Performance Evaluation Using Accounting Variables (Net Profit and Operational Profit) and Economic Measures

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Abstract—The paper seeks to examine the claim of economic measures advocate of their superiority as financial metrics compared with accounting measures. The paper uses a sample of public company accepted in Main market of Bursa Malaysia from 2001- 2010, and will apply panel data regressions to test the relative information content of EVA, REVA, EVA Momentum and other accounting variables (NP and OP) and the incremental information content of EVA components in explaining market value added (MVA). The data will collect from Bursa Malaysia, Universiti Malaya (UM), and Universiti Tekonologi Malaysia (UTM). We will use historical and secondary financial data, and for testing the hypothesis will use cross-sectional time series data, ordinary least square (OLS), panel data regressions, multivariate regression, correlation coefficient, coefficient of determination using SPSS. This study is expected to clarify the relationship between accounting and economic measures with market value added as a company's performance, and it could help to public companies' owners/managers in their making decision and increasing their performance. In this article, the conceptual model is proposed.

Index Terms—Economic Value Added (EVA), Refined Economic Value Added (REVA), EVA Momentum, Net Profit (NP), Operational Profit (OP), market value added (MVA).

I. INTRODUCTION

An accepted financial axiom is that the role of managers is to maximize the shareholders wealth by the effective allocation of resources. In order to make operational this objective, shareholder wealth is conventionally proxies by either standard accounting magnitudes (such as profits, operational profits and operational cash flows) or financial statement ratios including earnings per share and the returns on assets, return on equity). This financial statement information is used by managers, shareholders and other interested parties to assess current firm performance, and is also used by these same stakeholders to predict future performance [1]. 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

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levels and led to raised needs on companies to maximize stockholder [2] .

The stock price is the center of gravity for investment decisions. The prices in market are resulted from objective application of decisions taken in the valuation of stock price. In the recent years, criticism and dissatisfaction had increased about accounting performance measures. Critics said that these criteria are conservative basis [3].

The experiential studies emphasize that there is no single accounting criteria which illustrate the changeability in the stockholders wealth [4]. Each financial criterion that use for evaluation of company performance must be very connected with stockholders wealth. Accounting performance measures such as NP, NOPAT, EPS, ROI, ROE, and so on, have been criticized because their incapability to shape into a corporation full cost of capital, thus accounting income is not a consistent predictor of firm value and cannot be used for measuring corporate performance. Value based management system has gained popularity in academic literature in last two decades [5].

"EVA is promoted by proponents as being superior other traditional and non-traditional performance metrics as a determinant and predictor of corporate success and value creation [6]." It differs from the traditional accounting performance measures since it takes into account the cost of all capital employed. Although EVA is popularized as the only true indicator of business and management performance, it is in fact, one of the many variants of residual income [7]".

The study is aimed to examine the claim of economic measures advocate of their superiority as financial metrics compared with accounting measures. The remainder of the paper is organized as follows: research objectives, Literature review, theoretical framework, definition of variables, hypothesis, methodology, and conclusion.

II. RESEARCH OBJECTIVES

This study aims to achieve the following objectives:

- 1) Providing independent empirical evidence on the information content of EVA, REVA, EVA momentum, NP, and OP.
- 2) Increasing interest in economic measures in the business press, increasing use of EVA, REVA, and EVA momentum by firms and among academics, and potential interest in economic measures among accounting policy makers.
- 3) The study is aimed to Identify whether economic performance measures have correlate with market value added, and can use these tools for evaluation of

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companies' performance.

4) The study is aimed to test whether there is any significant relationship between economic performance measures (EVA, REVA, and ENA momentum) and accounting variables (NP and OP) with market value added (MVA).

III. LITERATURE REVIEW

Stewart [6] first provided evidence of the correlation between EVA and Market Value Added (MVA). Lehn and Makhija[8] 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 this correlation was slightly better than with traditional performance measures such as ROA, ROE and ROS. Milunovich and Tseui [9] found that MVA is more highly correlated with EVA than with EPS, EPS growth, ROE, FCF or FCF growth. De Wet [10] investigated the relationship between EVA and traditional accounting measures with market value added (MVA).The results show strongest association between MVA and operational cash flow but between EVA and MVA did not reveal the strongest association. Ramanas [11] examine the relationship between economic value added (EVA) and traditional accounting measures (NOPAT, PAT, PBIT, and OCF) with market value added (MVA) for Indian companies. The results reveal that EVA does not superior to the conventional accounting measures in its connection with MVA. Net operational profit after taxes (NOPAT) and profit after taxes (PAT) better explain MVA compared to EVA.

Paula & Elena [12] examined the association between EVA, EPS,OCF, and DPS whit Market value added (MVA). The results show 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.

Ghadiri Moghaddam and Shoghi [13] investigated the association between refined economic value added (REVA) and market value added (MVA) with earning per shares (EPS) in Tehran Stock Exchange (TSE). The result shows market value added (MVA) has more correlation with earning per share (EPS) than refined economic value added (REVA).



IV. THEORETICAL FRAMEWORK

Fig. 1. Theoretical framework of the study

Based on the literature review and objective of this study

that is to examine the relationship between Economic measures (EVA, REVA, and EVA momentum) and Accounting variables (NP and OP) with share market value in Bursa Malaysia, the above theoretical framework was developed (Fig. 1).

V. PERFORMANCE EVALUATION

Numerous measures and metrics are used to understand the performance companies. Industry practitioners, public company analysts, and investors use historic financial measures and industry-specific metrics to understand the past and to predict the future financial performance companies. Up till now, no single performance measure has been identified that captures the historic financial performance and explains the future performance of a firm [14].

The performance evaluation criteria are divided into two groups; (I) Economic performance measures, and (II) Accounting performance measures [15].

A. Economic Performance Measures

In economic models, the firm value is function of profitability power, potential investment, and the different between rate of return and cost of capital [16].

In recent years, various concepts have been proposed for measuring the residual income. Use of market value and book value for calculate the cost of capital has had a dramatic difference in results. Economic performance evaluation measures involve; economic value added (EVA), refined economic value added (REVA), EVA momentum, cash value added (CVA), and market value added (MVA) [17]. In this study economic value added (EVA), refined economic value added (REVA), and EVA Momentum selected as economic performance measures.

1) Economic value added (EVA)

The famous economist Alfred Marshall was the first spoke about the concept of economic profit as performance criteria in 1890, where the cost of invested capital is also deducted from profit to estimate the real or economic profit of a company [18]. Stewart [6] introduced the concept of Economic Value Added (EVA) in 1991 and it is registered as the trademark (EVATM) of the Stern Stewart consulting organization. The equation for EVA is based on the equation for RI, but specific definitions are given to income, required rate of return and investment, in order to eliminate undesirable accounting conventions [19].

EVA is a revised version of Residual Income (RI) with a difference the way the economic profit and the economic capital are calculated [20]. The economic value added is a good indicator both for the retrospective evaluation of performances (the economic value added for the historical period) and also for prospective evaluation of performances (the economic value added for the future period) [21].

The introducers of EVA are considered many advantages for its, that some of them are coming below [22]:

- 1) The EVA is only performance criteria that show changes in stock price over the time.
- 2) Growth goals and performance will combine with each other.
- 3) Assets management and working capital management

are improved.

- 4) The EVA is a tool for capital budgeting decision.
- 5) The best criteria for evaluating and measuring performance.
- 6) Able to measure the ability of tactical and strategic value creation opportunities [23].
- 7) EVA get better decision making and helps in reducing organization disagreement [24], [25].

"EVA is the amount of economic value added for the owners by management. The thrust area for today's management is to find means to create value for the owners. It is now established that the accounting profit in no cases represents the real value created for the owners. But, it may originate the calculation. In other words, accounting profit is required to be converted into economic profit. Under *EVA*, all distortions in conventional accounting are identified and accounting profit is adjusted to make it distortion free and finally we get the amount of EVA [26]". Stewart [6] explained EVA as Net operating profit after taxes (NOPAT) deducted with a capital employed.

In this study, economic value added (*EVA*) is intended found on Cordeiro & Kent [27], and beside, these formulas have been used by Ismail [28] which is following:

$$EVA = NOPAT - (WACC \times IC) \tag{1}$$

where: *NOPAT* is operational profit after tax, *WACC* is weighted average cost of capital, and *IC* is invested capital.

$$NOPAT = PBT + IT - TI \tag{2}$$

where: *PBT* is profit and loss before tax, *IE* is interest expense, *TI* is tax shield on interest.

$$IC = SD + LD + MI + SE \tag{3}$$

where: SD is short term debt, LD is long term debt, MI is minority interest, and SE is shareholder equity.

$$WACC = \left[CD \times \frac{TD}{TD + CMVE} \times (1 - T) \right] + \left[CE \times \frac{CMVE}{TD + CMVE} \right]$$
(4)

where: CD is cost of debt, TD is total debt, CMVE is company market value of equity, and T is tax rate.

$$CMVE = CSP \times TS \tag{5}$$

where: CSP is company share price, TS is total share outstanding.

$$MV = CMVE + TD + MI \tag{6}$$

where: *MV* is market value of company, *TD* is total debt, *MI* is minority interest.

There are three ways to increase EVA: (I) make more profit without using more capital, (II) Use less capital, (III) Invest capital in high – return projects.

Theoretically it can be proved that EVA is superior to other measures of performance (excluding residual income) on the grounds that it accounts for the full cost of capital, including the cost of equity. It is therefore a pure economic profit, meaning that it reflects the full cost of the limited (capital) resources used by a company during a given period. The difference between EVA and residual income lies in the adjustments required to the net assets and operating profits for the calculation of EVA [10].

2) Refined economic value added (REVA)

Refined economic value added (REVA) provides an analytical framework for evaluating operating performance measure in the context of shareholder value creation. EVA performs quite well in terms of its correlation with shareholder value creation, but REVA is a theoretically superior measure for assessing whether a firm's operating performance is adequate from the standpoint of comprehensive statistical analysis of both REVA and EVA is used to estimate their correlation with and their ability of predict shareholder value creation. REVA statistically outperforms EVA in this regard. The REVA used for external performance evaluation of company [2]. REVA is a measure that more concerned with performance evaluation of top management levels. Instead EVA is the simpler shape of these criteria, based on book value, and concerned with performance evaluation of lower levels of management in the firms [29].

One of the major criticisms one EVA is the fact that it computes the opportunity cost of capital employed based on their book values, while the investors except a return based on the market value. If the investors sell the Co. at its market value and invest the takings on assets with a risk equal to that of the Co. they can expect earning a return equivalent to the investment equity based on the total market value of the Co. and not only the book value of the investment as shown in the balance sheet. As a result, the investment equity must unavoidably reflect the actual opportunity cost of investors (Richter Honold, 2000). For the purpose of correcting this defect, Bacidore Jeffery et al. [2], suggested its replacement by a measuring criterion that they called REVA. REVA consists of the residual not found by deducing the opportunity cost of investors at the market value from the net operating income after tax, which is computed as follows:

$$REVA = NOPAT - (WACC \times MCapital)$$
(7)

where: NOPAT Is net operational profit after tax in period t, *WACC* is weighted average cost of capital, *MCAPITAL* is the company's market value at the beginning of period t.

$$MV = Mcapital = CMVE + TD + MI$$
(8)

3) EVA momentum

"EVA Momentum is a registered trademark of EVA Dimensions. In 2009 EVA Momentum emerged as the newest EVA-related business performance measure"[14]. Stewart [30] stated that EVA Momentum is "the one ratio that tells the whole story". Colvin [31] stated in *Fortune* that "savvy investors and managers will focus on EVA Momentum". "EVA Momentum has not been empirically investigated in any known previous study" [14]. Stewart [30] advanced earlier EVA work by introducing EVA Momentum as a new measurement tool. Stewart described EVA Momentum as the increase or decrease in economic profit divided by prior period sales. EVA Momentum is calculated as:

$$EVA Momentum = \frac{EVA1 - EVA0}{Sales0}$$
(9)

where: EVA1 is economic value added in period one, EVA0 is economic valued added in the prior period, and Sales0 is revenue for the prior period. Stewart [30] described EVA Momentum as an economic measure that is the size and situation neutral, provides trend warnings, and is --marketcalibrated. In contrast to Kaplan and Norton [32], who stated no single measure is adequate to measure business performance; Stewart argued EVA Momentum is the single best performance measurement tool. EVA Momentum attempts to address the weaknesses in sales growth rate, EPS, market share, profit margin, return on capital, and other measures. EVA Momentum considers year-over-year changes in economic profit as measured by EVA, relative to prior year sales. Stewart [30] claimed that stating EVA Momentum as a percentage of sales facilitates performance comparisons across company size and industries.

B. Accounting Performance Measures

The financial statements are the results of accounting system whereby the reported profit are great important for users. Investors, relying on accounting profit evaluate and predict the performance of a company. Managers also use the profit for future planning. Firm value obtained from multiplying the two numbers in the accounting Performance evaluation model; prime number is a firm profit and the second number is conversion ratio of profits to value [33]. In accounting performance evaluation model, the value of a company functions as various parameters such as net profit (NP), earning per share (EPS), profit growth (PG), return on equity (ROE), return on investment (ROI), free cash flow (FCF), and dividend (D) [6]. In this study net profit (NP) and operational profit (OP) selected as accounting performance measures.

Accounting profit is the typical traditional performance evaluation measures which are important for investors, shareholders, managers, creditors, and security analysis. Accounting profit calculated by accrual assumption and in the opinion of many researchers, as one of the most important performance evaluation measures [8], [34], [35]. However, accounting performance evaluation measures have the following deficiencies:

- 1) Distorted and manipulated to profit by using the different methods [6].
- Generally accepted accounting principles authorize inconsistency in calculation of profit on the various companies.
- 3) Profit measured with historical currency will change with changes in the price level [36].
- 4) Due to the application of cost principle and revenue recognition principle, unrealized value of assets sold that are kept in a specified time period, is not identified in the estimated of accounting profit. This feature

makes the useful information can be disclosed.

- 5) Due to the different methods adopted to calculate the cost of assets and for allocating costs, it is difficult to compare items based on accounting profit [37].
- 6) The accounting profit calculates based on revenue recognition principle, historical cost principle, and conservatism assumption. These cause to be provided misleading information to users [37].
- 7) Neglecting the cost of capital [34].

1) Net profit (Net Income)

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 words, net income represents the amount of money remaining after all operating expenses, interest, taxes and preferred stock dividends (but not common stock dividends) have been deducted from a company's total revenue.

2) Operational profit

Earnings before interest and taxes (EBIT) or Operating profit equals 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).

VI. MARKET VALUE ADDED (MVA)

The primary goal of most companies is to maximize shareholders' wealth. This goal obviously benefits stockholders, but it also helps to ensure that scare resources are allocated efficiently, which benefits economy. Shareholder wealth is maximized by maximizing the different between the market value of the firm's stock and the amount of equity capital that was supplied by shareholders. This difference is called the market value added (MVA)[38]:

$$MVA = MV - IC \tag{10}$$

where: MVA is market value added, MV is market value of company, and IC is invested capital.

VII. HYPOTHESIS

The following hypothesis is proposed to test the validity of the model:

- 1) There are positive relationship between economic measures (EVA, REVA, and EVA Momentum) and market value added (MVA).
- 2) There are positive relationship between accounting measures (NP and OP) and market value added (MVA).
- Information content of economic measures (including EVA, REVA, and EVA Momentum) is greater than the information content of accounting variables (including NP and OP).
- 4) Information content of accounting variables (including

NP and OP) is greater than the information content of economic measures (including EVA, REVA, and EVA Momentum).

5) Changes in value added items (including EVA, REVA and EVA Momentum) provide incremental information content beyond changes in conventional data (including NP and OP), and vice versa.

VIII. METHODOLOGY

There are different measures for evaluating of company performance. Economic measures are the most important measures for evaluation of company performance. The main research question is: which of Accounting measures (NP and OP) and economic measures (EVA, REVA, and EVA momentum) have a greater relationship with market value added (MVA) in Bursa Malaysia? So, the purpose of this article is to investigate whether economic measures are superior financial performance metrics and create market value added (MVA), as claimed by Stern Stewart and Company, and therefore is consistent with the purpose and intent of the Malaysian Companies.

We will choose the public companies accepted in Main market of Bursa Malaysia from 2001- 2010. The historical and secondary data will comprise companies' financial statement and will use to calculate EVA, REVA, EVA momentum, NP, OP, and MVA. The data will abstract from the income statement, balance sheet, and financial highlights, available from KLSE RIIAM information system (KLSE-RIS) website, Bursa Malaysia website, Universiti Malaya (UM), and Universiti Teknologi Malaysia (UTM). For testing the hypothesis, we will use multivariate regression, correlation coefficient, coefficient of determination using SPSS. This study involves five independent variables (EVA, REVA, EVA Momentum, NP, and OP) and one dependent variable (market value added).

IX. CONCLUSION

The proposed model provides the moderating link between economic measures (EVA, REVA, and EVA Momentum) and accounting variables (NP and OP) with market value added (MVA) to evaluation of company performance. The authors' intention is to fill up the gap about the lack of research on economic and accounting measures in Bursa Malaysia. There is no evidence conclusive that supporting whether EVA and EVA- related measures are associated with financial performance. In addition, EVA and EVA- related research in the public company has been limited. EVA momentum is a new performance measures that referred by Stewart in 2009. In Malaysia we don't find any research about EVA momentum and REVA. There is limited research about EVA, NP, and OP in Malaysia. This study extends previous EVA research and is the first known study that empirically examines EVA momentum and REVA as a performance measure in the Bursa Malaysia. Furthermore, the study will be carried out resulting from the proposed model to investigate the role of accounting and economic performance measures to evaluation of company performance and value creation. This study is expected to clarify the relationship between accounting and economic measures with market value added (MVA) as a performance of companies, and it could help to public companies' owners/managers in their making decision and increasing their performance.

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REFERENCES

- A. C. Worthington and T. West, "Economic Value-Added: A Review of the Theoretical and Empirical Literature Andrew C," *Asian Review* of Accounting, vol. 9, no. 1, pp. 67-86, 2001.
- [2] J. M. Bacidore *et al.*, "The search for the best financial performance me asure," *Financial Analysts Journal*, vol. 53, no. 3, pp. 11 - 20, 1997.
- [3] S. D. Young and S. F. O'Byrne, EVA and Value-Based Management A Practical Guide to Implementation, 2000: McGraw-Hill.
- [4] S. Chen and J. L. Dodd, "Economic value added (EVA(TM)): An empirical examination of a new corporate performance measure," *Journal of Managerial Issues*, vol. 9, no. 3, pp. 318 - 333, 1997.
- [5] A. K. Sharma and S. Kumar, "Economic Value Added (EVA) -Literature Review and Relevant Issues," *International Journal of Economics and Finance*, vol. 2, no. 2, pp. 200 - 220, 2010.
- [6] J. B. Stewart, *The Quest for Value: A Guide for Senior Managers*, 1991, New York: NY: Harper Business.
- [7] I. D. Maditinos, Z. Sevic, and N. G. Theriou, The Introduction of Economic Value Added (EVA) in the Corporate World., in Paper Presented at The International Conference: Innovation, Entrepreneurship, and Competitiveness in Balkan and Black Sea Countries, Kavala, Greece, November 2-4, 2006.
- [8] K. Lehn, and A. K. Makhija, EVA, "Accounting Profits and CEO Turnover: An Empirical Examination," *Journal of Applied Corporate Finance*, vol. 10, no. 2, pp. 90-97, 1997.
- [9] S. Milunovich, and A. Tsuei, "EVA in the computer industry," *Journal of Applied Corporate Finance*, vol. 9, no. 1, pp. 104–115, 1996.
- [10] J. De Wet, "EVA versus traditional accounting measures of performance as drivers of shareholder value – A comparative analysis," *Meditari Accountancy Research*, vol. 13, no. 2, pp. 1 - 16, 2005.
- [11] D. V. Ramana. (2005). Market Value Added and Economic Value Added: Some Empirical Evidences. [Online]. Available: http://papers.ssrn.com/sol3/results.cfm?RequestTimeout=50000000.
- [12] D. A. Paula and D. C. Elena. (2009). EVA Versus Traditional Accounting Measures of Performance as Drivers of Shareholder Value--a Comparative Analysis. [Online]. Available: http://www.upm.ro/proiecte/EEE/Conferences/papers/S309.pdf.
- [13] A. Ghadiri Moghaddam and H. Shoghi, "A Study of Refined Economic Value Added Explanatory Power Associated with MVA & EPS in Tehran Stock Exchange," INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS, vol. 3, no. 9, pp. 403 - 412, 2012.
- [14] R. Mahoney, EVA momentum as a performance measure in the United States lodging industry, Iowa State University: United States – Iowa, pp. 122, 2011.
- [15] A. Jahankhani, and a. Zariffard, "Do Managers and Stockholders Use the Appropreate Criterion to Measure the Performance of the Company and It's Value Financial Research," vol. 2, no.1(7-8): pp. 41-66, 1995.
- [16] A. E. Bausch, W. Barbara, and M. Blome, "Is Market Value-Based Residual Income a Superior Performance Measure Compared to Book Value-Based Residual Income?" *Working Paper 2003*, vol. 1, pp. Justus-liebig-Universitat, 2003
- [17] G. Mahdavi and M. S. Hosaini, "What is the Best Measure for the Financial Performance Evaluation?" *Quarterly Journal of Economics*, vol. 31, pp. 121-146, 2008.

- [18] D. Kyriazis and C. Anastassis, "The Validity of the Economic Value Added Approach: an Empirical Application," European Financial Management, vol. 13, no. 1, pp. 71-100, 2007.
- [19] S. Roos, Principles of Management Accounting: A South African Perspectiv, 2008, CapeTown:Oxford.
- [20] A. Sharma and S. Kumar, "EVA Versus Conventional Performance Measures - Empirical Evidence from INDIA," in Porc. ASBBS Annual Conference: Las Vegas, pp. 804 - 815, 2012.
- [21] M. I. Pantea et al., "The Managerial Performances Evaluation through the Economic value Added," European Research Studies, vol. XI, no. 4, 2008.
- [22] G. Mahdavi, and N. Rastgari, "Incremental information of economic value added (EVA) for profit forecast," Journal of Social Sciences and Humanities of Shiraz University, vol. 26, no. 1, pp. 136 - 156, 2007
- [23] J. Kang, K. Kim, and W. C. Henderson, "Economic Value Added (EVA): A Financial Performance Measure," Journal of Accounting and Finance Research, vol. 10, no. 1, pp. 48 - 60, 2002.
- [24] G. C. Biddle, R. M. Bowen, and J. S. Wallacec, "Evidence on EVA," Journal of Applied Corporate Finance, vol. 12, no. 2, pp. 1 - 21, 1999
- [25] L. M. Lovata, and M. L. Costigan, Empirical analysis of adopters of economic value added. Management Accounting Research Journal, 2002. 13: p. 215 - 228.
- [26] N.C. Shil, Performance Measures: An Application of Economic Value Added. International Journal of Business and Management, 2009. 4(3): p. 169 - 177.
- [27] J. J. Cordeiro, and D. D. Kent Jr., Do EVA(TM) adopters outperform their industry peers? Evidence from security Analayst Earnings Forecasts. American Business Review 2001. 19(2): p. 57 - 63.
- [28] I. Ismail, The ability of EVA (Economic Value Added) attributes in predicting company performance. African Journal of Business Management 2011. 5(12): p. 4993-5000.
- [29] R. Darabi, and E. Esfandiyari, The relationship between REVA, EBIT, and OCF with stock price in Tehran Stock Exchang Journal of financial accounting and auditing, 2009. 1: p. 121-144.
- [30] J. B. Stewart, "EVA Momentum: The One Ratio That Tells the Whole Story," Journal of Applied Corporate Finance, vol. 21, no. 2, pp. 74-86, 2009.
- [31] G. Colvin, "Many performance ratios lie about a company's health. A new metric, EVA Momentum has emerged that can't easily be gamed," Fortune, vol. 161, no. 1, pp. 22, 2010.

- [32] R. S. Kaplan and D.P. Norton, "The balanced scorecard-measures that drive performance," Harvard Business Review, vol. 70, no. 1, pp. 71-91, 1992.
- [33] A. Jahankhani, and A. Sajjadi, "The Application of Economic Value Added," Financial Decision Making Financial Research, vol. 2, no. 4 (5-6), pp. 68 - 86, 1994.
- [34] S. Chen and J. L. Dodd, "Operating Income, Residual Income And EVATM: Which Metric Is More Value Relevant?" Journal of Managerial Issues, vol. 13, no. 1, pp. 65-86, 2001.
- [35] A. C. Worthington, and T. West, "Australian Evidence Concerning the Information Content of Economic Value-Added," Australian Journal of Management, vol. 29, pp. 201 - 223, 2004.
- E. Hendriksen and M. F. Van Breda, Accounting Theory, 5th ed. 1992, [36] New York: IRWIIN.
- [37] A. Riahi-Belkaoui, Accounting Theory, 5th ed ed. 2004, London: International Thomson Busines.
- E. F. Brigham and M. C. Ehrhardt, Financial management Theory and [38] Practice. 2005, South - Western, United States of America: Infotrac College Edition.



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