Economic Value Added – A General Review of the Concept

Daraban Marius Costin
"Lucian Blaga" University of Sibiu
marius.daraban@ulbsibiu.ro

Abstract

Business organizations of the 21st century, a century driven by globalization, internationalization and speed, must compete on changing and evolving markets. One of the main goals of every business is to create value for its shareholders, value that is generated by the proper usage of existing resources. The notion that can be utilized to successfully illustrate the increase in economic value is the economic value added concept.. The Economic Value Added concept known also as EVA is an add on to value, value based management and economic value.. EVA is a method and a tool for quantification and measurement of the value created by a business organization.

Key words: EVA, value economic value added,
J.E.L. Classification: M20, M21, M00

1. Introduction

The concept of EVA is the result of the addition of 3 other concepts. The ***dictionary definition*** per Merriam - Webster of the compounding terms are:

- ***economic*** is defined as relating to an economy; relating to the process or system by which goods and services are produced, sold, and bought; relating to the science of economics. (Merriam Webster, 2016)
- ***value*** is defined as the amount of money that something is worth; the price or cost of something; something that can be bought for a low or fair price; usefulness or importance (Merriam Webster, 2016)
- ***added*** is defined as to put (something) with another thing or group of things; to mix or combine (an ingredient) with other ingredients; to include (something) with something else (Merriam Webster, 2017)

The ***dictionary definition*** of EVA could be rephrased as being the additional amount of money that somebody can obtain through production, sale or purchase of certain goods or services. The philological translation of the EVA terms is only limited accurate; the essence of economic processes is not considered.

The most used definition for EVA defines EVA as an economic profit of an business organization expressed as the surplus in created value over the expected return of the shareholders. EVA can determined as being the difference between the net profit of the business organization and the cost of the opportunity capital used by the business organization.

2. Origin of Economic Value Added

The origins of the Economic Value Added come from Hamilton (1877) and Marshall (1890), which showed that companies can create wealth if you manage to earn more than their own capital costs and liabilities. Economic Value Added is an indicator for measuring performance based on real economic profits of the company product, which allows measurement of its success or failure over a period of time is useful to investors who wish to determine how well the product has value to them and can be used for comparative analysis with rapid industrial similar. (Petrescu & Apostol, 2009, p. 1)

What is known today as the Economic Value Added concept was developed by the management consulting company Stern Value Management that owns the trademark of EVA™ as a way of evaluating the business organizations performance expressed as value generation for shareholders.

Officially founded in November 1982, Stern Value Management takes its roots in the 1950's, with the path-breaking work of Professor Merton H. Miller and Franco Modigliani on what determines value. Headquartered in New York, our firm was originally incorporated as Stern Stewart & Co. in 1982, but became Stern Value Management in 2013. (Stern Value Management, 2016)

Merton H. Miller (1923-2000), was an American economist, co-author of the Modigliani-Miller theorem earned the Nobel Prize 1990 while being professor at Carnegie Institute of Technology for his contribution to the theory of financial economics.

Franco Modigliani (1918 - 2003), an American naturalized Italian, co-author of the Modigliani-Miller theorem that has brought him his Nobel Prize 1985 for the contribution to the Modigliani-Miller theorem and for his analysis of the behavior of household savers an improvement on Keynes's consumption function.

Stern Value Management develops 1983 the EVA concept based on the works of Merton H. Miller and Franco Modigliani as a model for maximizing the value created that can also be used to provide incentives at all levels of the firm. (Stern Value Management, 2016).

Starting 1988 big organizations like Coca Cola (1988), Briggs & Stratton (1989), South African Breweries (now SABMiller) (1990), Singapore Technologies (1994), United States Postal Service (1996), AB InBev (1997), Tata Consultancy Services (2001), Godrej Group (2002), Chinese government (2010) and many others begin to adopt the EVA concept.

Stern Value Management defines EVA as follows: Economic Value Added® is a measure of economic profit. EVA® is calculated as the difference between the Net Operating Profit After Tax (NOPAT) and the opportunity cost of invested Capital. This opportunity cost is determined by multiplying the Weighted Average Cost of debt and equity Capital (WACC) and the amount of Capital employed. The formula for EVA: EVA = NOPAT – WACC*Capital. (Stern Value Management, 2016)

What separates EVA from other performance metrics such as EPS, EBITDA, and ROIC is that it measures all of the costs of running a business – operating and financing. EVA is the soundest performance metric, and the one most closely aligned with the creation of shareholder value. Many companies have adopted it as part of a comprehensive management and incentive compensation system that drives their decision processes. (Stern Value Management, 2016)

In a review of literature Sharma, A. K., & Kumar, S. done in 2010 the authors show that in developing economies less numbers of studies are available supporting the empirical validity of the concept as a corporate performance measurement tool. The concept of EVA has gained significant attention in the advanced economies, but implementation issues and its validity is under debate all over the world. (Sharma & Kumar, 2010, p. 1)

EVA is now recognized as an important tool of performance measurement and management all over the world, particularly in advance economies by adopting it as corporate strategy. Still there are mixed evidences about the superiority of EVA over traditional performance measurement tools. (Sharma & Kumar, 2010, p. 7)

3. Economic Value Added components

The definition given by Stern Value Management to EVA shows that EVA is the difference between the net operating profit after tax of the business organization and the cost of the opportunity capital invested in the business organization.

$$EVA = NOPAT - Cc = NOPAT - IC * WACC$$

If the equation is divided by IC the results is the following

$$\frac{EVA}{IC} = \frac{NOPAT}{IC} - \frac{IC * WACC}{IC}$$

$$EVA = IC * (ROIC - WACC)$$

Where
Cc = capital cost = WACC* IC
IC = invested capital
WACC = weighted average cost of capital
EVA = Economic Value Added
NOPAT = net operating profit after tax
ROIC = return on invested capital

EVA summarizes in one concept the operational business and the capital market perspective. The premise valid for both perspectives is that on any market the used resources must generate value for its owner. A business has as its fundamental purpose value generation for its shareholders. At the same time the capital market generates value for its investors though yields of the risk bearing financial assets.

The development of the concept of EVA has added flexibility in measurement of performance. The traditional methods can continue side by side with EVA. (Girotra & Yadav, 2001).

4. Traditional measurement of economic performance methods drawbacks vs EVA

There are many methods of performance measurement that can be applied to business organizations. The return maximization of traditional measurement methods does not automatically reflect the maximization of shareholder return. The return on investment (ROI) can be maximized by ignoring the cost of the invested capital.. In case of ROI the misallocation of capital is not reflected, therefore a non-alignment with increase in shareholder return is possible. Return on equity (ROE) does not consider the increase in leverage by taking on additional debts. In this case ROE can be maximized by decreasing or even jeopardizing the shareholder return by increasing the leverage risk. Earnings per share (EPS) is very reactive to additional invested capital, regardless of its nature equity or debt as long as it is near the marginal cost of debt. EPS can increase without a change in real shareholder return.

5. Advantages and disadvantages of EVA

EVA clarifies the concept of maximizing the absolute returns over and above cost of capital in creating shareholders' wealth. Hence better investment decisions can be taken with above aim rather than maximizing percentage of ROI. Understanding of EVA enables monitoring of investment decisions closely not only at the level of corporate but at line staff as well. (Girotra & Yadav, 2001).

EVA is fostering long term thinking at all levels of the business organization by changing the mindset of managers and employees towards shareholder perspective.

It emphasizes that in order to justify investments in the long run they have to produce at least a return that covers the cost of capital. In other case, the shareholders would be better off investing elsewhere. This approach includes that the organization tries to operate without the luxury of excess capital and it is understood that the ultimate aim of the firm is to create shareholder value by enlarging the product of positive spread multiplied with capital employed. The approach creates a new focus on minimizing the capital tied to operations. (Girotra & Yadav, 2001)

The cost of capital is one of the most important aspects reflected by EVA. When using traditional indicators, most companies appear profitable even in reality they are not. EVA corrects this error, explicitly recognizing that when managers use the capital, must pay for it. By taking into account the cost of equity, EVA indicates the profit made or not in each reporting period. (Vasilescu & Popa, 2011, p. 3)

Franco Modigliani and Merton H. Miller in their work "The cost of capital, corporation finance and the theory of investment" highlight the fundamental concerns of corporations with regards to finance and financial funds.

What is the "cost of capital" to a firm in a world in which funds are used to acquire assets whose yields are uncertain; and in which capital can be obtained by many different media, ranging from pure debt instruments, representing money-fixed claims, to pure equity issues, giving holders only the right to a pro-rata share in the uncertain venture? This question has vexed at least three classes of economists: (1) the corporation finance specialist concerned with the techniques of financing firms so as to ensure their survival and growth; (2) the managerial economist concerned with capital budgeting; and (3) the economic theorist concerned with explaining investment behavior at both the micro and macro levels. (Modigliani & Miller, 1958)

In their literature review on EVA, that included 112 papers published between 1998 and 2008, Sharma and Kumar concluded that even ~40 years later from Franco Modigliani and Merton H. Miller "The cost of capital, corporation finance and the theory of investment" the focus with regards to EVA has not changed and is still mainly on the external, investor view of value creation for shareholder.

In their literature review they classified the analyzed papers according to themes, namely:

Table no. 1 EVA literature focus

Focus on	**Number of papers**	**% out of total**
Empirical evidences on EVA, Stock Return & firm performance	58	52%
EVA and market value added (MVA) Relationship	25	22%
Value based management	4	4%
EVA concept, limitations	12	11%
EVA and discounting techniques	3	3%
EVA and managerial performance	8	7%
Literature survey	2	2%
TOTAL	**112**	**100%**

Source: (Sharma & Kumar, 2010)

More than 70% of the studied papers focus on EVA and stock returns and market value. About 11% of the reviewed papers are dealing with the EVA concept and its limitations. This vast number of papers that deal with the external view of the performance evaluation shows that the EVA concept is accepted, used by organizations but has still a long way to go. About 80% of the studied papers focus on business performance from the external view of the capital market, as opposed to the view of internal performance measurement as being a tool for value creation and management at lower levels of the business organization. This external view of the capital, financial market of the literature reviewed is determined by the understanding that the capital to be invested comes with its costs, capital is not a free resource regardless of its nature as equity or borrowed funds/ debt.

Despite the advantages of EVA, the concept comes also with its pitfalls that need to be understood and taken into consideration. EVA is a short term performance measurement tool, start-ups and companies that are investing more in a certain period of time may show as EVA destructive and not as EVA constructive. By increasing the investments during a certain period EVA may show as not building shareholder value. This short-term view is not only EVA specific, it is a characteristic of all performance measurement tools where future results cannot be considered. EVA is not suitable for companies that are in an extensive development phase, the results in this are to be considered only on long term. Inflation can have a major influence over

EVA, especially in a high inflation economic environment. In cases of high inflation, the shareholder value added determined by EVA must be adjusted by the inflation rate to have a real value.

6. Conclusions

EVA is a relatively new and more comprehensive concept that measures the economic value that is created by business organizations for its shareholders. The big addition that EVA is bringing compared with the traditional economic measurements tools is the attention of cost of capital. The capital invested in any business organization comes with inherent costs associated. Regardless of form of invested capital equity or debt the one providing the funds is expecting an appropriate return. The ultimate goal of any business organization is to create value for its The EVA concept is adjusting the results of the business organization also with the cost of capital that comes along with some inherent investments risks generated by uncertainty.

EVA comes as a quantifiable expression of value generated by any business organization. Besides the "hard facts" of expressing the performance rendered by business organization EVA comes also with some fundamental requirements in business organizations like:

- Different view on management decisions not only at top management levels by considering the cost of capital
- EVA needs a change in approach towards value creation for shareholdersEVA can be the basis of a modern quantifiable motivation system

By integration with process based costing (PBC) EVA can be used to better align the business strategy with the efficiency monitoring of the business processes. Acquiring this knowledge about the variables underlying the creation of value, along with the implementation of a remuneration system based on EVA–PBC is able to generate a business environment that increases the motivations of human resources. In addition, it reconciles managerial initiatives with a willingness to collaborate and communicate to increase the EVA parameter. Obviously, this is a cultural process and, therefore, it tends to be slow, especially in SMEs.

From an operational perspective, the adoption of such an integrated model of performance measurement is an advanced management tool that entails control of production times, operational and capital costs; a progressive elimination of inefficient resource allocations, thanks to the visibility of the processes that are unable to create value; and the possibility to operate direct comparisons between the EVA produced by different business units, given that this performance measure neutralizes the differences in risk levels underling each strategic business unit. (Mocciaro Li Destri , et al., 2012, p. 13)

Although the EVA concept has its challenges to be understood, handled and implemented it has been shown that companies that use also EVA have had a real sustainable and solid development on the long run that increased the market value and business value. The major contribution to the development came from the change in mindset of the organization, change that cannot be directly determined yet.

7. References

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