International Journal of Research in Finance and Marketing (IJRFM)
Available online at: http://euroasiapub.org
Vol. 8 Issue 3, March – 2018
ISSN(o): 2231-5985 | Impact Factor: 6.397

A *Vis A Vis* COMPARATIVE STUDY OF ECONOMIC VALUE ADDED ANALYSIS AND BALANCE SCORE CARD

Bhanwar Lal Raigar [1]

[1] Research Scholar, Department of ABST, University of Rajasthan, Jaipur.

ABSTRACT

The purpose of the paper is to comparatively asses and presents a cornucopia of approaches and ways of defining, measuring and using the concept of Economic Value Added (EVA) and Balance score card (BSC) technique. These are financial performance measure that emphasizes the maximization of shareholder value, as opposed to mere maximization of net profit. The authors familiarize the readers with important ideas and research that have contributed to the development of the concept of EVA and BSC. The nature of this paper is exclusive to the review of secondary sources, such as theoretical insights as well as the results of numerous empirical research which *vis a vis* comparatively study EVA and BSC. Furthermore, the paper will show various adjustments to financial statements before accounting profits can be used to calculate EVA and BSC. The results of the aforementioned research will unequivocally present EVA as one of the most widely used and accepted measures of overall firm performance, gaining more popularity when coupled with the notions of strategic (financial) management. Paper confides that with comparison to EVA great advantage of Balanced Scorecard is the possibility to use it in combination with other performance management systems and individual indicators

Keywords: Economic Value Added (EVA) and Balance Score Card (BSC), Performance Measures, Strategic Management, Cost of Capital.

INTRODUCTION

Complex, turbulent and uncertain conditions of the internal and external environment of enterprises complicate the process of managing the value of a firm. The management of competitive advantages and firm value as well as their planning requires the selection of appropriate management technology. In an environment filled with strategic fractures it is extremely difficult for value analysts that create, maintain and develop competitive advantages and the value of the firm to rely on the assumption of stable environment of the firm. The development of a suitable management technology is primarily driven by practical needs and the necessity of solving developmental problems of firms. Though the intimate connection between business strategy and the search for (customer) value is well established in the field of strategy, it is somewhat surprising to find only scarce research on how firms create value in contrast to the abundant ideas on value appropriation (Becerra 2009, 91). The changes in management technology are therefore caused by the strong growth in internal and external complexity of the firm, where problems of designing and implementation of business decisions (as well as their control, including ex-post and ex-ante control) are being tackled with an ever increasing set of performance measurement tools and criteria.

Most, if not all value based management performance measures use some form of discounted cash-flow technique to estimate how much a new strategy might affect shareholder value. These financial tools for strategic decision making, including option pricing theory, are widely used by managers, and the most basic of them are usually included in strategic management textbooks. The problem lies in the fact that financial analysis is not really intended to understand where value ultimately comes from. There are important aspects of strategic management that are not facilitated by the use of these techniques, like the analysis of customers, competitors and resources. Basically, how the management of the firm handles these categories will determine financial implications for shareholder value (Becerra 2009, 90).

In order to solve this practical problem, Stern and Stewart developed the Economic Value Added (EVA)2 performance measure in 1991. It measures the dollar value of the firm’s return in excess of its opportunity cost (Bodie, Kane, and Marcus 2014, 644). Indeed, Hall (Hall 2013) lists a number of studies (Stewart, 1991; Stern, 1993; O'Byrne, 1996; Chen and Dodd, 1997;

International Journal of Research in Finance and Marketing (IJRFM)
Available online at: http://euroasiapub.org
Vol. 8 Issue 3, March – 2018
ISSN(o): 2231-5985 | Impact Factor: 6.397

Hall, 1999; Chmelikova, 2008) confirming the superiority of the valuation using economic value added compared to traditional accounting performance indicators. EVA as a measure of company's performance places the emphasis on the creation of value by the management for the owners since it takes into account the cost of capital employed. From the standpoint of an investor, EVA provides a better predictor of market value of a company than other measures of operating performance (O'Byrne 1996). Furthermore, it takes into account the social aspect of an enterprise. As Peter Drucker explained it (Drucker 1995), *"until a business returns a profit that is greater than its cost of capital, it operates at a loss. Never mind that it pays taxes as if it had a genuine profit. The enterprise still returns less to the economy than it devours in resources."*

THE ECONOMIC VALUE ADDED CONCEPT

The concept of Economic Value Added is based on the work of professors Franco Modigliani and Merton H. Miller. In 1961 they published the seminal paper "Dividend Policy, Growth and the Valuation of Shares" in the Journal of Business. Modigliani and Miller showed that corporate investment decisions – manifested in positive NPV decisions – are the primary driver of a firm's enterprise value and stock price – as opposed to the firm's capital structure mix of debt and equity securities (Grant 2003, 3). These ideas were extended into the concept of EVA by Stewart and Stern of Stern, Stewart & Co at the beginning of the 1990s. It is an estimate of a firm's economic profit – being the value created in excess of the required return of the company's investors (being shareholders and debt holders). It is the performance measure most straightforwardly connected to the creation of shareholders wealth over time (Ray 2012). Stern et al (Stern, Shiely, and Ross 2001, 33) suggest that *"when fully implemented" EVA will be "the centerpiece of an integrated financial management system that incorporates the full range of corporate financial decision making"*.

EVA has become a widely advocated method of measuring firm performance. The methodology is "the one measure that properly accounts for all the complex trade-offs involved in creating value" and therefore, "the right measure to used for setting goals, evaluating performance, determining bonuses, communicating with investors, and for capital budgeting and valuations of all sorts" (Stewart 1991, 136). EVA is the spread between the rate of return on capital and the cost of capital, multiplied by the economic book value of the capital employed to produce that rate of return (Barbera and Coyte 1999, 16). However, this methodology presents an upgrade to then already existing measure of residual income, which is defined as operating profit subtracted by capital charge. The roots of the measure go back as far as 1890, when residual income was defined by Alfred Marshall as total net gains less the interest on invested capital at the current rate (Barbera and Coyte 1999, 18). Mathematically EVA gives exactly the same results in valuations as Discounted Cash Flow (DCF) or Net Present Value (NPV), which are long since widely acknowledged as theoretically best analysis tools from the stockholders' perspective (Brealey and Myers 1991, 73–75).

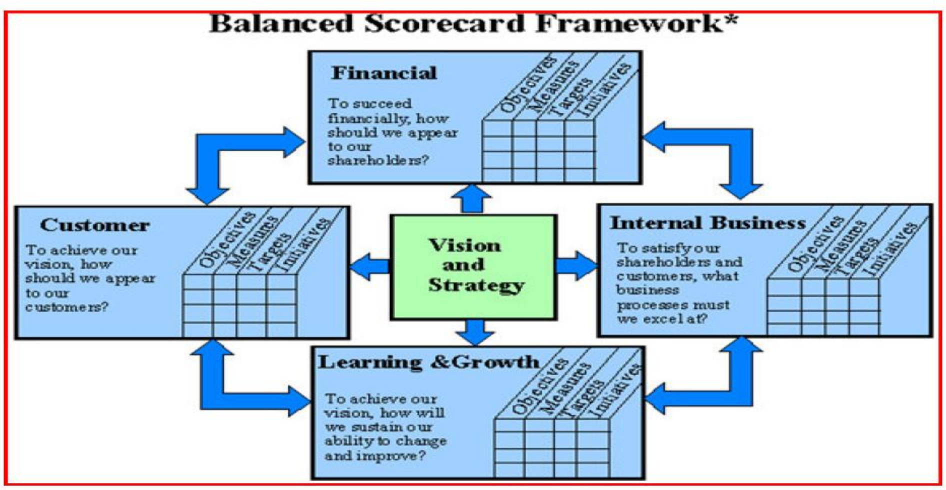
Nonetheless, EVA is different from other traditional performance measuring tools because most measures mostly depend on accounting information. The problem with these kinds of tools is that accounting earnings fail to measure changes in the economic value of the firm, and some of the reasons include (Shil 2009): (1) Alternative accounting methods may be employed: different methods for depreciation, inventory valuation, goodwill amortization, and so on; (2) Both business risk (determined by the nature of the firm's operations), and financial risk (determined by the relative proportions of debt and equity used to finance assets) are excluded; (3) Accrual based accounting numbers differ from cash flows from operations; (4) Dividend policy is not considered; (5) The time value of money is ignored.

CONCEPT OF BALANCED SCORE CARD

Balanced Scorecard is a strategy management system that helps managers to translate organisation strategy into operational objectives and implement it. BSC framework looks at the strategy from four different perspectives i.e. financial, customer, internal business processes and learning and growth. Thus, it brings in the necessary clarity to strategy.

Further, implementation of BSC ensures that strategy gets communicated to all the employees suitably to facilitate implementation by them. Measuring organizational performance through BSC reviews remain integral to BSC concept. Based on the learning from these reviews, strategy gets updated. Thus, the four important steps in BSC designing and implementation include 1) translating vision into operational objectives, 2) communicating the vision and linking it to the individual performance, 3) planning and adjusting the strategy based on feedback and 4) learning BSC, thus, strikes a balance between long term and short term objectives, financial outcomes and performance drivers for the same, and introduces a continuous process of learning and adaption to modified strategies. The strategy is broken down into critical operational strategic objectives considering the customer value proposition (Kaplan and Norton, 1996) and the desired financial results. The performance drivers or the lead objectives to these outcome objectives in the financial and customer perspectives are then identified and placed in the internal business processes and learning and growth perspectives forming a causal relationship. The drawing that shows these objectives placed in different perspectives, linked with arrows depicting causal relationship is known as strategy map (Kaplan and Norton, 2004).

Figure 1.1: The Balanced Scorecard Framework



Source: *Reprinted with permission from Kaplan, R.S. and Norton, D.P. 1996. 'Using the Balanced Scorecard as a strategic Management System,' Harvard Business Review, Januray-February*

A balance is maintained between the financial and non-financial, short term and long term, and the lead and lag objectives. Each of these objectives are well defined to ensure common understanding of the terms, Appropriate measures, targets and initiatives are identified with respect to each objective The measures on the balanced scorecard ensure a balance between external measures for shareholders and customers, and internal measures of critical business processes, innovation and learning and growth. It strikes a balance between the outcome measures of past performance (lag indicators); the measures that drive future performance (lead indicators), and also between clearly quantifiable and somewhat subjective measures (Kaplan and Norton, 1996). BSC introduced the idea of measuring the drivers of performance, i.e. the lead indicators while retaining the measures of financial performance, i.e. the lag indicators of performance (Brown, 2000). Measures in each of these perspectives are interlinked such that a change in the leading measure results in a change in the lagging measure (Kaplan and Norton, 2001).

OBJECTIVES OF STUDY

The present study has been carried out with the following objectives:

(a) To comparatively asses the role and importance of EVA and BSC

(b) To structurally differentiate between functioning of EVA and BSC.

RESEARCH METHODOLOGY

The nature of this paper is exclusive to the review of secondary sources, such as theoretical insights as well as the results of numerous empirical research which *vis a vis* comparatively study EVA and BSC. Furthermore, the paper will show various adjustments to financial statements before accounting profits can be used to calculate EVA and BSC.

FINDINGS OF THE STUDY

BSC emerged as a result of studies of different methods and tools to evaluate business performance efficiency. The authors of this concept have found out that it is not enough to use only financial indicators to adequately measure organization. That’s why BSC concept includes four perspectives: financial, customer, internal processes, learning and growth.

Balanced Scorecard is based on the following principles:

- Cause and effect relationship
- Interrelationship of indicators which the company can measure in the end of a certain period and indicators which can be evaluated immediately
- Subordination of all indicators financial results

EVA based management emerged as a result of value based management development. EVA indicator became a successor of such indicators as ROI (return on investment) and ROCE (return on capital employed). The following principles lay down the foundation of EVA based management:

- Business owners invest capital to get profits
- The company is founded to get additional profits
- Company personnel aims at increasing shareholders value through a motivation system

EVA based management is based on the indicator mathematical formula. By splitting this formula it is possible to identify objectives and share responsibilities for their implementation.

Implementation results

BSC creators view organization as a strategy-oriented. Most important things to know about Balanced Scorecard:

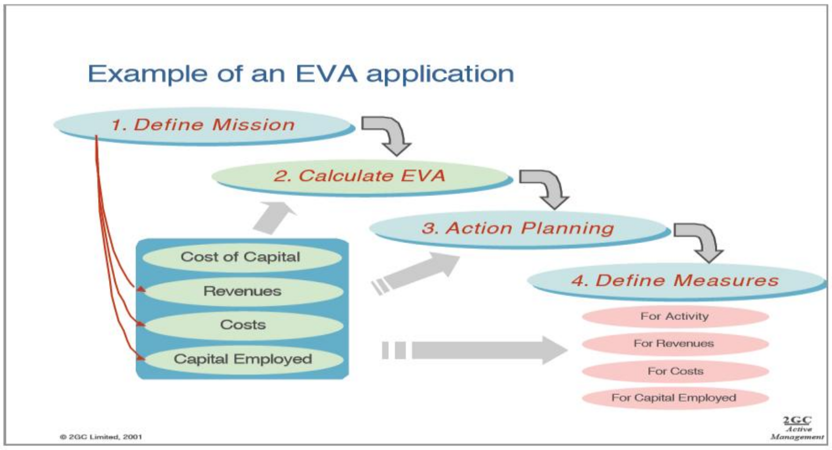
- **Putting strategy into action.** BSC makes it possible to transfer strategy to the operational level which makes it possible to aim all actions at implementation of strategic goals.
- **Links between organization and strategy**. Balanced Scorecard makes it possible to achieve a synergy effect when all departments and business units of a company pursue strategic goals.
- **Strategy implementation by all employees.** Balanced Scorecard encourages employees to contribute to implementation of strategic goals through an extensive communication and motivation system.

- **Real-time strategic management.** Balanced Scorecard makes it possible to link budget and strategy with the help of information and analytical systems in order to exercise continuous control and conduct strategic education campaigns.
- **Motivation.** Balanced Scorecard creates a perfect motivation for employees at all levels. Creators of **EVA based management** have established so-called 4 Ms:
- **Measurement.** EVA based management system makes it possible to create evaluation system for the company which can correctly indicate actual profitability.
- **Management system.** The system covers a set of managerial decisions, including strategic planning, allocating funds, purchase and sale of actives, goal setting, etc.
- Motivation. A fair compensation and bonus system based on an EVA indicator makes it possible to balance the interests of managers and shareholders.
- **Mindset.** Implementation of the management and compensation system based on EVA indicator leads to changes in the corporate culture and organization climate.

Combining EVA and the Balanced Scorecard

There is considerable scope to enhance the value of both tools by combining them in a single application, effectively by using the EVA calculation to drive the definition of categories of measures used in the Balanced Scorecard's financial perspective.

Thus, while EVA might help suggest which financial indicators truly drives the development of long-term shareholder value, the development process used to create a Balanced Scorecard can be used to illustrate and test a management team's theories about how they are most likely to trigger the required reaction among customers and other external relations necessary to deliver the desired long-term financial results. The structure of a typical EVA application is shown in Figure 1.2 overleaf.



In the example, EVA value is calculated from elements related to income, costs, capital, and cost of capital. The definitions of the values used in the EVA calculation in turn are linked to 'Action Plans' designed to improve their value, and each of these action plans has associated measures of progress. Sometimes the measures used are similar to those originally found in the EVA calculation

This structured consideration of the drivers of shareholder value is not unlike the 'financial objectives' of a typical (non-EVA based) Balanced Scorecard (see Figure 2). By comparing Figures 1 & 2, the similarity is clear. In fact there is quite possible that this type of EVA break down could be used as a defined basis for the selection of Financial Objectives and Measures in a Balanced Scorecard. The increased 'authenticity' of the structure of the EVA calculation would add credibility to any discussion concerning the basis for financial measure selection.

Further, use of EVA in this way facilitates its use as the basis for variable incentive rewards within an organisation.

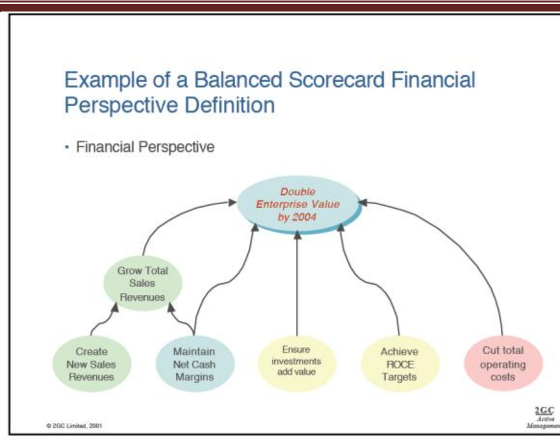


Figure 2 – Balanced Scorecard Financial Objectives

But the financial perspective is only one-fourth part of a classically structured Balanced Scorecard. By combining EVA with Balanced Scorecard in this way, it is important to consider what additional benefit might arise from the inclusion of the remaining three perspectives. In large part the value stems from these perspectives role in conveying ideas of 'causality'**.**

Drawbacks of BSC and EVA Based Management

Major drawbacks of Balanced Scorecard:

- BSC can be designed only after all employees accept and understand the company strategy
- There is no responsibility for the total results
- This system focuses on managing funds and resources, but not financing them

Key drawbacks of EVA based management system:

- Strong ties between bonuses and EVA indicator may lead to making decisions aimed at short term benefits through cost reduction and use of actives with an expired depreciation term
- Scorecard system consists of financial indicators which ignore such long-term success factors as personnel knowledge, information technologies, corporate culture, etc.
- EVA based management system works more in the short term perspective.

CONCLUSION

Analysis showed that these management tools are not mutually exclusive. They can be used both separately and in combination. The best effect is achieved through combined usage of EVA and BSC. EVA indicator may be used as a basis of motivation system, as well as a part of financial perspective, while BSC is a major management tool which focuses on implementation of strategic goals and communication between operational in strategic management. EVA and Balanced Scorecard are both tools that have become popular during the 1990's, and both have valuable application potential as tools to help managers to focus more effectively on the creation of shareholder value. However while EVA is efficient at tracking the relative value generating performance of an organisation and its components, Balanced Scorecard is a powerful complementary tool useful to guide the management of strategic and operational plans intended to trigger the sought value generating improvements.

REFERENCES

- Barbera, Maria, and Rodney Coyte. 1999. *Shareholder Value Demystified: An Explanation of Methodologies and Use. Sydney: UNSW Press*.
- Barney, Jay. 1991. Firm Resources and Sustained Competitive Advantage. *Journal of Management 17 (1): 99–120*.
- Becerra, Manuel. 2009. *Theory of the Firm for Strategic Management: Economic Value Analysis*. Cambridge: Cambridge University Press.
- Bodie, Zvi, Alex Kane, and Alan J. Marcus. 2014. *Investments*. New York: McGraw-Hill.
- Brealey, Richard, and Stewart C. Myers. 1991. *Principles of corporate finance*. New York: McGraw-Hill.
- Dodd, James L., and Shimin Chen. 1997. Economic Value Added (EVA): An Empirical Examination Of A New Corporate Performance Measure. *Journal of Managerial Issues 9* (3): 318–333.

- Drucker, Peter. 1995. The Information Executives Truly Need. *Harvard Business Review January-February*: 54–62.
- Grant, James L. 2003. *Foundations of Economic Value Added.* Hoboken: John Wiley and Sons.
- Hall, John. 2013. Toward Improved Use of Value Creation Measures In Financial Decision-Making. *The Journal of Applied Business Research* 29 (4): 1175–1188.
- Lehn, Kenneth, and Anil Makhija. 1996. EVA and MVA as performance measures and signals for strategic change. *Strategy and Leadership* 24 (3): 34–38.
- Montgomery, Cynthia A., and Birger Wernerfelt. 1988. Diversification, Ricardian rents and Tobin's q. *RAND Journal of Economics* 19 (4): 623–632.
- Newbert, Scott. 2008. Value, Rareness, Competitive Advantage, and Performance: A Conceptual-level Empirical Investigation of the Resource-based View of the Firm. *Strategic Management Journal 29*: 745–768.
- O'Byrne, Stephen F. 1996. EVA and market value. *Journal of Applied Corporate Finance* 9 (1): 116–125.
- Peteraf, Margaret. 1993. The Cornerstones of Competitive Advantage: A Resource-Based View. *Strategic Management Journal* 14 (3): 179–191.
- Porter, Michael. 1980. *Competitive Strategy, Techniques for Analyzing Industries and Competitors.* New York: The Free Press.
- Ray, Sarbapriya. 2012. Efficacy of Economic Value Added Concept in Business Performance Measurement. *Advances in Information Technology and Management* 2 (2): 260–267.
- Shil, Nikhil Chandra. 2009. Performance Measures: An Application of Economic Value Added. *International Journal of Business and Management* 4 (3): 169–177.
- Stern, Joel, John Shiely, and Irwin Ross. 2001. *The EVA Challenge: Implementing Value-Added Change in an Organization*. Hoboken: John Wiley and Sons.
- Stewart, G. Bennett. 1991. *The Quest for Value*. New York: Harper Collins Publishers.

- Teece, David, Gary Pisano, and Amy Shuen. 1998. Dynamic Capabilities and Strategic Management. *Strategic Management Journal* 18 (7): 509–533.