reserve of reducing value of investments |
| 9. Reserve of delayed income | Increase in the reserve of delayed income |

**H1:** Economic value added (EVA) better explains the share market value (MV) than the operational profit (OP).

**H2:** Economic value added (EVA) better explains the share market value than the net profit (NP).

## MATERIALS AND METHOD

This study is a deductive research. This study is also a correlative study since it seeks to investigate the relationship between dependent and independent variables. It is a periodic study because it studies a specific period of time and it can be an applied research. In order to gather theoretical information, library research was selected and the books in the libraries together with articles found in internet were used. The sample data of this study was restricted to non-financial companies, which were listed in TSE and with available annual trading data during the period of 2004 through 2008. The financial companies such as holdings and investments are excluding from the sample data, in order to have consistent interpretation on certain company characteristics such as earnings and size. The sampling method is the systematic elimination and the sample firms must have following conditions:

- Information must be available for the past 5 years.
- Fiscal year must be ended at the end of year (20th of March).
- Transaction intervals must not be more than 6 month.
- Data must be available for testing hypotheses

**Hypothesis Testing:** In order to analyze the hypotheses, dependent and independent variables were studied and measured at first. Then, the ability of each independent variable (EVA, NP, and OP) in predicting the share

market value of subsequent period was analyzed. To do this, Pierson's model and simple regression were used. The results are described below:

**Testing the First Hypothesis:** The first hypothesis is: "Economic value added (EVA), better explains the share market value than the operational profit (OP)." To analysis the first hypothesis, and the ability to accept or reject it, it must be determined whether there is a linear relationship between dependent and independent variables.

First, we examine the presence or absence of a significant linear relationship between economic value added (EVA) and stock market value (MV).

- There is not significant linear relationship between EVA and MV. $H_0$: $\beta_i = 0$
- There is significant linear relationship between EVA and MV. $H_1$: $\beta_i \neq 0$

**Test Results at the 95% Level Are Shown in Table 2:** The level of test error is 5%, and the significant of F (significance F < 5%) is less than 5%, thus, the $H_0$ hypothesis is rejected, therefore, there is a significant relationship between EVA and MV. The model shows more than 42% of changes in dependent variable. After making sure, there is a linear relationship between economic value added (EVA) and share market value (MV), the Pearson correlation coefficient is calculated. Pearson correlation coefficient gives us the opportunity to make comments to accept or reject the hypothesis.

- There is no correlation between EVA and MV. $H_0$: $P_{x,y} = 0$
- There is correlation between EVA and MV. $H_0$: $P_{x,y} \neq 0$

Table 2: Summary of Model

| Model | R | Coefficient of determination | Adjusted coefficient of determination | Standard error of estimate |
|---|---|---|---|---|
| 1 | O.653[*] | 0.426 | 0.415 | 2376154.59 |

*Economic value added (EVA)

Table 3: Analysis of Variance (ANOVA)[**]

| Model | Total Power | Degrees of freedom | The mean square | Test statistic | Sig. |
|---|---|---|---|---|---|
| Regression 1 | 2.97 + 14 error | 1 | 2.973 + 14 error | 52.653 | 0.0000[*] |
| Remaining | 4.23 + 14 error | 86 | 5.646 + 14 error | ----- | ------- |
| Total | 7.21 + 14 error | 87 | --------- | --------- | --------- |

*Economic Value added (EVA)

**Dependent Variable: share Market value (MV)

Table 4: Pearson correlation coefficient

|  |  | Share market value (MV) | EVA |
|---|---|---|---|
| Share market value (MV) | Pearson correlation coefficient | 1 | 0.653* |
|  | Sig | 0 | 0.0000 |
|  | Numbers | 87 | 87 |
| Economic value added (EVA) | Pearson correlation coefficient | 0.653* | 1 |
|  | Sig | 0.00000 | 0 |
|  | Numbers | 87 | 87 |

* Correlation coefficient at 1%

The relationship between EVA and MV is more than 65%. It shows there is significant and direct correlation between EVA and MV.

For analayzing the first hypothesis we need to determine whether there is liner relationship between operational profit (OP) and share market value (MV).

- There is not significant linear relationship between OP and MV. $H_0$: $\beta_i = 0$
- There is significant linear relationship between OP and MV. $H_1$: $\beta_i \neq 0$

**Test Results at the 95% Level Are Shown in Table 5:** The level of test error is 5%, and the significant of F (significance F < 5%) is less than 5%, thus, the $H_0$ hypothesis is rejected, therefore, there is a significant relationship between OP and MV. and the model shows more than 59% of changes in dependent variable. After making sure, there is a linear relationship between operational profit (OP) and share market value (MV), we calculated the Pearson correlation coefficient. Pearson correlation coefficient gives us the opportunity to make comments to accept or reject the hypothesis.

- There is no correlation between OP and MV. $H_0$: $P_{x,y} = 0$
- There is correlation between OP and MV. $H_0$: $P_{x,y} \neq 0$

The relationship between OP and MV is more than 77%. It shows there is significant and direct correlation between OP and MV.

**Testing the Second Hypothesis:** The second hypothesis is: "Economic value added (EVA) better explains the share market value than the net profit (NP)." To analysia the second hypothesis and the ability to accept or reject it, it must be determined whether there is a linear relationship between dependent and independent variables. First, we examine the presence or absence of a significant linear relationship between economic value added (EVA) and stock market value (MV). In Table (2), Table (3), and Table (4) we show there is positive and direct relationship between EVA and MV, and this relationship is more than 65%.

For analayzing the second hypothesis we need to determine whether there is linear relationship between net profit (NP) and share market value (MV).

- There is not significant linear relationship between NP and MV. $H_0$: $\beta_i = 0$
- There is significant linear relationship between NP and MV. $H_1$: $\beta_i \neq 0$

**Test Results at the 95% Level Are Shown in Table 5:** The level of test error is 5%, and the significant of F (significance F < 5%) is less than 5%, thus, the $H_0$ hypothesis is rejected, therefore, there is a significant relationship between NP and MV. And the model shows more than 61% of changes in dependent variable. After making sure, there is a linear relationship between net profit (NP) and share market value (MV), the Pearson correlation coefficient is calculated. Pearson correlation coefficient gives us the opportunity to make comments to accept or reject the hypothesis.

Table 5: Summary of Model

| Model | R | Coefficient of determination | Adjusted coefficient of determination | Standard error of estimate |
|---|---|---|---|---|
| 1 | O.774* | 0.599 | 0.592 | 2102016.23 |

*Operational profit (OP)

Table 6: Analysis of Variance (ANOVA)**

| Model | Total Power | Degrees of freedom | The mean square | F Test statistic | Sig. |
|---|---|---|---|---|---|
| Regression 1 | 4.31 + 14 error | 1 | 4.259 + 14 error | 110.942 | 0.0000* |
| Remaining | 3.10 + 14 error | 86 | 3.998 + 14 error | ----- | ------- |
| Total | 7.29 + 14 error | 87 | --------- | --------- | --------- |

*Operational profit (OP)

**Dependent Variable: share Market value (MV)

Table 7: Pearson correlation coefficient

| | | Share market value (MV) | Operational profit (OP) |
|---|---|---|---|
| Share market value (MV) | Pearson correlation coefficient | 1 | 0.774* |
| | Sig | 0 | 0.0000 |
| | Numbers | 87 | 87 |
| Operational profit (OP) | Pearson correlation coefficient | 0.774* | 1 |
| | Sig | 0.00000 | 0 |
| | Numbers | 87 | 87 |

•* Correlation coefficient at 1%

Table 8: Summary of Model

| Model | R | Coefficient of determination | Adjusted coefficient of determination | Standard error of estimate |
|---|---|---|---|---|
| 1 | O.785* | 0.616 | 0.610 | 1152331.15 |

*Net profit (NP)

Table 9: Analysis of Variance (ANOVA)**

| Model | Total Power | Degrees of freedom | The mean square | F Test statistic | Sig. |
|---|---|---|---|---|---|
| Regression 1 | 1.243 + 14 error | 1 | 1.233 + 14 error | 102.670 | 0.0000* |
| Remaining | 8.60 + 13 error | 86 | 1.113 + 12 error | ----- | ------- |
| Total | 9.86 + 14 error | 87 | --------- | --------- | --------- |

*Net profit (NP)

**Dependent Variable: share Market value (MV)

Table 10: Pearson correlation coefficient

| | | Share market value (MV) | Net profit (NP) |
|---|---|---|---|
| Share market value (MV) | Pearson correlation coefficient | 1 | 0.785* |
| | Sig | 0 | 0.0000 |
| | Numbers | 87 | 87 |
| Net profit (NP) | Pearson correlation coefficient | 0.785* | 1 |
| | Sig | 0.00000 | 0 |
| | Numbers | 87 | 87 |

* Correlation coefficient at 1%

Table 11: The summary of results

| Independent Variables | linear relationship | correlation coefficient | Coefficient of determination | Adjusted coefficient of determination |
|---|---|---|---|---|
| Net profit (NP) | correlated | 0.785 | 0.616 | 0.610 |
| Operational profit (OP) | correlated | 0.774 | 0.599 | 0.592 |
| Economic value added (EVA) | correlated | 0.653 | 0.426 | 0.415 |

- There is no correlation between NP and MV. $H_{0:} P_{x,y} = 0$
- There is correlation between NP and MV. $H_{0:} P_{x,y} \neq 0$

The relationship between NP and MV is more than 78%. It shows there is significant and direct relationship between NP and MV.

**Analysis and Interpretation of Results:** Table (11) shows there are relationship between independent variables (EVA, OP, and NP) and dependent variable (MV). The table (11) shows:

- There is significant and direct relationship between net profit (NP) and share market value (MV). The correlation coefficient between NP and MV is 0.785.
- There is significant and direct relationship between operational profit (OP) and share market value (MV). The correlation coefficient between OP and MV is 0.774.
- There is significant and direct relationship between economic value added (EVA) and MV. The correlation coefficient between EVA and MV is 0.653.
- The results indicate the net profit (NP) justifies more than 61% change of stock market value (MV), the operational profit (OP) justifies more than 59% change of stock market value (MV), and EVA justifies more than 42% change of stock market value (MV).
- The results show although EVA has a significant and direct relationship with share market value (MV). But, the relationship between NP and OP with MV is more than the relationship between EVA and MV.

## CONCLUSION

The purpose of this study is to examine the relative explanatory power of the economic value added (EVA) model with respect to share market value (MV) compared to recognized accounting variables ( NP and OP) in the context of Tehran Stock Exchange (TSE). In other words, this study investigates the relationship between economic value added (EVA), operational profit (OP), and net profit (NP) with share market value (MV) in non-financial listed companies in Tehran Stock Exchange (TSE) for five years (2004-2008). The results indicated there are more relation between accounting variables (NP and OP) and share market value (MV) than economic value added (EVA). Although, EVA has significant

correlation with share market value. The findings show net profit (NP) has most relationship with MV. The correlation coefficient between NP, OP, and EVA with MV is 78%, 77%, and 65% respectively.

## REFERENCES

1. Bacidore, J.M., J.A. Boquist, T.T. Milbourn and A.V. Thakor, 1997. The search for the best financial performance measure. Financial Analysts Journal, 53(3): 11-20.
2. Jahankhani, A. and J. Sohrabi, 2010. An Analytical survey Of Inflation Distortions to Economic Value Added and the Firm's Financial Characteristics. Financial Research, 12(29): 1-20.
3. Anvari-Rostami, A., R . and H. Seraji, 2004. The Relashionship between EVA, EBIT, and OCF with Stock Market Value of Company Listed in Tehran Stock Exchange (TSE). Iranian Accounting and Auditing Review, 11(37): 3-21.
4. Stewart, G.B., 1991. The Quest for Value: A Guide for Senior Managers. New York: NY: Harper Business.
5. Darabi, R. and M. Bani, 2009. Evaluatig the Correlation between Economic Value Added (EVA), Net Profit (NP), and Operational Profit (OP) with Share Market Value in Companies Accepted in Tehran Stock Exchange (TSE). Quarterly Financial Accounting, 1(1): 119-136.
6. Lehn, K. and A.K. Makhija, 1997. EVA, Accounting Profits and CEO Turnover: An Empirical Examination. Journal of Applied Corporate Finance, 10(2): 90-97.
7. Biddle, G.C., R.M. Bowen and J.S. Wallace, 1997. Does EVAt Beat Earnings? Evidence on Associations with Stock Returns and Firm values. Journal of Accounting and Economics, 24(3): 301-336.
8. Nazaryeh, Z., 2000. Evaluation of the relation between earning per shares (EPS) and EVA in the companies of non-metal inorganic products accepted in Tehran Stock Exchange (TSE). MSc, Master of Science, Allameh Tabatabaei University, Iran.
9. Peixoto, S., 2002. Economic Value Added: Appplication to Portuguese Public Companies. Journal of Accounting Portuguese, 3: 25-40.
10. Izadinia, N., 2003. Evaluation of Business Units with the Use of Economic Value Added Models and Free Cash Flows and Determining Price Rip and Shares Value. Doctor Philosophy, Allameh Tabatabaei University, Iran.

11. Firer, S., 2004. Does Value Added Beat Earnings? Empirical Evidence from South Africa. Working Paper: School of Accountancy, University of the Witwatersrand.

12. Wong, P.H., 2005. The Impact of Economic Value Added (EVA) and Traditional Performance Based Measures on Stock Returns: Evidence from Malaysia. Doctoral Phylosophy, Universiti Sain Malaysia (USM), Penang, Malaysia.

13. Kim, W.G., 2006. EVA and Traditional Accounting Measures: Which Metric is a Better Predictor of Market Value of Hospitality Companies? Journal of Hospitality and Tourism Research, 30: 34-49.

14. Kyriazis, D. and C. Anastassis, 2007. The Validity of the Economic Value Added approach: An Empirical Application. European Financial Management, 13(1): 71-100.

15. Paula, D.A. and D.C. Elena, 2009. EVA Versus Traditional Accounting Measures of Performance as Drivers of Shareholder Value-a Comparative Analysis from http://www.upm.ro/proiecte/ EEE/Conferences/papers/S309.pdf

16. Anvary-rostamy, A.A., R. Tehrani and H. Seraji, 2004. Study the Relationship among EVA, EBIT, OCF, and Share Market Value (MV): The Case of the Tehran Stock Exchange (TSE). Iranian Accounting and Auditing Review, 11(37): 147-152.

17. Noravesh, I., F. Salehy and G. Karamy, 2004. Investigating the Relation between Operational Cash Flows, Operational Profit and Economic Value Added with Created Shareholder Value. The Iranian Accounting and Auditing Review, 11(37): 121-146.

18. Biddle, G.C., R.M. Bowen and J.S. wal-lace, 1998. Economic Value Added: Some Empirical EVAdence. Managerial Finance, 24(11): 60-71.

19. Noravesh, I. and B. Mashayekhi, 2004. Incremental Information Content of Economic Value Added (EVA) and Cash Value Added (CVA) Beyond Accounting Profit (AP) and Oprerational Cash Flow (OCF). Financial Research, 6(17): 131-150.

20. Ramazani, S.M., 2008. The Relationship between Economic Value Added (EVA) and Return on Assets (ROA) in Tehran Stock Exchange (TSE). Bursa Journal, 74: 4-11.

21. Zimmerman, J.L., 1997. EVA and Divisional Performance Measurement: Capturing Synergies and Other Issues. Journal of Applied Corporate Finance, 10(2): 98-109.

22. Young, D. and S.F. O'Byrne, 2001. EVA and Value Based Management. New York: Mc Grow-Hill.

23. Sokeng, S.D., D. Lontsi, P.F. Moundipa, H.B. Jatsa, P. Watcho and P. Kamtchouing, 2007. Hypoglycemic Effect of Anacardium occidentale L. Methanol Extract and Fractions on Streptozotocin-induced Diabetic Rats, Global Journal of Pharmacology, 1(1): 01-05.

24. Prajapati Hetal Ritesh, Brahmkshatriya Pathik Subhashchandra, Vaidya Hitesh Bharatbhai and V. Thakkar Dinesh, 2008. Avian Influenza (Bird Flu) in Humans: Recent Scenario, Global Journal of Pharmacology, 2(1): 01-05.

25. Okafor, P.N., K. Anoruo, A.O. Bonire and E.N. Maduagwu, 2008. The Role of Low-Protein and Cassava-Cyanide Intake in the Aetiology of Tropical Pancreatitis, Global Journal of Pharmacology, 2(1): 06-10.