

EPS and EVA Forecasting Ability for Industrial Jordanian Companies

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Abstract

This study investigates the relationship between Economic Value Added (EVA) and Earnings per Share (EPS) and provides empirical evidence on the information content of EVA from Manufacturing Corporation listed on Amman Stock Exchange. The problem statement to be analyzed in this study is: Does current economic value added have incremental information content relative to current earnings per share components when predicting future earnings per share?

Based on correlation and multiple regression analyses, we show that current earnings can predict future earnings, current earnings components can predict future earnings and current economic value added does not have incremental information content relative to current earnings components when predicting future earnings.

Keywords: Earnings per Share, Economic Value Added, Accruals, Cash Flow from Operating Activities.

Introduction

It is now well settled that the aim of every business entity should be maximizing shareholders wealth by enhancing firms value and all the activities of a firm should be directed to achieve this objective. Use of Economic value added (EVA) improves internal corporate governance in the sense that it motivates managers to drop value destructive activities and invest only in those projects that are expected to enhance shareholder value (Bhattacharyya, 2004).

EVA, a performance evaluation measure, is determined by calculating the cost of capital for both the equity and debt employed in order to produce those profits and is subtracted from the net operating profit after taxes, (Stewart, 1991).

The choice of performance measures is one of the most critical challenges facing organizations. Performance measurement systems play a key role in developing strategic plans, evaluating the achievement of organizational objectives and compensating managers. Many managers feel that traditional accounting based measurement systems no longer adequately fulfill these functions (Venanzi, 2010).

EVA is important because it calculates the creation of shareholder value, since it is a performance metric. It differentiates from the more traditional financial performance metrics; examples include net profit and EPS (earnings per share). After debt and equity are subtracted from operating profit this determines the profit that is left from the company's capital that is how the EVA is calculated. While this idea, is in fact simple, it is very demanding because it determines that the real profit accounts for the cost of capital.

A substantial proportion of academic research has focused on investigating the claim that EVA is a better measure of value than reported accounting earnings.

Previous empirical research has shown mixed results relative to this claim (Bhattacharyya, 2004). It would be a mistake to believe that any single measure is perfectly suited to all types of financial decision support. This research examined the association between EVA and future earnings and subsequently its use by analysts' in their forecasts of earnings per share.

The focus of this study is a review of the main measures: the economic value added (EVA) described by Stewart (1991), and the earnings per share (EPS). This paper aims at contributing to the developing dialogue on the information contents of different financial performance measures. It would be a mistake to believe that any single measure is perfectly suited to all types of financial decision support; meanwhile it could be very useful to compare the different measures by highlighting their respective strengths and weaknesses as well as their similarities (Venanzi, 2010).

The aim of this research is to determine the following; the first aim being to deliver empirical evidence about the information content about accounting earning measures and the information content of EVA. The second aim, is to provide evidence of the increasing interest in EVA in the business press, the possible peek of interest of EVA amongst accounting policy makers, and the increased use of EVA by managers, investors and firms. Finally, this study wants to determine the information content of earnings per share of the Jordanian market and of the

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economic value added.

This study is organized as follows: First Research objectives are shown, and then the literature for the relevant theoretical and empirical work on EVA and EPS are reviewed. After that, the methodology and framework which includes sample and the variables used in the empirical analysis is presented. After words, separate section portrays and discusses the data analysis, discussion and statistical results. Finally the conclusion and recommendations are presented.

Research Importance

The aim of this research is to provide evidence on the ability of EVA to estimate earnings and to explain, along with forecast future changes in earnings.

The study of analysts' EPS information content is very important to the understanding of the valuation process in the capital markets'. Several analysts used EVA to assess and suggest firms, but this study, is one of the first studies in Jordan that investigates the extent to which EVA is included in analysts' earnings forecasts.

In this study, evidence is introduced from the Jordanian market, about the information content of EVA, improving the literature on EVA and the relationship of EPS in the capital market research.

Literature Review

"*The Quest for Value*" by Bennet Stewart is a reference publication in the area of Economic Value Added. The author clearly details the positive aspects of EVA along with value that it brings, in order to better assess a company's performance measurement. The book gives a more in depth look at how a company can create value in comparison to traditional profit or dividend measures.

(Chari 2009) study of empirical literature assesses the advantages of EVA, in comparison to customary measures in terms of better association with shareholder returns. His study highlights the empirical findings are in fact mixed. In fact, only 6 out of the ten studies that were examined deduced that the EVA is superior to other accounting measures. Chari states that this inconsistency within the findings is attributed to the superiority of EVA, to the methodology and impact of inflation. The 10 studies chosen were chosen based on the preference to the various differences in sample size, county of study and methodology.

Makelainen (1998) concluded that EVA is superior in comparison to traditional measures, e.g. ROI, and ROE, when it came to explaining the market value. Durant, (1999) points out the concept of EVA, how it is calculated and the possible ways in which, one can enhance the EVA. Sakthivel et al., (2011) discovered that EVA, is in fact the only variable that had influence on the Market Value of Pharmaceutical companies. It also had a positive impact on Value Creation for those same Pharmaceutical companies. The study assessment showed that shareholders value creation went up every year for the pharmaceutical industry, since 2000. In addition, it assessment also concluded that pharmaceutical companies in India had succeeded in shareholders' value creation through MVA and EVA.

Fernandez (2003) examined 582 companies that used EVA, MVA, NOPAT and WACC data that was provided by Stern Stewart. The study concluded that there was a correlation between the increase in the MVA every year and the NOPAT was in fact, greater than the correlation between the increases in the MVA each year and the EVA.

(Das et al., 2007) used a non-linear S shaped function to better characterize return-earnings relationship, instead of a linear function. Distortion of the findings, can result from the linear function, in the research that was conducted.

Debdas (2006) revealed the shortfalls of traditional measures e.g. Net Profit Margin, Operating Profit Margin, Return on Investment (ROI), Return on Net Worth and Earning per Share all failed in recognizing the surplus. On the other hand, EVA is a new measurement that can successfully measure corporate performance and emphasis on clear surplus, in comparison to the traditional measures used as profit based indicators.

Movassagh et, al. (2011) assessed the overall effectiveness in forecasting future earnings and the role they play in, improving that accuracy of analysts' forecasts. The outcome indicated that EVA contained information that incremental to EPS in forecasting future earnings. Furthermore, the study also concluded that though the potential for EVA, to add incremental value to analysts' forecasts of future earnings, analysts don't use the information in the reported EVA properly, but instead overlook it.

Results from empirical research regarding the claim that EVA is a more value relevant measure than currently reported net income is mixed (Movassagh et, al. 2011). An example of this, is that companies embracing EVA to be used as an internal performance measure and as a foundation for incentive compensation, show noteworthy financing, investing's and operation improvements that increased shareholder wealth (Kleiman, 1999). Furthermore, Chen and Dodd (1997), discovered a strong relationship between the returns and EVA when compared to EPS and returns. Additionally, results have been found that show stock returns over a ten year period, correlates highly with the average EVA, in comparison to other types of measures that are earning based

(Lehn and Makhaha, 1997).

Conversely, studies exist that reveal that the evidence, is in fact contradictory to the findings. An example includes Bao and Bao (1998), uncovered there is a higher connection, between price deflated earnings change and change in price. That is in comparison to the change in price deflated EVA changes and change in price. In addition, Chen and Dodd (1998) and Biddle et al. (1997) discovered that earnings that were unanticipated, had a stronger association with returns and unexpected EVA. Moreover, Biddle et al. (1997), indicated that EVA in terms of clarifying market adjusted returns, is very significant.

Those prior studies concentrated on covering the EVA's ability to calculate the shareholder value, in the stock market situation. In this study, the connection found between EVA and future earnings is evaluated in this study. This study is motivated to examine, EPS because it is an area of deep interest in the financial security valuation area.

Methodology

This research aims to contribute towards an important aspect of the relationship between EVA and EPS with reference to Jordan. Here this relationship of 39 Industrial Jordanian firms listed on Amman stock Exchange for a period of six years from 2004 – 2009 will be examined. This section discusses the firms and variables included in the study, the distribution patterns of data and applied statistical techniques in investigating the relationship between EPS and EVA.

The first step of research analyses of EVA is to assess if it is vital in predicting future EPS. The study can bring to light the information content of EVA by considering other simple value determinants, e.g. earnings.

Population

The population will consists of the Industrial Jordanian shareholding companies listed in Amman Stock Exchange for the study period (2004-2009). There are (86) companies listed from these two sectors in Amman Stock Exchange in year 2004; 38 companies listed in the first market (44% from the population) and 48 companies listed in the second market (56% from the population).

Research Sample

All industrial shareholding companies that share prices data are available during the study period (2004-2009), and there is an availability of data required to calculate study variables will be included in the study sample.

(39) Companies will represent the study sample.

Study Period

The study covers the period from 2004 to 2009, various data required for years 2002 and 2003 to computing study variables. The reason for restricting to this period was that the latest data for investigation was available for this period. The required data include the following:-

1. Annual Closing Prices from 2003 to 2009.
2. EPS from 2002 to 2009.
3. Total Assets from 2004 to 2009.
4. Total Liabilities from 2004 to 2009.
5. Current Liabilities from 2004 to 2009.
6. Net Income from 2004 to 2009.
7. Total Shareholders' Equity from 2004 to 2009.
8. Interest Rates from 2004 to 2009.
9. Total Outstanding Shares from 2002 to 2009.
10. Net Cash Flow from Operating Activities from 2002 to 2009.

Research Hypotheses

H₀₁: Current earnings per share can not predict future earnings per share.

H₀₂: Current earnings per share components can not predict future earnings per share.

H₀₃: Current economic value added does not have incremental information content relative to current earnings per share components when predicting future earnings per share.

Research Variables and Models

The following regression models are estimated:-

1. $EPS_{t-1} = \beta_0 + \beta_1 EPS_{t-2} + \beta_2 \Delta EPS_{t-1} + e_1$
2. $EPS_{t-1} = \alpha_0 + \alpha_1 CF_{t-1} + \alpha_2 \Delta CF_{t-1} + \alpha_3 AC_{t-1} + \alpha_4 \Delta AC_{t-1} + e_2$
3. $EPS_{t-1} = \lambda_0 + \lambda_1 CF_{t-1} + \lambda_2 \Delta CF_{t-1} + \lambda_3 AC_{t-1} + \lambda_4 \Delta AC_{t-1} + \lambda_5 EVA_{t-1} + \lambda_6 \Delta EVA_{t-1} + e_3$

Where:

EPS is earning per share before extraordinary items and discontinued operations.

ΔEPS : Change of earning per share.

CF: Cash flow from operating activities per share.

ΔCF : Change of cash flow from operating activities per share.

AC: Accruals per share.
 Δ AC: Change of accruals per share.
EVA: Economic value added per share.
 Δ EVA: Change of Economic value added per share.
 $\beta_0, \alpha_0, \lambda_0$: The intercept of equation.
 β, α, λ : Coefficients for independent variables.
 t : time = 1, 2, ..., 6 years.
 e_{it} = Error term.

The key aim of this study, is to give empirical evidence on how EVA and earnings, can predict the future earnings levels at a company. The study first assess the predictability earnings, using the first model. In period $t-1$ the earnings level, is linked to earnings level in in period $t-2$ and changes of earnings in period $t-1$ All the elements of earnings are outlined by the changes and the levels to capture the predictions of future earnings that are based on random-walk and mean reverting models, this is coherent with Ali and Zarowin (1992) hunch, for the returns-earnings relation Previous studies have shown that funds-based profit components have opposing persistence, when it comes to future earnings (Sloan, 1996).

Consequently, the second model causes changes on the level of earnings into cash flows from operations and accruals components to decompose. The cash flow from operations (CF) is determined from published data, in which the accrual component of earnings (AC) equivalent to earnings per share and that is determined, as net income before extraordinary items and discontinued operations and less cash flow from operations per share (Movassagh et al. 2011). In the third model, EVA is added to measure its incremental information content.

According to the Stern Stewart Company, The formula to compute EVA is as follows:

EVA = Net Operating Profit After Taxes – Capital Charges

EVA = NOPAT – WACC * EA, where:

NOPAT = Net Operating Profit after Taxes

EA = Economic Asset or Invested Capital¹

WACC = Weighted Average Cost of Capital calculated using the following formula²:

$$WACC = \frac{E}{V} * Re + \frac{D}{V} * Rd * (1 - Tc)$$

Where:

Re = cost of equity (measured by using CAPM theory)

Rd = cost of debt (measured by multiply interest rate by total liability over total assets)

E = market value of the firm's equity

D = market value of the firm's debt

V = E + D

E/V = percentage of financing that is equity

D/V = percentage of financing that is debt

Tc = corporate tax rate

EVA is the difference between Net Income (Net Profit) and Cost of Equity. If the cost of equity is zero, the Net Profit is equal with EVA. To mitigate the effects of scale (i.e., larger firm-years have larger values of both independent and dependent variables), all variables in the three models are deflated by market price at the beginning of period $t-1$ (P_{t-1}).

The cost of equity is expressed formulaically below ³:

$$Re = rf + (rm - rf) * \beta$$

Where:

- Re = the required rate of return on equity
- rf = the risk free rate
- $rm - rf$ = the market risk premium
- β = beta coefficient = unsystematic risk

¹ Invested capital equals total assets minus short-term liabilities.

² From <http://www.investopedia.com>

³ From <http://www.investopedia.com>

Analysis and results

Two methods applied to the study in quantitative analysis. The first method being, correlation models, Pearson correlation was specifically used to measure the degree of association between different variables. The second method being, regression analysis, to estimate the relationships between EPS and EVA. Regression analysis is a statistical technique that estimates the relationships between variables. Regression analysis is important because it allows one to grasp, they typical value of the dependent variable changes, when any one of the independent variables is varied, even when the other independent variables are held fixed. When it comes to predicting and forecasting, regression analysis is widely used.

A general panel data regression model is written as $y_{it} = \alpha + \beta'X_{it} + u_{it}$. Different assumptions can be made on the precise structure of this general model. Two important models are the fixed effects model and the random effects model¹.

Table (1-a) and (1-b), displays the descriptive measures for the key variables. Part (a) presents the descriptive measures before having deleted outliers, and part (b) presents the descriptive measures after having deleted outliers. Together the variables affect the statistical results and they were not expected to be presented in the future. Outliers are determined, when they are more than the 99 percentile and less than 1 percentile (Al-Debie and Walker, 1999). The total number of outliers are (13) observations, from (234) observations (5.56%). The descriptive measures that were used, include the minimum value, mean, standard deviation, percentile 1, and percentile 99, median and maximum value.

The data is distributed normally because the minimum values for the variables are near the percentile (1) and the maximum values are near the percentile (99). Since the convergence between the mean and the median is distributed normally it indicates the same conclusion.

Deleting outliers decreases the standard deviation for the main variables. Study sample companies earning per share average is 0.13 JD per share, so the Jordanian investors can generate this figure from their investments, but when we divide this figure to the main components; operating cash flow and accruals the study sample companies averages will decline to zero approximately.

Table (1-a) Descriptive Measures before deleting outliers' observations

Variable	Earnings per share (EPS)	EVA per share (EVA)	Operating Cash Flow per share (CF)	Accruals per share (AC)
Mean	0.33	-0.03	0.11	0.23
Median	0.10	0	0.08	0.02
SD	1.99	0.13	0.51	2.05
Minimum	-0.67	-1.16	-2.32	-1.65
Maximum	22.59	0.25	3.03	22.80
Percentile 1	-0.64	-0.93	-1.87	-1.56
Percentile 99	14.18	0.22	2.31	14.43

Table (1-b) Descriptive Measures after deleting outliers' observations

Variable	Earnings per share (EPS)	EVA per share (EVA)	Operating Cash Flow per share (CF)	Accruals per share (AC)
Mean	0.13	-0.02	0.01	0.04
Median	0.09	0	0.08	0.01
SD	0.26	0.06	0.36	0.32
Minimum	-0.6	-0.32	-2.32	-1.10
Maximum	1.8	0.16	1.66	2.53

Table (2) Correlation matrix

Variable	ΔEPS_{t-1}	CF_{t-1}	ΔCF_{t-1}	AC_{t-1}	ΔAC_{t-1}	EVA_{t-1}	ΔEVA_{t-1}
EPS_{t-1}	(0.324)*	(0.246)*	0.011	(0.636)*	0.026	(0.842)*	(-0.305)*
ΔEPS_{t-1}		(0.25)*	0.105	-0.02	-0.058	(0.206)*	0.014
CF_{t-1}			0.034	(-0.591)*	-0.013	(0.247)*	-0.039
ΔCF_{t-1}				-0.018	0.010	0.001	-0.021
AC_{t-1}					0.036	(0.506)*	(-0.222)*
ΔAC_{t-1}						0.036	-0.012
EVA_{t-1}							(-0.310)*

* Correlation is significant at the 0.01 level.

¹ http://en.wikipedia.org/wiki/Panel_data

Additionally, the pair-wise correlations between any two variables (dependent or independent) are presented in Table 2. The highest significant relationship was between EPS and EVA which we expect given that they are competing performance proxies. There is an important relationship between EPS and EPS components. A significant correlation is the negative significant relationship between accruals and cash flow from operating. This is widely documented in previous research and shows that when the cash flow transactions are increased the accruals figures decrease.

Furthermore, changes in EVA and accrual component are in fact negatively correlated. This implies that EVA has the ability to undo certain accruals thought by Stern Stewart to be value-irrelevant.

Multicollinearity Problem

As seen in table (2), the relationship between the main variables, indicates a multicollinearity problem that affects the model power and the ability to later explain the results. The Variance Inflation Factor (VIF) was used to refer to the actual disparity percentage to total disparity. If that factor is less than (5) that means that there is no multicollinearity problem (Fox, 1991).

Table (3) Regression Model Variance Inflation Factors (VIF)

Regression Model	VIF factor*
1. $EPS_{t-1} = \beta_0 + \beta_1 EPS_{t-2} + \beta_2 \Delta EPS_{t-1} + e_1$	1
2. $EPS_{t-1} = \alpha_0 + \alpha_1 CF_{t-1} + \alpha_2 \Delta CF_{t-1} + \alpha_3 AC_{t-1} + \alpha_4 \Delta AC_{t-1} + e_2$	1.5
3. $EPS_{t-1} = \lambda_0 + \lambda_1 CF_{t-1} + \lambda_2 \Delta CF_{t-1} + \lambda_3 AC_{t-1} + \lambda_4 \Delta AC_{t-1} + \lambda_5 EVA_{t-1} + \lambda_6 \Delta EVA_{t-1} + e_3$	4.026

As shown from table (3), all (VIF) factors are less than (5), so there is no multicollinearity problem in the regression models.

Autocorrelation problem

Autocorrelation among regression model residuals was tested using Durbin-Watson factors. If the Durbin-Watson factors are between (1) and (3) than that indicates that there is no autocorrelation problem (Alsaeed, 2005).

Table (4) Regression Model Durbin-Watson Factors

Regression Model	Durbin-Watson Factors
1. $EPS_{t-1} = \beta_0 + \beta_1 EPS_{t-2} + \beta_2 \Delta EPS_{t-1} + e_1$	2.287
2. $EPS_{t-1} = \alpha_0 + \alpha_1 CF_{t-1} + \alpha_2 \Delta CF_{t-1} + \alpha_3 AC_{t-1} + \alpha_4 \Delta AC_{t-1} + e_2$	1.694
3. $EPS_{t-1} = \lambda_0 + \lambda_1 CF_{t-1} + \lambda_2 \Delta CF_{t-1} + \lambda_3 AC_{t-1} + \lambda_4 \Delta AC_{t-1} + \lambda_5 EVA_{t-1} + \lambda_6 \Delta EVA_{t-1} + e_3$	1.724

As shown in table (4), all Durbin-Watson factors are between (1) and (3), so there is no autocorrelation problem in the regression models.

Regression Analysis

The first purpose of this study is to provide empirical evidence on the ability of EVA and earnings to explain and predict future earnings.

In model (1), the two independent variables coefficients are positive and significant. The first null hypothesis is rejected so current earnings per share can predict future earnings per share.

Prior year's earnings are useful in predicting future earnings because the conservatism in reporting events that are known to market participants when they occur.

In model 2, the coefficient on change in accruals is in fact, negative and significant because the accrual changes tend to reverse in futures years. That is because the mechanics of accrual accounting. Conversely, the independent coefficient on the change in cash flows is positive because cash flow changes are more permanent.

So the second null hypothesis is rejected and current earnings per share components can predict future earnings per share.

This result is consistent with (Movassagh et. al, 2011) and indicates that the prior year's level of cash flows and accruals can predict the future profitability.

Finally, in regression model (3), EVA is added in order to evaluate its information content. EVA and a change in EVA coefficients are not significant, so the third null hypothesis is recognized. This means that current economic value added does not have incremental information content, in relation to current earnings per share component, when predicting future earnings per share.

Based on the results of regression (3), we have come to the conclusion, that EVA does not have incremental information content and does not significantly outperform accruals and operating cash flow. Consequently, the relative information content tests disprove the claim of EVA proponents and that EVA is not the best financial metric that will explain future earnings.

Table (5) Regression Analysis

Dependent Variable Regression Model	Earnings Per Share (EPS_{t-1})		
	(1)	(2)	(3)
EPS_{t-2}	0.537 (8.194)**		
ΔEPS_{t-1}	0.011 (6.011)**		
CF_{t-1}		1 (331.267)**	1.006 (206.3)**
ΔCF_{t-1}		3.509 (0.122)	2.415 (0.084)
AC_{t-1}		0.999 (416.364)**	1.004 (230.202)**
ΔAC_{t-1}		-3.423 (-2.003)*	-3.371 (-1.975)*
EVA_{t-1}			-0.014 (-1.576)
ΔEVA_{t-1}			-3.231 (-0.486)
F-Test	(49.8)**	(46160)**	(30856)**
Adjusted R^2	0.999	0.999	0.109

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

Conclusion and Recommendations

EVA gained massive popularity in the media and attracted some of the largest corporations in the world, coupled with a hot debate about its association with share price (Ismail, 2006). In hopes of contributing to the literature on this topic, we have carried out this study using Jordanian data.

Our findings, in fact, do not offer any support to the claim of Stern Stewart and Co. in their belief that EVA is in fact a better method in explaining earnings. I would like to point out that while stating that, we strongly concur that there are other non-earnings and non-EVA factors that drive share value and that those factors should be taken into account, in the case of shareholders' value creation or for performance measurement and management compensation.

In this study, our new approach to appraise the relative performance of earnings and EVA as measures of firm performance. We look at the relationships between EVA and future earnings and have found that EVA, does not have an incremental information content in explaining future earnings over that of cash flow and accrual components of earnings. The results can be explained that for EVA, it is relatively new in emerging markets, such as Jordan for the analysis of analysts' future earnings. Consequently analysts may not discover this performance measure and then use it for predicting future firm performance.

Based on those results the below recommendations are suggested:

- 1) In this study, analysis has been restricted to one factor, prior-year earnings performance. In future research, other factors such as contextual factors may want to be included. Contextual factors can lead to EVA adjustments to be more or less useful in earnings and cash flow predicaments.
- 2) Future research may better explain why EVA appears to be useful by systematically testing the specific adjustments EVA makes to accounting earnings.
- 3) The Industrial Jordanian Companies must focus their economic value added in a more efficient way in order to increase profitability.
- 4) Jordanian Securities Commission can also benefit from this research results by encouraging companies to use EVA, this may lead to an increase of its information content in the future.

References

- Al-Debie, Mamoun, and Martin Walker, 1999, "Fundamental Analysis: An extension and UK evidence", British Accounting Review, Vol. 31, pp. 261-280.
- Ali, A. and P. Zarowin, (1992). "The Role of Earnings Levels in Annual Earnings Returns Studies". Journal of Accounting Research, Vol. pp. 30, 286-296.
- Alsaeed, K., 2005, "The association between firm-specific characteristics and disclosure: the case of Saudi Arabia", The Journal of American Academy of Business, Vol.7 No. 1, pp. 310-321.

- Bao, B.-H. and Bao, D.-H. (1998), "Usefulness of value added and abnormal economic earnings: an empirical examination", *Journal of Business Finance and Accounting*, Vol. 25 Nos 1/2, pp. 251-264.
- Bhattacharyya, A., (2004). "Economic Value Added- A General Perspective" Indian Institute of Management.
- Biddle, R. M. Bowen and J. S. Wallace. (1997). "Does EVA Beat Earnings? Evidence on Associations with Stock Returns and Firm Values". *Journal of Accounting & Economics* (24): 301-336.
- Chari, L. 2009." Measuring Value Enhancement through Economic Value Added: Evidence from Literature", *The IUP Journal of Applied Finance* 15(9).
- Chen, S. and J. L. Dodd, (1997) "Economic Value Added (EVATM): An Empirical Examination of A New Corporate Performance Measure." *Journal of Managerial Issues*, 318–333.
- Chen, S. and J. L. Dodd, (1998), "Usefulness of accounting earnings, residual income, and EVA: a value relevance perspective". Working paper, Drake University, Iowa.
- Das, D., S. Thomas, and R. Repetto. 2007. "Integrated Environmental and Financial Performance Metrics for Investment Analysis and Portfolio Management". *Corporate Governance: An International Review* 15(3).
- Debdas, Rakshit (2006), "Eva Based Performance Measurement: A Case Study of Dabur India Limited", *Vidyasagar University Journal of Commerce*, Vol. II, pp. 40-59.
- Durant, Michael (1999), "Economic Value Added: The Invisible Hand at Work", *Credit & Financial Management Review*.
- Fox, John, 1991, "Regression diagnostics. Thousand oaks, CA." Stage publication- Qualitative applications in the social sciences, pp. 79.
- Fernandez, P. 2003." EVA, economic profit and cash value added do NOT measure shareholder value creation". *ICFAI Journal of Applied Finance* 9(3)
- Ismail, Ahmad, 2006, *International Journal of Managerial Finance*, Vol.2 No.4 pp. 343-353.
- Kleiman, R. T., 1999. "Some New Evidence on EVA Companies." *Journal of Applied Corporate Finance*, Vol. 12 No.2, pp. 80–91.
- Lehn, K. and Makhija, A.K. (1997), EVA, accounting profits, and CEO turnover: an empirical examination 1985-1994, *Journal of Applied Corporate Finance*, Vol. 10 No. 2, pp. 90-97.
- Makelainen, Esa, (1998), "Introduction to Economic Value Added, EVA", <http://EconPapers.repec.org/RePEc:wpa:wuwpfi:0504003>.
- Movassagh, Rahman, Mir Seyyedi, Mohammad Tahmasebi, (2011). " Economic Value Added, Future Accounting Earnings, and Financial Analysts Earnings per Share Forecasts". *Institute of Interdisciplinary Business Research*, Vol. 3, No.2, pp.1906-1919.
- Prabhat, (2010). "Difference between Accounting and Economic Profit." <http://www.differencebetween.net>.
- Sakthivel. N. (2011), "Value Creation in Pharmaceutical Industry: A Regression Analysis", *Journal of Arts Science and Commerce*, Vol. II, Issue 1, pp. 215-232.
- Sloan, R. G., (1996). "Do Stock Prices Fully Reflect Information in Accruals and Cash Flows about Future Earnings." *The Accounting Review*, pp. 289–315.
- Stewart, Bennet. (1991). *The Quest for Value: A Guide for Senior Managers*, Harper Business, New York.
- Venanzi, Daniela, 2010. "Financial performance measures and value creation: a review working paper", Roma Tre University.
- Websites:
<http://www.investopedia.com>
http://en.wikipedia.org/wiki/Regression_analysis
http://en.wikipedia.org/wiki/Panel_data

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