

Financial valuation of business. A new approach

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Abstract

This paper aims to investigate the use of the a method that is based on economic value added in the process of financial valuation of business, We will review methods of measuring external value creation, still we do an analysis on the economic value added from the main methods of calculation, followed by a study aimed at analyzing the advantages and disadvantages of using this method in the financial valuation of business, also trying to outline its limits.

Keywords: Economic value added; financial costs; capital; enterprise.

According to Glossary of Evaluation Terms of the UK Evaluation Society, evaluation is a in depth study, taking place at a particular time and are used in a systematic and analytical research recognized procedures to make a trial on the value of an enterprise(<http://www.evaluation.org.uk/resources/glossary.aspx>). Measuring value creation is achieved using simple instruments and static.

1. Extern measuring of value creation

Simplest tools include rates of market capitalization / net situation, MVA (Market Value Added) and return on shareholder investment.

- *Market capitalization / net situation* or *Market to Book Ratio* represents a first important indicator of value creation. It is defined as follows:

$$\frac{MC}{NS} = \frac{\text{Market capitalization}}{\text{Net situation}}$$

Above rate is equal to the ratio of market value of securities issued by the company and the book value of equity, registered as such in the balance sheet liability. It offers investors an assessment of the value (goodwill) clearance over time enterprise. Rate is greater than 1 if stock exchange value exceeds the aggregate amount of investment in the company after its creation. This indicator allows assessment of profitability achieved.

- *Market Value Added* or MVA

For a listed company, MVA is the sum of the value of market capitalization and net debt which reduces the carrying amount of economic activity and expressed by the undertaking in the amount of surplus capital. The two indicators for making an initial classification of firms in growth, with a higher CB / SN , MVA ratio, for which MVA is close to zero or even negative.

- *Total Shareholder Return* (TSR)

Total Shareholder Return is calculated based on value addition made and aggregate dividends received during the holding of securities. It is about the shareholder return on investment measured ex-post.

$$TSR = \frac{Dt(P_t - P_{t-1})}{P_{t-1}}$$

The measuring instruments of external value creation are interested in serving as a historical perspective essential for understanding future analysis and for monitoring the operation according to this criterion.

2. Economic Value Added

2.1. A measure of value creation

Economic value added is measured by the difference between production company and its foreign consumption (which come from third parties) and purchase of goods and services from outside or flows of such elements of the business, which is intermediate consumption (Pierre Fl., Besançon E, 2005).

Although derived from national accounts and the first few were likely macroeconomic usefulness is recognized by business managers they use in calculating the rates that allow, in particular, productivity assessment, tracing its development structure, distribution phenomena. This indicator serves the need for information of all partners and provides a ground for dialogue between them, especially in relation to issues of economic distribution of wealth produced. It is the source of accumulation of money that a company can use to pay direct and indirect participants in economic activity: employees, creditors, shareholders, business (Onofrei M., 2007).

Indicator created in the mid-eighties by Joel Stern and Benett Stewart, Economic Value Added (EVA) is a measure of surplus value produced by an enterprise in a period of time which may cover one or more years. It provides an objective measure of the supplement improved value. It has seen a remarkable boom in the late eighties of the twentieth century in the U.S. and mid-nineties due to worldwide publication of rankings of firms 'value creation' in economic journals in France and USA. Information value of this indicator increases when compared with the means used (Ensault B., Hoarau Ch., 2004).

Economic value added is a management tool that allows performance measurement of a company or investor. Starting from the relationship of it's calculation we can be obtain an expression of the market value of the company (Bucătaru D., 2006).

In its most basic form, EVA corresponds with the residual income. This notion is based on the idea that a company should generate a yield higher than that normally expected by the investor taking into account the risks assumed. Residual result is indeed the difference between the observed and the expected return of risk taking into account (Gervais M., 2005).

Observed yield corresponds to operating income before financial expenses, reduced by tax rate (income tax benefits that applied). Expected return, given risk, is normally due investors pay equity. This remuneration is the product of invested capital (own funds plus financial liabilities) and the opportunity cost of resources or weighted average cost of capital k :

EVA is expressed as:

$$EVA = OR - kCI,$$

with: - OR, the operating result before financial costs after tax, and

- CI, the amount of capital invested.

Dividing this equation by k to obtain: $\frac{EVA}{k} = \frac{OR}{k} - CI$.

States as is the calculation of net added value (NPV), when cash flow is constant in time and number of periods taken account is high.

Indeed,

$$OR(1+k)^{-1} + \dots + OR(1+k)^{-n} = OR \frac{1-(1+k)^{-n}}{k},$$

It is noted that tends $(1+k)^{-n}$ to 0 when n increases and results:

$$OR \frac{1-(1+k)^{-n}}{k} \rightarrow \frac{OR}{k}$$

The calculation assumes that the consequence of an investment, the result of operation is stabilized in its stationary regime. The projects are as profitable immediately and start-up periods are very small. When the EVA is not constant over time, NPV and EVA may conflict, NPV may be positive and negative EVA. Residual result is consistent with an annual indicator of the total market value of the company, because:

$$TMVo = Ci_0 + \sum_{t=1}^{\infty} \frac{EVA}{(1+k)^t}$$

TMVo is the total market value of the company during the period 0.



It enables better than NPV, distancing themselves from an internal entity. Every school takes aim for a waste product to meet. Outputs are calculated annually and is considered the main source of value creation: increasing operating income, capital reduction or reducing the opportunity cost of resources.

Weighted average cost of capital is the average total cost of the undertaking's future funding sources. It is obtained as:

$$K = ce[E/(E+D)] + cd[D/(E+D)],$$

with: - E, amount of equity,

D the sum of financial debt,

ce cost of equity and

cd cost of debt; it represents the minimum rate of return that shareholders have to ask the investment projects in that stock exchange value of the shares remains unchanged (project allow payment suppliers and provides rate of return required).

The cost of equity is calculated as follows:

$$Ce = Prr + Rp$$

where: - Prr is the pay risk rate. It corresponds to the public issued securities whose maturity is close to the duration of cash flows of the enterprise;

- Rp is price assumed of risk premium on equity.

Rp is calculated as follows:

$$Rp = Rpm \times \beta,$$

where: - Rpm is market risk premium (difference between the yield of the market and hoped to pay risk-free rate);

- β is a coefficient expressing more or less volatility of title in relation to the market (the additional risk taken by an investor who holds that title), $\beta > 1$ corresponds to a firm whose output fluctuations are amplified in relation to market, $\beta < 1$ expresses a situation in which changes are amortized in relation to the market. The coefficient β is usually estimated from a linear regression method of least squares yields the index of market and firm action in the last period. The cost to obtain such debt cd:

$$cd = (1-t) Nir,$$

where: - t is the tax rate on profits, because the financial costs allow a tax saving to be considered for calculating the cost of debt;



- Nir is the nominal interest rate debt .

The main adjustments are as follows:

- All costs whose effects are manifested over a long period (several years of accounting), as R & D expenditure, some advertising and training costs, are capitalized and then amortized over a period appropriate (in principle why that they generate benefits). The capital invested is thus increased by the net (with deduction of depreciation) of such capitalized costs, operating result is reduced payments and period of depreciation costs capitalized expenditure;
- Differences between accounting and tax rules can generate tax-deferred payments. Thus, the use of tax depreciation degressive results in late payment of tax, provision for future costs recorded in the accounts tax deductible may have a reversed effect. Changes in deferred taxes during the year is added to operating income, and deferred tax account balance plus the amount of capital invested (it increases the weight currently available funds). In such circumstances we will have a more consistent vision on value creation of business during the year;
- Provisions are often a source of manipulation. The current policy is to provide large provisions in growth times, in order to have reserves in times of need. To remove this, if there is an increase in reserves at a time, change is the added amount of operating income, and if there is a corresponding reduction in the amount of this variation is broken down. Account balance is added to capital reserves, because it corresponds to the mass of funds currently available;
- When a company redeems one another and paying a price exceeding the market value of all identifiable assets net of debt, this is normal since she bought the latter's goodwill. However, the driver will not be limited to the purchase price unless it all remain in balance. Correction is therefore not absorb the difference in the acquisition, to guide responsible to obtain value of goodwill and to avoid an impulsive purchase or excessively lenient assessment at that time;
- Equipment purchased by leasing, are reinstated in the balance sheet. Rents leases are restated financial expenses and depreciation, in the same way that assets acquired are treated as normal investments financed print a loan equivalent fictitious.

The EVA is a combination of incentive pay. Typically it is used two ways to pay:

- A bonus plan index. He is the driver pay as a salary and bonus commensurate with the EVA achieved. These bonuses are accumulated on a plane, and each year is paid a portion of the amount accumulated;
- A share purchase plan funded by enterprise.

EVA is primarily a tool that allows ex-post measure of the level of wealth created by the company for its shareholders. Its principle is to measure the difference between return on assets released from structure and the rate of return required on capital contributions needed to finance these assets. This difference can be considered creating a "net wealth". This analysis is not yet so recent. Alfred Marshall, in the late nineteenth century, had defined economic profit as "invested capital multiplied by the difference between capital invested and cost of capital". Also, the mid-twenty of the twentieth century, the Donaldson Brown, chief financial officer of General Motors said " management objective is not necessarily getting the best

return on invested capital but also provide a profit for each additional volume which exceed the cost of additional capital”.

2.2. Criticism EVA

Economic analysis based on the known value added height in the mid 1990s. Describe advantages and limitations of this tool allows to explain the situation:

Advantages:

EVA results in the creation of wealth in cash and not a percentage. Indeed, to maintain high levels of economic profitability should not reduced its average, and managers could waive some value-creating projects. EVA does not have such a drawback. It allows a more just measure of enterprise performance than indicators such as the stock market, which is based on matters for which management has the real power of decision, especially on capital and financial structure. Assessing performance in terms of shareholder value creation levers allow analysis of action to improve the outcome. This is possible by:

- minimizing the weighted average cost of capital. Debt costs less expensive than equity. Paying the suppliers is tax deductible, while shareholders pay is not. Debt interest rate is always lower their cost of funds, having claims require a lower risk premium than the shareholders because the company in difficulty, they have priority over the latter. Debt repayment deadlines prohibit excessive internalization of the equity available. Sought is relevant to increasing debt. One can try to reduce income volatility by reducing fixed costs, or by lowering the effective tax rate (use of the possibilities of deductibility, transfer price);
- seeking a better use of assets by investing in assets which yield compared with weighted average cost of capital is the best, abandon assets whose yield is insufficient and rethink specializations in business to increase income from invested capital consistently;
- reduction of capital assets and the appropriate amount to fund.

Moreover, high amounts of residual benefit provides better access to capital markets, both in terms of quantity and price, later the company will be able to develop several important projects. By using EVA is considered different sources of value creation and efficiency lies in the cost of the product (traditional levers) and in the balance. This finding allows the construction of a value tree. Rent is sufficient for monitoring the expression of each element of the tree by indicators.

Note that variable will get almost the same action if the rate (operating result after tax / own funds) should be used and decomposed as follows:

$$\frac{OR}{OF} = \frac{OR}{T} \times \frac{T}{TA} \times \frac{TA}{OF}$$

with: - OR operating result after tax,

- OF own funds,

- T turnover and
- TA total assets.

Lever on the profit margin (OR / T) are decreased costs or increasing turnover. Rates T / TA inform the possibility of obtaining turnover consuming less active. Rates TA / OF examines financing assets (use leverage to increase profitability).

2.3. Limits:

The cost of equity is difficult to determine. Normally, the calculation should be based on prospective data (to determine yield is hoped) into practice using past time series (especially calculating coefficient β), the assumption being that tomorrow will be just like yesterday: a sudden change of context (growth rate) is likely to question the relevance of financial structure defined on the basis of past data. In such circumstances, the use of EVA to know if the result is higher yield hoped for shareholders is problematic.

Market risk premium may be a consensus as the coefficient β , but in this case, it will compare the result with a subjective element that can be manipulated and / or unable to understand turbulence. Comparison of EVA with an objective indicator only has real meaning: it always starts by forecasting the market risk premium and the coefficient β . But back calculation remains relevant: it puts in correspondence with the result of a pay equity pay the risk-free rate and market risk premium are those of the period and the coefficient β on average at the last period. This calculation corresponds to a back control, in terms of ownership of action and its power is limited:

- uncertainty on the weighted average cost of capital have a significant impact on the measurement of EVA;
- reprocessing are complex and subject to a certain arbitrariness;
- use of EVA does not remedy the lack of strategic vision. To create value, you must be able to imagine innovative strategies;
- EVA is applied quite difficult in sectors where long-term investment and return on investment which is not expected before fifteen or twenty years. It is an instantaneous measure of value creation, the pointer is bad enough to accommodate activities that destroy wealth for many years at the beginning of their life. Several North American groups that use this approach developed a special strategy: they orient the best skills, manages the activities in drastic manner, and ensure their continued development through the redemption of innovative companies. Their success depends, not by ability to innovate, but the ability to maintain fluid resources and knowledge acquisition integration;
- internal quality performance evaluation using EVA prices remain a function of relevance assignment and key distribution;
- normally, subordinates have greater risk aversion than superiors or shareholders, because they have less room for maneuver than their superiors or fewer opportunities for

diversification of assets than shareholders. Any performance-related pay variable lead subordinate to bear some of the risk and cost respectively. The question is then whether the proposed incentive exceeds the cost that it is determined, as in the case of a negative situation, the system will not create any motivation. Incentive is based on the evolution rate scholar, who can be considered quite fluctuating, exciting and quite risky;

- EVA is based on the implicit assumption that there is an identity between value and value of enterprise ownership because shareholders take their own risks which may be provided in the contract (residual risks) created by enterprise rent can go only to the shareholder. However, as human capital, managers and employees bear some of these risks and, in general, all partners: the residual risk is also exposed to business decisions. In case of difficulty of the undertaking, guarantee private customers bear a loss. A management measure based solely on shareholder value is not known to the other partners bear residual risk.

On the theory shows(Charreaux G., Desbrières P., 1998 and Gervais M., 2005) that EVA is based on a traditional hypothesis in financial theory that all suppliers of inputs, except the shareholders, are paid at their opportunity cost (the minimum price acceptable to them, presumably the same as the factor in a competitive market). Accordingly, shareholders are the only partners related to surplus created (value set) of business, namely the difference between profitability and achieved the minimum acceptable. By refusing the obvious part of ideologically and drawing us in measuring the value of partnership is considered in a customer-supplier relationships, value created is the difference between the opportunity cost of the supplier (the minimum price that applies for this to take and track the transaction), and that the value obtained by each of them is the difference between the price explicitly (one resulting from the negotiation) and their opportunity cost. For customers, to pay less expensive is a valuable source for the supplier, this is getting at least a higher price than or equal to the source of hope value.

In this article we have defined and discussed the use of the a method that is based on economic value added in the process of financial valuation of business. In addition, we have considered the essence of value and a variety of approaches to the valuation of business . One can set about defining EVA in a variety of ways – such as the resources available to individuals or organizations to support the pursuit of goals.



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