

# Evaluation of Economic Value Added as an Effective Tool to Run the Value-Oriented Management System

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## Abstract

Shareholders always seek criteria based on which they could evaluate company's performance in order to value creation. A suitable criterion to evaluate performance should be related to shareholders on one hand and their ability to determine the value created for them on the other hand. Achieving such a criterion together with growth in management system is introduced based on value. There are several tools to run value added management system among which economic value added and market value added can be mentioned. Economic value added is a suggested value to evaluate performance of the commercial unit and an indicator for creating value derived from performance. Value added more than any other criteria is related to the real financial benefit and is considered as the best criteria to create shareholders' value,

**Keywords:** value based management, economic value added, market value added

## Introduction

Nowadays, managers of companies are faced a period in which new financial concepts represents a better reflection of value and profitability of companies. Accounting systems that have been used up to now were insufficient and are not promised against increasing challenges derived from capital market efficiency and owners. The increasing efficiency in capital market leads to more efficiency of allocating capital between companies. But allocating capital using present ineffective methods is impossible in the future. A new financial concept is the concept of value based management which better reflects invest-

ment opportunities, which necessitates its use. The concept of value based management is itself composed of other concepts, one of the most important of them is economic value added (EVA) (Garvey et al, 2000). Economic value added is not a strategy rather it is a way through which the level of efficiency of company performance is measured. Economic value added as one of the most important criteria for measuring the performance do not require more proof because in this way it determines a value for the company which is so near to the market value. Economic value added gives a good criterion for determining the level that company added to the value shareholders expected. Thus, managers emphasize the economic value added and can ensure that their operation is compatible with the operations related to maximizing shareholders' wealth. Economic value added includes economic profitability or operational net profit except capital expenses. If the result of this measurement is positive it can be judged that managing through current operations increase the company's value and if it is negative the company's operation leads to reduction of commercial unit value.

According to economic value added, creating value in a company depends on two factors:

1. How much is the company return from the applied investment?
2. How much does company spend in this applied investment?

The main point about economic value added is that the company can earn a return more than the cost of the capital of financial sources (Rahnamaye Roodposhti & Salehi, 2010).

## Value based management system

The Value based management system approach

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is a comprehensive framework for measuring and managing commercial affairs aimed to create long term value for shareholders (Ittner & Larcker, 2001). Value based management is a job philosophy and a management system for effective competition in global market based on its natural value, dignity and capability of every individual, especially employees, customers and sellers. Since value based management is a customer-oriented philosophy, the foundation of common basic values is founded. Under value based management method, every organizational member is awarded according to the value it creates. So people are led to value creation. Today, productive organizations and institutes try to implement value added management while adapting to new situations. (Dastgi & Izadnia, 2003). A comprehensive program of value based management includes the following components:

- Strategic planning
- Capital allocation
- Capital budgeting (investors management)
- Function measurement
- Adjusting managers and employees plans
- Adjusting internal relations of organization
- Adjusting external relations of organization (Izadnia, 2005).

According to value based management, the success of management in fulfilling the shareholders desires necessitates taking decisions that results in the creation of wealth for shareholders. In other words, the main emphasis of this system is on directing management activities, planning, organizing and supervising the organization operation toward value creation and identifying non-value-added activities in a way that over all, leads to increase in market value of company (Mohanty, 2006). Implementing value based management system requires measures to analyze and measure commercial unit. Economic value added is a pass to implement value based management system. In addition , adjusting internal and external relations is the main element of value based management system. Economic value added is a very effective relational tool that connects operational managers and superior managers and finally aligns capital market objectives with objectives of different sectors. In fact, economic value added is a favorable arm in service of value creation management (Dastgir & Izadi Nia, 2003).

## Theoretical foundation and literature review on economic value added

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Indicator of economic value added by Stern Stewart was created for stating challenges that companies face in measuring financial operation (Stewart, 1991). Stewart (1994) in a local study showed that economic value added from among other criteria of his age, the best criterion is creating wealth in shareholders which can be approximately 50% superior to accounting criteria (profit of each share, investment return and shareholders' salary return) explains shareholders' wealth changes. Also, in 1995, Stewart institute states "forget about the profit of each share, investment return and shareholders' salary return. Economic value added is something that controls the price of each share" (Stewart, 1995). Steven Stewart believes that economic value added is a motivator for the value of shareholders and reflects the changes of shareholders' values better than traditional accounting criteria of performance evaluation (Ferguson et al, 2005). Economic value added is praised in commercial and financial journals and accounting theorists also took it into account. In Fortune magazine about economic value added titles such as the hottest financial idea of the day and the real solution for value creation is mentioned as a new way for finding customer (Biddle et al, 1998).

Peter Drucker (1991), a famous thinker in management, believes that "economic value added is considered as one of measures of comprehensive productivity whose growing popularity reflects new information era" (Peter Drucker, 1991).

Balkouie and Fekrat (1994) found that performance evaluation criteria based on value added have less variability and also more continuity than other accounting criteria including profit and cash flow (Riahi Belkai & Fekrat, 1994).

Also, Hezberg, in 1995, after conducting studies whose information is extracted from Stern Stewart institute, concluded that evaluation model of remained profit (including economic value added) offers us a way that can effectively identify companies whose share is cheap. Because accounting profit is considered as a weak indicator for economic profit and inflation too causes the increase in gap and finally leads to improper calculation of economic value added. In order to decrease the difference, he suggests using adjusted economic value added (Hezberg, 1995).

Key believes that the popularity of Economic value added is for rejecting traditional financial lists and relevance of its inference. Maybe investors want comprehensive financial lists accessible to Economic value added rather than traditional financial lists, Because traditional financial lists have many biases. The range of these biases is from attempt to underestimating profit for paying less tax to overestimating it for financing of Lending institutions and the contrast between the managers' interest and owners' interest (Kee, 1998 ).

James Wallace (1998) shows that managers of companies who use Economic value added to evaluate company's performance, compared to companies' use of traditional methods to evaluate performance, are more motivated to increase shareholders' wealth (James Wallace). Harest and Hopkinz (2000) published a comparative study titled "profits, measurement, publication and its effects on share evaluation" which shows that economic value added is a special form of measurement model based on remaining profit (Hirst & Hopkins,2000).

Stowe (2002) in a book titled "analytical evaluation of investing in stock" states that economic value added is a commercial perception of remaining profit (Stowe, 2002).

Fernandez (2008) states that; the principle basis of evaluation using the economic value added pattern, is to identify the market value added to the capital used or deducted from it. In economic value added model, the company's value equals to the amount of investment in company (Booked value of debt and capital at time zero). Additionally, the current value of the price of economic value added that company expects is based on the average rate of adjusted capital (Fernandez, 2008).

## Definition of economic value added

Calculation of economic value added is done through the following formula that can be stated in the following two ways (Ismail, 2006)

1.  $EVA = ANOPAT - K \times \text{total capital}$
2.  $EVA = NOPAT - K \times \text{Total capital} + \text{AccAdj}$
3.  $EVA = \text{Accruals} \pm OCF - K \times \text{total capital} + \text{AccAdj}$

Which in formula 1:

ANOPAT= net profit Operation after adjusted tax  
K= capital cost

In formula 2:

NOPAT= net profit Operation after tax

AccAdj = accounting adjustment

In formula 3:

OCF= operational cash flow

## Functions of economic value added

While economic value added was first created by Stern Stewart to provide consulting services for companies who wanted to determine suitable service compensation levels for their managers, two broad cases of usage can be considered for it. Economic value added can be used in two internal and external ways.

Internal functions: managers use economic value added as a tool for facilitating decision making process. Analysts and investors also use economic value added to make decision for selling or buying shares. Economic value added can be a tool to control management. In such a way that it forces managers to perform as they are shareholders (owners) of companies. Also, economic value added can be used to recognize capabilities and functions of human resources to assess their performance (Lefkowitz, 1999).

Chew (1997) introduces an ownership plan based on economic value added. Proposed plan for the ownership of economic value added pays cash rewards to employees based on economic value added. If this plan is implemented aligned with common way of awarding employees in allocating the authority of buying shares to employees, instead of paying employees in cash, they can be given ownership interest (share or other securities) based on economic value added. According to Chew, theoretical framework of economic value added helps to praise employee contribution at different levels of management in maximizing the company's wealth. Also, economic value added through improving individual performance rather than general function prevents job accumulation. Finally, manager should aim at creating value and be responsible for improving its individual performance. A practical example in this case is John Clerico, the executive director of Praxair. He says; economic value added causes that our employees emphasize more on capital profitability and their attitude toward education is so as to ensure that expending capital for shareholders creates value and does not lead to capital annihilation (Chang,1997).

Famous thinker in management, Peter Drucker, discussed the internal function of economic value added. Drucker, in an article in Harvard Busi-

ness Review magazine, introduced economic value added as a criterion for measuring overall profitability whose growing popularity reflects the new requirements of the new era. For companies whose aim is to increase profitability by lack of concentration, economic value added is probably a reasonable basis for evaluating the performance and giving awards to employees who are given the authority, especially those who are responsible for making decision in expending the main capital of the company (Peter Drucker, 1991). Drucker effectively recognized that in a new trend, economic value added is used by the manager for management styles to increase company's functionality. Today, more than ever, these styles are promoted effectively by company's owners.

Today, more than before, these management styles are promoted effectively by owners. Because increasing the ability to buy and sell share by members of society and the investors' ability to transact, caused companies become more intended toward efficiency. Another way of analyzing internal activities of companies is called agency theory. This concept that managers do not work to maximize owners' profit is called agency theory that are companies' managers, agents and owners (shareholders) and authorities. Rogerson (1997) conducted an study about the owner-agent to state the relationship between shareholders and managers. Rogerson reported a unique allocation rule that forced managers to choose an effective level of investment and usually the profit created by this allocation rule is called "remaining profit or economic value added"; Rogerson states that economic value added facilitates the possibility of compliance of expense with income and made managers' assessment more reasonable based on company's performance. Over all internal usage of economic value added causes that those who work within company, act in the interests of business owners (Rogerson, 1997).

External uses: as a tool for investors, the implied goal of economic value added is appropriate pricing of securities of the company for general investment. Most of academic resources discusses about using economic value added as a tool for investment. For example one issue of Fortune magazine reports that economic value added not only changes the way managers direct companies, but also changes the pricing method by Wall Street (Tully, 1998). Fortune Magazine during past five years published articles in support of economic value added in which ranking 1000 top companies based on market value added are mentioned. One of the famous articles of

Fortune (1993), introduced value added as one of the hottest financial ideas of the day about whom discussion is getting hotter every day and stated that one of the most important features of economic value added is its strong relation with share return. Another issue of Fortune magazine reported that Stone Inborn, the manager of Goldman Sachs research institute published a report about its market share value based on economic value added (Lefkowitz, 1999). Inborn do not discuss about usual criterion of 500 S&P, P/E proportion, share profit return and similar cases. Rather, he predicted based on a single criterion which is economic value added. Speeches of Inborn employees word by word made real changes in share price individually and also in stock market that exactly were noticed by investors (Teitelbaum, 1997).

Economic value added by investors was also used by investors and many academic resources discuss about using Economic value added as an investment tool. For example, CPA magazine reports that many investors believe in economic profit analysis and use it to assess company's potential to understand share price in long terms (Economic value added). As Erber and their colleagues in Stern Stewart company states that economic value added is the real key of value creation. Economic value added is introduced as an effective scale to assess company's performance; A scale which is directly connected to share value more than any other scale. Economic value added is a framework for financial management and service compensation system that can be a director for decisions made in companies. Economic value added can affect organizational culture and upgrading job quality of organization personnel that finally leads to increase in shareholders wealth (Morise, 2001)

1. Economic value added principles are used to maximize market value added.
2. Put financial interests of employees and shareholders in a raw which leads to morale and motivation enhancement and provides an environment in which managers try more to create more value.
3. Deduct effects of methods that lead to traditional accounting deviation to measure operational profits after tax.
4. Increase market value added with a cautious growth.

### **Advantages of Economic value added**

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Economic value added is a fundamental indicator to measure the performance and to determine

the company's value that has several advantages, the most important of them, according to Mr. Stewart (1991) is as follows: (Mashaiekh, 1385)

1. Economic value added has close relation with the current net profit; Economic value added is compatible with the theory that states company value by choosing projects that only increases by current positive net profit.

2. Makes the Economic value added of company's senior managers responsible about criteria that are more under their control (like return rate and rate of capital expense) and uncontrollable criteria (like stock market value).

3. Economic value added is influenced by all decisions taken by managers like investment decisions, profit division, decisions about financial support and capital expense rate.

4. Economic value added as internal criterion for evaluation properly shows success of company's performance for adding value to shareholders investment.

5. Economic value added shows that company's value depends directly on the company's performance.

6. Economic value added is related to company's market value because the current value of the future Economic value added is the foundation for assessment and evaluation of company in the market.

7. Economic value added is a criterion that shows the real performance of company decreased or increased compared to its predicted performance.

8. Economic value added is a suitable criterion to determine objectives of performance measurement, strategy measurement, capital allocation, designing reward systems, increasing capital and pricing.

9. Economic value added as a measurement criterion for economic performance and prediction is compatible with other criteria of cash value added, shareholders' value added and cash flow return on investment.

10. Economic value added as a measurement criterion of performance is less distorted by accounting.

11. Economic value added is a suitable criterion for determining the managers' awards.

### Drawbacks of economic value added

Economic value added as a measurement criteria for company's performance has the following

pitfalls (Mashaiekh, 2006).

1. Calculating Economic value added including return rate and rate of capital investment which has many complexities.

2. Economic value added is usually calculated based on historical figures thus it can be misleading to some extent. In other words, without evaluation of long term investment decisions, analysis of Economic value added can have faulty implications.

3. Sometimes analysis of Economic value added is impossible. For example for companies which are newly launched or for investment companies analysis of Economic value added is not suitable.

4. In order to analyze Economic value added, identifying all sources used by company is necessary but since most of properties which are used in company are invisible assets, identifying and evaluating them is difficult.

5. Economic value added cannot be applied as a criterion to compare commercial company or units which are in different sizes. Although this shortcoming is resolved by standardizing Economic value added as one year is considered as base year and assume the capital of the first year equal to 100.

6. Adjustments that Stewart suggests to implement on operational net profit after tax breaks conservation principle and preserving the uniformity in implementing generally accepted accounting principles (GAAP) and prolongs implementing them and the process of data gathering to calculate the natural value (Azad, 2007).

7. Economic value added as the performance measurement criterion is less subject to distortion of accounting. Stewart in calculating Economic value added uses the booked value of shareholders' income that by doing this he faced criticisms of researchers such as Basidor et al. in a way that he suggests since changes in companies' capital occurs according to market rates, it is better to use market value of shareholders to infer. With regard to debts also the market value assumes market value equal to booked value of debts (Kavousi, 2006).

### Market value added

Market value added which was introduced to shareholders in 1990 by Stewart to assess value creation, is the result of difference market value of a company and its economic booked value and indicates the difference between the money that shareholders gain from selling their share compared to

the amount they invested (Ansari & Karimi, 2009). In fact, market value added occurs because market understands the future value created by company. Thus, market value added is defined as the current values of future Economic value added. To calculate Market value added the following relationships are used: (Brigham et al, 1999)

1) Market value added = market value of shareholders' income – the capital provided by shareholders

Market Value added = (number of shares provided by people \* price of each share) – booked value of shareholders income

2) Market value added = the current value of future EVA

The provided capital by usual shareholders including booked value of typical shareholders and capital equivalents. According to this criterion the shareholders wealth is maximized if the difference maximizes (Ansari & Karimi, 2009).

### The relationship between market value added and economic value added

Tec company's performance creates value for shareholders if the company's market value is more than the booked value of the capital used. In other words, companies that have profit as much as their capital cost do not have market value added, on the other hand companies that have profits more than their capital expense are encouraged by market, through increasing market value added. Therefore, economic value added as an internal criterion has external implications in creation or deduction of company's market value (ibid). There is a relationship between market value added and economic value added, though it is not direct. In such a way that if a company has a long history of negative economic value added probably market value added becomes negative and if the company has a long history of positive value added probably market value added also becomes positive. However, the price of each share that forms the main element of market value added calculations is more dependent on the future expected performance than previous performance. Thus, if a company has a long history of negative value added, it can have positive market value added too (though assuming that investors expect fundamental changes happens in future (Brigham et al, 1999). As mentioned above, economic value added creates market value added because the current values of the future EVAs are the

foundation for future evaluations of company in the market. If future economic value added is positive the company's share in market is sold evenly and if future EVAs is negative the company's share is sold with reduction. Economic value added is internal and external market value added for measuring the performance and determining the value of company. Thus, even if economic value added is an internal criterion for measuring the performance, it leads to creation of external criteria that determines market value (Keramati, 2007).

### Conclusions

In today's competitive market, creating value and wealth is one of the main objectives of each individual and investment institutes. They are following the subject to know which of the investment opportunities creates value more than other cases and their wealth increases.

Using suitable criteria to evaluate performance and share value of a company causes that the company's share do not intend towards real value. Financial and accounting experts have presented different criteria for evaluating activities and opportunities so far. One of the most important of these criteria is economic value added that can also help investors to choose investment portfolios with suitable return and also to direct managers in increasing profitability. Economic value added can be calculated at the level of subsidiary sectors and units of the commercial units. This criterion can respond to evaluation of commercial unit during the time periods. Particularly, one that produces value and wealth creation at the level of shareholders that with regard to reporting profit or loss and available accounting information and after doing necessary changes calculations it becomes possible.

### Recommendations

Regarding the conclusion draw from this study, the following recommendations can be pointed out:

1. Since economic value added is one of rather new economic criteria for evaluating the performance of companies, it is suggested companies calculate this criterion monthly and represent it in their information list. It is also suggested that economic value added is considered as a measurement criterion in financial lists and in companies gatherings to take an step towards more efficiency of Iran capital market.

2. Regarding the limitedness of capital resources in Iran and that none of the traditional criteria for measuring cost performance do not take into account the lost opportunities of investment, stock exchange organization must use EVA in evaluating companies' share along other criteria, because in its structure the cost of company's capital is taken into account. This way investors too by modeling the stock take into account this criterion in choosing the share.

3. Economic value added is one of the criteria that every year a thousand active companies in New York stock exchange are ranked according to it. Thus it is suggested that in stock exchange of Tehran and other cities of Iran, it is used in introducing top companies and this criteria is announced for almost fifty top companies.

4. Stock exchange organization forces companies accepted in Tehran Stock exchange like EPS, to announce periodical predictions of EVA as EVA announcements.

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