EVA and correction of accountancy variables for determining the real financial productivity of a commercial organization

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Abstract
In order to estimate the success of companies it is of importance to take account of investments it has made, profit, profitability, etc. It is quite often though that the methods and ways of estimating the success of a company are inaccurate and this in a longer term brings about a number of problems when running a company. Thus, it is necessary that we look for alternative ways that in light of the existing circumstances and conditions present within the company would ensure an adequate estimation of company's financial achievements. EVA – Economic Value Added is one of the most remarkable measurements put into use in the 90s. The paper focuses on the ways of calculating EVA. It highlights the formula of calculating EVA suggested by Benet Stewart. The financial approach toward EVA evaluation is based on spread (difference of securities and currency exchange rates) – ROIC – WACC. This approach stems from the perception that the interest of the company's financial staff is the invested capital profitability relative indices and not the total size of operational profit after the NOPAT payment. Generally, EVA is the profit of shareholders, as the interest rate is discounted from it. Thus, it should not be surprising that EVA is correlated with investment capital as well as own capital. Similarly to usual profit, EVA can be compared to other accounting indicators. Ultimately, EVA can be viewed still as an indicator for evaluation of effectiveness of investments. This is why the comparison of different subdivisions should be carried out not only in terms of return and profit, but rather according to invested capital. When different subdivisions are being compared, we normally make use of the "standardized EVA", which calculates the economic profitability of a company. EVA has been viewed is an absolute measure and this is its main advantage. The paper focuses on one of the most significant issues, namely, corrections of accounting indicators. Accounting corrections – this is exactly what makes EVA different from the Rest of Income (RI). Its purpose is to convert RI indicators into EVA indicators.
Generally, the large number of corrections during preparation of accounting statements infers increase of additional costs. Some of the corrections can have such a negligible effect, that it can be ignored easily without affecting the quality of the statement. Computing EVA is an extremely demanding and time consuming task. On the contrary, the large number of corrections can be counterproductive and may distort the results. The corrections of the accounting indicators are based on certain assumptions and tend to be quite subjective, free in nature. When correcting investment capital one should pay a special attention to joint assets and one's own capital's accounting indicators and their corrections which should be presented in light of various conditions. Capitalization is a depiction of operational charges (current and all existing charges) in a company's capital. The paper touches upon the capitalization in view of different conditions and methods. Corrections of operational revenue follows the same rules

as corrections of accounting capital. Notably, the revenues and charges linked with assets correctional items are added to the profit. Namely, to NOPAT is added the postponed tax assets, as they are not linked with real spending of money resources.
Technological companies, which spend enormous resources on research and development, can significantly decrease and increase their profitability after considering NOPAT corrections. Everything depends on SPEC depreciation periods. Taking account of NOPAT corrections the operational charges capitalized when calculating invested capital as well as financial costs camouflaged as operational costs and change in dubious loan reserve are added to profit. Notably for the reporting period the allowances should be restored according to the evaluation of allowance rate changes. It should also be noted that Goodwill depreciation diminishes not only the accounting assets, but revenues also. Therefore, current depreciations of the goodwill should be added to operational profit, only in case if they are considered in the computations. . Economic profit includes only current liabilities according to taxes, that is from accrual method we should return to cash method. For this reason accounting profit should be corrected. Postponed tax charges are added to it, or postponed tax revenue is subtracted. Both of them can be viewed as difference between liabilities of postponed taxes and assets of postponed taxes, considering the items added to capital.

Keywords: EVA, accountancy, financial productivity, commercial organization

Profit, profitability and other traditional indicators of financial effectiveness involve numerate formal conditionality's, assumptions and frequently reveal limitations in terms of managing company's values.

In response to visible "pitfalls" of traditional indicators in the beginning of 90s of the previous century number of new measurements were developed. The most distinguished among them was and still is EVA – Economic Value Added, developed by a consultancy company "Stern Stewart".

Operational Approach

A basic formula suggested by Benet Stewart for computing EVA can be presented as follows:

EVA = NOPAT – WACC x Invested Capital (1)
For invested capital we use the amount of capital for the beginning of the evaluation period; NOPAT refers to operational profit after tax payments; and WACC is the mean weighted charges on capital. Special attention should be dedicated to Invested Capital variable. In the framework of EVA methodology invested capital refers to weighted size of total balance assets.

The basic invested capital (without adjustment) is computed as difference between total assets and non-interest bearing current liabilities.

IC= TA-NIBCLs

With TA – Total assets refer to total (whole) assets; NIBCLs – Non-Interest Bearing Current Liabilities.

Financial Approach

The financial approach toward EVA evaluation is based on spread (difference of securities and currency exchange rates) – ROIC – WACC.
EVA = (ROIC – WACC) x Invested Capital (2)
This formula is an elaborated version of operational approach.

EVA = NOPAT – WACC x Invested Capital = (3)

$$=[\frac{NOPAT}{\text{Invested Capital}} - \text{WACC}]\text{x Invested Capital} = (\text{ROIC} - \text{WACC}) \text{ x Invested Capital}$$

This approach stems from the perception that the interest of the company's financial staff is the invested capital profitability relative indices and not the total size of operational profit after the NOPAT payment.

Product WAVV x Invested capital is frequently referred to as Capital Charge. According to Stern Stewart average weighted charge on capital is based on own capital and market price of loan. However, this aspect is not paid the due respect at all times (1,2,3,4). In this case the EVA will be discounted according to WACC for company's cost evaluation.

It is more correct to use the accounting WACC, which is based on accounting structure. In this case, EVA refers to a company owners' economic profit and for cost evaluation purposes it should be weighted according to the weighted charges for own capital charges.

Relative EVA

Similarly to usual profit, EVA can be compared to other accounting indicators: return, invested capital, own capital, common assets, non-turn over (fixed) assets and other indicators similarly to other usual cases.

Generally, EVA is the profit of shareholders, as the interest rate is discounted from it. Thus, it should not be surprising that EVA is correlated with investment capital as well as own capital. This extremely interesting feature of EVA needs some further clarification. In the first place, professionals attempt to correlate with return. There is no contradiction in this. However, it is not perceived as the best option. Subdivisions of a company do enjoy diverse assets turn-over. Hence, EVA sales profitability does not provide ultimate response in terms of economic effectiveness of the subdivisions which are compared.

Ultimately, EVA can be viewed still as an indicator for evaluation of effectiveness of investments. This is why the comparison of different subdivisions should be carried out not only in terms of return and profit, but rather according to invested capital. For the comparison purposes relative indicator is the "standardized EVA", which basically is the ratio of EVA to investment capital. Its calculation is not difficult as invested capital is one of the components of EVA.

Standardized EVA

Using this indicator frequently requires comparison of different subdivisions of an organization, which is characterized with varying scales of operations and invested capital. EVA is an absolute measure and this is why relative effectiveness perception is made even more complicated. It is useless for comparison of the companies, which enjoy different levels of invested capital.

The relative indicator of a company's investment effectiveness is the standardized EVA, defined as investment profitability indicator. It can be obtained through dividing the EVA by invested capital at the beginning of evaluation period.

$$\text{Standardized EVA} = \frac{EVA}{\text{Invested Capital beginning of year}} \quad (4)$$

In most cases, this indicator is similar to accounting profitable rate excluding the cost of the capital. Standardized EVA can be exressed as:

$$\text{Std. EVA} = \frac{EVA}{\text{Invested Capital}} = \left[\frac{NOPAT}{\text{Invested Capital}} - \text{WACC}\right] \text{x Invested Capital}$$

$$= \text{ROIC}_{\text{NOPAT}} - \text{WACC} \quad (5)$$

This is the difference between the profitability (expressed as further operational cash flows divided by invested capital) and mean capital weighted value. Therefore, the standardized EVA is spread – ROIC-WACC. This variable is usually used with the competitors, to compare own investment with the investmens of other companies. In addition, the standardized EVA can also be used to identify the investment environment in the company's subdivisions.

Notably, the excessive profitability is significantly limited as compared with the possibilities of EVA.

As present (discounted) EVA exactly expresses the Net Present Value (NPV[1]) of the project, it can be assumed, that there is approximately the same correlation between the standardized EVA and Internal Rate of Return (IRR[2]). To clearify even more, the standardized EVA forecasts the True Ecxeess Return of the project (which is the difference of IRR and Cost of the Capital). However, this is only possible in specific cases of using the economic depreciation scheme. Other schemes of depreciation lead to rising or declining the return evaluated against the Internal Rate of Return through the standardized EVA. As economic depreciaton is not used in practice, it should not be expected, that EVA will define the economic return of a company or even a poject.
If EVA is an Economic return, the standardized EVA is Economic profitability. On the other hand, the relative variable is useless for the management purposes. Benet Stewart, the author of EVA, defined a vey useful notion of "Relativity Trap." Initially the EVA was developed as the absolute indicator, which can be regarded as the major advantage of EVA. Basically, the company should increase its absolute and not relative wealth. The typical mistake is to believe that it is desirable to get higher profitability for a company.

[1] NPV- Net Present Value
[2] IRR - Internal Rate of Return

Managers tend to ignore profitable projects in fear of decreasing the company's profitability. However, even the slight increase in profit, if it exceedes the capital charges, lead to the increase of the value of the company.

Consequently, the standardized EVA should be used only for comparison purposes and with cautioun. It would be beneficial for the companies to sometimes decrease the standardized EVA of some of their subdivisions at the same time inreasing the size of the capital (N.B: If standardized EVA is decreased while the size of the capital is unchanged, it is a bad indicator).

As suggested, the application of standardized EVA solves the problem with comparison. However, another question is raised regarding the evaluation of the EVA of the competitors. In this respect, we can only rely on rough calculations based on their quarterly and annual statements. Currently, the EVA is not included in the reportings. Althoug determining the EVA from the statements is not a very difficult task, it can not be completed without making assumptions. At any rate, for computing EVA for eompetitors, the basic information about them should be avialable.

The EVA does not provide ultimate information regarding the strategic effectiveness of the company. Although competitors might have lower EVA indicators, better strategic moves can warrant their growth and success. Simultaneously, they can abruptly increase their capitalization or achieve the leading position in terms of technological improvements or market position, which will inadvertently complicate the situation of a company to be evaluted. One of the main criteria in this regard is the customer's recognition.

Correction of Accounting Indicators

Accounting corrections – this is exactly what makes EVA different from the Rest of Income (RI)[3]. Its purpose is to convert RI indicators into EVA indicators.

The Stern Stewart Company considers more than 160 corrections in the accounting statements of its client companies, which implement and use EVA. Such a large amount of corrections are not required in practice. Normally, the number does not exceed 15 [5]. The major aim is the correct the most significant errors of those accounting indicators, which determine whether the EVA would be economic vs. accounting indicator. The number of corrections should not vary to extremes, rather their number should be relevant. 168 corrections in operational profits can divert us from the intended aim and do not yield any reasonable results.

Generally, the large number of corrections during preparation of accounting statements infers increase of additional costs. Some of the corrections can have such a negligible effect, that it can be ignored easily without affecting the quality of the statement. Computing EVA is an extremely demanding and time consuming task. On the contrary, the large number of corrections can be counterproductive and may distort the results. The corrections of the accounting indicators are

[3] RI – Rest of Income = RRR x Investment, RRR meaning the Required Rate of Return.

based on certain assumptions and tend to be quite subjective, free in nature.

One of the objectives of corrections is to avoid the most visible contradictions of the Charging Method, which are by all means very significant for analyzing the eligibility for loans as well as financial sustainability of a company. On the other hand, they prevent from investment profile analysis [3]. After applying corrections, economic assets and profit should revert back to economic cash-based framework.

Corrections can be grouped in two categories:

1 Bilateral action. Corrections in the operational profit structure, in terms of charges, simultaneously are reflected in the invested capital framework. For instance, charges on scientific, research, experimental – construction related works (SREC) are capitalized. Therefore, they are withdrawn/deducted from the profit which simultaneously increases invested capital
2 Unilateral action. This is used only with the operational profit or invested capital. Different types of income can be drawn from the operational profit, which on the other hand does not affect the investment capital framework.

Below are given some of the corrections in the framework of EVA. It should be noted, that the corrections do not relate with EVA indicators exclusively. They can be applied to determine corrected income, profitability, financial effectiveness and other indicators of company's financial conditions. However, the undermining principle remains the same – the major aim of applying corrections is to get trustworthy picture about the financial effectiveness of a company.

Corrections of Invested Capital

Invested capital is simply the amount of business invested capital. It can be computed using the assets or a right side of a statement, that is, the capital itself and respective liabilities. Even though both of the options are equal, the latter is considered easier. The options should be selected by considering the accessibility of relevant information. The corrections made by these two options are different (However, the articles of computing investment capital as well as the results are identical in both cases). We would consider both of the correction methods using the specific examples.

The starting point is the common assets or own accounting capital indicator. The following corrections may be implemented:

I. Allowances are evaluated using FIFO method (First In First Out – that is, first income, first in expenditure). This is the most acceptable option, as the allowance size will be reflected through the last purchasing price in the statement. The LIFO method (Last in First Out – that is last in income and first in expenditure) is not used in International Financial Reporting Standards (IFRS). In GAAP (General Accountant Acknowledged Principles). As the pace of harmonization process accelerates to comply with accounting international standards, it can be forecasted, that this method will be also rejected. If the statement still uses the LIPO method, in order to obtain economic values, it is necessary to correct the allowance

evaluation and to convert it to FIFO method by adding LIFOs allowances

II. All the charged allowances are returned, for instance, assignments on receivables. Regardless the fact, that the company lost the hope to return it, these receivables indicate the backflow of cash flows occurred in the past. Hence, the allowances decrease the size of real monetary investments. Because of this, they are reentered in the statements to restore the size of invested capital

III. Capitalization of the scientific, research, experimental and construction-related tasks (SREC). In accounting statements only part of investments are capitalized. A lot of capital articles, from economic perspective, are considered as costs. Namely, scientific, research, experimental and construction-related items. In EVA computations they are excluded from costs and are capitalized in the group of net capitalized intangible assets (NCI)

IV. Capitalization of advertisement charges. These charges are added to operational profit

V. Restoration of goodwill (intangible assets of the company like company's business reputation) and accumulated depreciation of long-term assets. In the initial version of EVA the restoration of goodwill depreciation was a requirement. Since 2001 the goodwill depreciation has been abolished. Currently, the goodwill is tested annually for depreciation. Its depreciation provokes the decrease of the profit as well as size of asset investment in business.

In the following passage will be offered a more in-depth analysis of the corrections in terms of content and significance.

Capitalizing operational costs, which do not yield profit in current period, but rather encourage growth in future (capitalizing costs that encourage growth). According to accounting rules, different costs falling in investment category must be included in costs of current period.

In modern environment, decision regarding the strategic investments are linked with: the serious investments in scientific, research, experimental or construction-related tasks; attracting customers through advertisements; price reductions; and even damping (selling goods on an artificially decreased price aiming to harm competitors). Accounting considers them as costs decreasing profit instantly. Consequently, a lot of managers do not express willingness to implement such investments, as they decrease profit and productivity of accounting. Undoubtedly, a lot of investors, owners, creditors and even managers understand the price of such investments, but it is impossible to measure it objectively by accounting indicators. More adequately, these investments can be approached as initiatives with the purpose of long-term profitability. Capitalizations of charges in EVA methodology allows for more adequate evaluation of the results of such investments.

The examples of productivity charges investments are charges on: scientific, research, experimental or construction-related tasks (SREC), marketing expenditures, advertisement expenditures, investments in human resources (financing education of staff by the company), staff learning, purchasing software. It is far more frequent to focus investments on scientific, research, experimental or

construction-related tasks (SREC). In addition, capitalization of charges are implemented due to business restructuring (restructuring charges). Restructuration should influence the increase of company's future cash flows. The only difference is that restructuring charges are included in one time (not recurrent) charges.

According to IFRS, restructuration is planned and controlled program of the management, taking into consideration important changes in directions of commercial occupation rules. According to its rules, restructuration charges, if they do not meet certain criteria, belong to profit and loss reporting. They are taken into consideration, when forming the allowances for the period of restructuring decisions.

Capitalization also presupposes inclusion of operational charges (that is, current and all the existing charges) in the capital. Current charges, therefore, are added to profit. And lastly, it is required to depreciate the capitalized operational items considering their economic life expectancy. Consequently, the profit decreases by the amount of depreciation of capitalized operational charges. Several questions are raised right away, which are extremely difficult to respond to. Which year should be considered as a starting point to implement capitalization of past operational charges? How can be depreciated? In any case, it would be necessary to implement simultaneous managerial accounting analysis in addition to accounting, which will serve as a framework for capitalization of every operational charge. It may become necessary to carry out reporting on SNEC, marketing charges, reserved amount of educational charges. This only makes sense when these charges are significantly large. But if they comprise the negligible percentage of total charges of the company, it is meaningless to implement such a demanding and time-consuming changes.

In addition, special charges should be capitalized only if this reflects solidly grounded decision. For instance, out of different charges on advertisement, most of them may have short term impact on a company's profit, which makes their capitalization unnecessary. Only large-scale advertisement campaigns and deposits on marketing research and strategies, which influence the customers for the longer period, can be regarded as investments. The rest of the charges are just incentives and for this reason they belong to the current charges. Generally, numerous things depend on business. If a business extensively uses marketing technologies, then the charges on marketing can undoubtedly be considered as investments. If the product determines the demand for it and marketing efforts have limited role, then marketing charges should be regarded as charges for the moment they were incurred.

In order to simplify the capitalization procedures, quite frequently only the charges of SNEC are considered. Later on this reserved amount is added to accounting value of the capital as an investment in SNEC. The depreciation of capitalization charges is approximated, taking into account the cycle of getting benefits from them in a specific field. These indicators are normally readily available. For example, if the large-scale marketing campaigns show their effects during 2-3 years period, then relevant capitalized charges should be totally depreciated during the same period. SNEC can show impact in some of the fields of 3-5 areas, while in other fields they might be used during decades. The effects maintenance period of the SNEC is

determined by the viability of a new product. In case of a computer industry, this period lasts maximum for 3-5 years.

Capitalization of financial charges camouflaged as operational charges (Separate financing from operating decisions)

Some of the accounting operational charges are indeed financial. First and foremost, operational leasing taxes should be regarded in this category. From the financial perspective, operational leasing is not different from capital, which is why operational leasing charges should be capitalized. We already discussed the relevant procedures to be completed. Operational leasing is viewed as a debt. Given value of leasing taxes is added to accounting capital, current charges of operational leasing are included in profit, and interest of leasing liabilities is discounted from the profit. This procedure should be applied to confirm that capital leasing is capitalized in the accounting statement. If not so, the given value of the capital leasing should be included in invested capital.

Eliminating accounting corrections and conditionalities, which decrease the accounting value of the capital in the presence of alterations in real invested capital (Eliminate Discretion or Gaming)

Different allowances and impairments/write-offs belong to these specific accounting procedures; namely, impairment (depreciation) of goodwill and long-term assets, uncollectible assignments, guaranteed refurbishment and service provision. Allowances are reflected in the assets in the form of counter statements, which decreases their size in accounting statement. For economic fairness, these allowances should be returned to invested capital. The same approach should be applied to the impairments. In case of goodwill depreciation (impairment) not only current but all the reserved impairment should be restored.

Benet Stewart, the founder of EVA Dimensions, introduces the notion of "Equity Equivalent Reserves". Every allowance decreases the size of assets of the company – they are discounted from invested capital. Stewart argues, that equity equivalents allow for obtaining total accounting size of the capital [4].

Equity equivalents consist of uncollectable, guaranteed liabilities, LIFO and other reserves used in assets. If recognized, they will incur charges decreasing the profit. However, this happens only in one statement period. Depreciation of these allowances decreases the real size of invested capital in the long term.

Professor Aswat Damodaran, from Stern Business School, New York University, highlights the necessity for correction of share redemption operations [1]. The essence is that, redemption of own shares by a company can decrease the size of own capital if market price of shares is significantly higher than their nominal price. For instance, if the multiplier P/B equals 5, then redemption of 5% of shares will cause reduction of capital by 25%. From economical perspective, the capital was only decreased by 5%.

Addition of LIFO Allowance

In those companies, which use LIFO reserve method, during EVA computations it is required to base the computation upon the real size

of invested capital, which reflect the allowances with restored values. For this purpose LIFO allowance should be restored. Those companies using IFRS, are not aware of this type of reserve, as according to FASS principles using LIFO method is not allowed. For comparison purposes, it would be beneficial to discuss each of them.
As already stated, LIFO indicates that allowances in the statement are evaluated by the first purchasing prices, which indicates that in case of increase in price the allowance value will decrease in the statement. Moreoever, it is best related to the COGS product return, obtained through the sales of the products, which by means of LIFO method evaluates the allowances according to prives by the end of the period.

If analyzed thoroughly, the LIFO method distorts the chronological flow of the operations. This is why in effecitveness evaluation this method is used only to determine discrepancies between the product price and material charges. On the contrary, the FIFO method is more accpetable, as it is more realistic.

Some of the companies use both methods, evaluating certain allowances according to FIFO method, and others according to LIFO method.

In fact LIFO-allowance is the characteristic of GAPP. For disclosure of LIFO allowance a guideline documet shold be used – SEC Regulation S-X Rule 5-02 (c)[4]. This manual requires the companies, using LIFO method, to clarify the excessive allowance values (obtained through LIFO method) in comparison to current or restored allowance values.

As for terminology instead of LIFO Reserve using LIFO Allowance is more approprieate, which is in fact used in financial reoirtings.

LIFO Allowance generally is expressed as a difference between the inventory size obtained from FIFO method and inventory size obtained from LIFO method.

LIFO allowance = INVENTORYFIFO – INVENTORYLIFO
LIFO-Allowance can also be the difference between the LIFO and evaluation according to average weighted value methods.

Generally the companies use FIFO method in everyday statements of allowances and then convert them to LIFO statements.

Allowances represent the counterstatement of reserve reporting. Moreoever, in internal statements the "record and report" or "report but does not record" approaches can be used. In the first case LIFO is obtained through calculations and allowance is recorded only in accounting statement.

Statement of Financial Position (excerpt)

	2011	2010
Inventories, less LIFO reserve (2011,$838; 2010, $718)	1400	1300

In the latter case, the following is recorded in registration forms:

Cost of goods sold

[4] If for reserves evaluation is used LIFO method, then compensating and current value of reserves exceeding LIFO reserve, if significant, is given in brackets or financial statement notes and comments prepared in accordance with IFRS or GAAP.

.....XXX Allowance to reduce FIFO inventory to LIFO basis (LIFO Reserve)…….XXX

Therefore, users of statements can easily shift from one method to another and differentiate between the effects of profit and allowance size.

In order to obtain FIFO-allowance size, the allowance size obtained through LIFO method should be added to LIFO-allowance. Profit, and more precisely, the cost of goods sold, COGS is corrected according to LIFO allowance corrections. In the following passage the reasons and procedures for this is provided. The cost of goods sold is commonly defined as:

COGS = Beginning Inventory + Purchases – Ending Inventory
Cost of Sold Goods according to LIFO method:
COGS = Beginning $Inventory_{LIFO}$ + Purchases – Ending $Inventory_{LIFO}$
Cos of Sold Goods according to FIFO method can be calculated as follows:
$COGS_{FIFO}$ = Beginning $Inventory_{LIFO}$ + Beginning LIFO Reserve + Purchases – (Ending $Inventory_{LIFO}$ + Ending LIFO Reserve)

The difference between them equals to:
$COGS_{LIFO}$ - $COGS_{FIFO}$ = - (Beginning LIFO Reserve - Ending LIFO Reserve)
Therefore the following corrections are required for EVA.
Corrections in statement:

+ LIFO RESERVE
In the statement of profit and loss (specifically in COGS):
LIFO RESERVE Beginning – LIFO RESERVE Ending = - Δ LIFO RESERVE
Companies not using GAAP method cannot benefit from LIFO-allowance other than it could be used for managing statements or EVA assignments.

Interpretation of LIFO-Allowance

LIFO-Allowance can provide additional significant information. If LIFO-allowance is increasing during certain period and there are no significant discrepancies in allowances, it indicates the increase of price of raw materials and other supplies. If the LIFO-allowance is decreased, it can be assumed, that the prices of raw materials has declined.

Eliminating marketable securities and unfinished construction from the capital

These items should be eliminated from the accounting capital to obtain the business invested capital size, because both the marketable securities[5] and unfinished constructions do not relate to obtaining operational profit. But this does not mean that any other nonoperational asset should be ignored.

[5] Marketable securities – Cash flows (more exactly, their equivalent) not essential for operations. In order to obtain interest from it, it belongs to short-term securities. If cash is stored without bringing any revenue, it infers negative values.

An issue with the cash flows remains unsolved, as quite a few could claim that they are not involved in operational tasks. Cash flows are neccesary for current calcutaions, as without them operations cannot be completed. For this reason, it is more acceptable to include cash flows in operations invested capital. Moreover, one compomising option is possible: to compute the acceptable rate of cash flows used in payments, which is necesary for operational payments, consider the remaining amount as temporarily free and thus eligible for discounting from the invested capital.

The most appropriate option is not to discount inactive assets (except for cash flows and unfinished construction) from the capital while computing EVA. Invested capital is the free capital, as even the title suggests. Cash flows and unfinished constructions are excluded from the list because they do not participate in operations. Quite frequently the company possesses other inactive assets, namely, allowances, unused space, unused facilities, etc.

Inactive assets should be revealed and represented in one line and then it is possible to compare them with EEVA. Inactive assets do not cover capital charges and are seen as destroyers of the cost. They reduce the size of EVA as they influence the capital by the size of the charges. If they are sold out by market price, this will cause increase of EVA by Idle AssetsXWACC size. It would be more beneficial to include these assets in operations and acquire the profit from it, thus covering the expenditure from the capital. Inactive assets should not be confused with excessive assets. These are the assets, which participate in operational tasks but in the long term do not cover the capital shortage. They negatively influence the cost and thus it is better to get rid of them. For instance, excessive rate of manufacturing reserves or receivables consume the capital in vain. For increased profitability, a company should optimize the management of these assets.

Generally, the correction indicators can be generalized to the term "withdrawal of inactive assets". Investment in financial assets and investment property belong to his group. Notably, these investments are not considered operational in relevant companies.

Matching Revenues and Costs

In the framework of this item unusual and special revenues and costs, as well as postponed assets and tax obligations, other postponed revenues and charges are deducted from the stored revenue.
Unusual loss is added or unusual revenue is subtracted from the capital, from which tax is deducted (net of tax). Stored unusual/special revenue is subtracted from accounting capital, and in contrast, stored unusual loss is added to accounting capital.

With reference to above-described, Benet Stewart states the following: "stored unusual loss after deduction of taxes and revenues should be added to capital. This will turn asset sales and devastations (selling the shares) from successful efforts to complete registration of the costs. According to economic model, the chunk of capital needed for generation of successful products and services and acquisitions, is unsuccessful investments. Reporting only the capital, which is linked to successful investments cause exaggeration of true rate of revenues, which in fact was implemented in risky business. Pecuniary benefits are obtained in those cases, when unusual loss (minus unusual revenue)

is restored and added to NOPAT after tax deduction, and unusual loss (minus unusual revenue) after tax deductions are added to capital" [4].

It is unquestionable, that stored loss should be restored in the framework of the capital, as it decreases the size of business investment. These are the historical assets stored as a result of the systematic loss of the company, which are not linked to operations. There are following positions with regard to the adding loss as well as deducting the cost of assets: They belong to unproductive assets or unsuccessful investments. If they are deducted from the capital, then investment analysis will become biased. Consequently, the payments will cover only successful investments, which will increase the investment effectiveness of the company.

Not everything is straightforward with the unusual revenue. To balance the depreciation of unusual loss, it is absolutely proper to apply the similar approach to unusual revenues. On the one hand, the business enjoyed less investment. Unusual revenues can be regarded as windfalls, but this does not justify ignoring the, during the investment analysis. At any rate, revenue is the profit obtained through different activities, including investment and financial activities. On the other hand, unusual revenue is a type of revenue reinvested into the business. This is why, it belongs to investment capital and subsequently, it cannot be deducted. Therefore, it follows, that it is only meaningful to focus only on unusual loss.

Tax Assets and Liabilities

Invested capital should be corrected according to accounting corrections on tax assets and liabilities. Tax assets should be written off the accounting capital, and in contrast – tax liabilities should be added. This is justified since the postponed assets and liabilities are not realized during the current period. Company gets cash and pays taxes without considering them. This is the result of accounting conditionality. They do not affect the economical capital.

Partnership guarantees

Invested Capital of partnerships and Joint Liability Company (JLC) should be added the liabilities of partnerships and participating parties of SPS on the bases of the own property of the participating individuals. Evaluating the cost of guarantees is not an easy task, as it contains a lot of uncertainties. It is unclear, when the guaranty is due (it is issued with indefinite time) and what amount is considered. The only clarity is that in case of loans the responsibility of the participants may emerge and increases simultaneously with the increase of financial leverages. The cost of guaranty is also defined by the risk factor and is fully dependent upon the personal property size of partnership JLC participants.

NOPAT Corrections

Corrections of operational revenue follows the same rules as corrections of accounting capital. Notably, the revenues and charges linked with assets correctional items are added to the profit. Namely, to NOPAT is added the postponed tax assets, as they are not linked with real spending of money resources. Moreover, so called tax shield effect is defined according to interest payments and reserve changes.

In cost reporting section allowance cost corrections (corrections in LIFO allowance) is taken into account. Thus, NOPAT payments should start from the scratch, taking every effect into consideration. In accounting NOPAT not all the necessary corrections are taken into account.

Addition of operational costs of capitalized investment nature during invested capital payments

First of all, to reclaim fairness current charges on SREC and other investment charges (on advertisement, education), which are capitalized during the invested capital payments, should be added to accounting operational revenues. The purpose of these charges is securing further development and growth of the company. However, every accumulated charge (on SREC, advertisement, education) should be depreciated. Depreciation rate depends on conditions of specific field and should reflect economic cycles of investment in SREC, advertisement, education, that is should cover the period, during which they bring economic profit to the company. Subsequently, depreciation size of accumulated operational charges is again deducted from operation profit. If depreciation size exceeds current charges, operational profit can even decrease.

Technological companies, which spend enormous resources on research and development, can significantly decrease and increase their profitability after considering given corrections. Everything depends on SPEC depreciation periods.

Example

A company produces the software support systems. Its total capital size equals to 500 million USD. Operational profit can be defined as 75 millions. The expenditures on SREC amounts to 250 million. The average age is 5 years. Therefor annual depreciation is 50 millions.

Accounting profitability of assets – 15 %, economic profitability – 12,5 %.

Financial costs camouflaged as operational costs

Costs of operational leasing are again added to operational revenue. However, interest of operational leasing should be deducted.

Change is added according to dubious uncollectibles (considering the sign)

As already stated, allowance for uncollectible belong to the category of accounting corrections, which decrease the accounting assets without changing the existing one. Allowances are the results of application of accrual method. They are reflected not only on assets, but also reports on revenue and loss, by decreasing revenue.

Below is an example of making accounting statements while applying uncollectibles to determine allowance.

Example:
A company sold goods for 50 thousand dollars by tax postponement. However, due to different obligations the buyer did not paid the debt.

The amount was considered as uncollectible and was transferred to allowances.

Selling good by credit:
Dr – Accounts Receivable– 50 thousand dollars
Cc – Finished goods – 50 thousand dollars.

Creating Allowances According to Uncollectibles:
Dr – Costs of Uncollectibles – 50 thousand dollars.
Cr – Allowance for uncollectibles – 50 thousand dollars.

The same according to OFRS and GAAP

Dr	Accounts Receveible	$ 50.000
Cr	Finished Goods	$ 50.000
Dr	Bad debt expense	$ 50.000
Cr	AAllowance for uncollectibles	$ 50.000

Notably for the reporting period the allowances should be restored according to the evaluation of allowance rate changes. If during the year the allowances increase, these changes should be added to operational profit. If the allowances decreased, then the allowance should be subtracted from the operational profit. This decrease indicates, that the allowances were reviewed and accounting profit restored. However, this is not only the result of accounting conditionality. It does not affect net profit at all. Therefore, economic periods from one period to another ignore the influence of allowance over the profit.

The same rules should be applied to uncollectible allowances as well as other types of allowances, which significantly affect revenue and capital.

Alteration in LIFO-Allowance

This requires the same approach, as other allowances and is used only when the resources are evaluated by LIFO method.

Adding goodwill depreciation to Revenue and Corrections According to Postponed Taxes

Goodwill depreciation diminishes not only the accounting assets, but revenues also. Therefore, current depreciations of the goodwill should be added to operational profit, only in case if they are considered in the computations, that is when computations are commenced with net profit. If computing starts from the return “zero”, then they are simply ignored.

Corrections according to postponed taxes

Economic profit includes only current liabilities according to taxes that is from accrual method we should return to cash method. For this reason accounting profit should be corrected. Postponed tax charges are added to it, or postponed tax revenue is subtracted. Both of them can be viewed as difference between liabilities of postponed taxes and assets of postponed taxes, considering the items added to capital.

Minority Shares

During computing EVA for parent company owners, minority share should be deducted from invested capital and operational profit. The minority share is the part of the capital belonging to shareholders.

According to concept of parent company, the main purpose of consolidated financial statement is to provide information relevant to the interest of controlling shareholders. The parent company controls all the assets and operations of subsidiaries. Minority shareholders do not control neither subsidiaries nor parent companies. They just enjoy the rights to claim shares of assets and revenues. From the parent-company concept perspective, the minority share is presented as liability or as a separate component of joint-stock.

In IFRS the minority share is represented as component of own capital

From the perspective of consolidation concept of parent company financial indicators, it is a requirement that all the subsidiaries are grouped together, with all their revenue, cost, asset and liabilities grouped together also. according to this concept, it is more logical that minority share is reported as part of shareholders capital. Presumably, the developers of IFRS were guided by this principle.

The following question might arise: Is it worthwhile to proportionally consolidate the subsidiaries? During the proportional consolidation only those assets are unified, in which parent-company has a share. Moreover, no minority share is developed. At a first glance, it can be assumed to be the perfect approach. However, the parent company enjoys the possibility to entail all assets of the companies. Therefore, it is not reasonable to ignore uncontrollable share as well as consolidated revenues and costs. Only the complete consolidation with indication of minority shares does provide relevant information to controlling shareholders as well as other users of financial statements.

In US GAAP minority shares are not included neither in own capital, nor liabilities. It is just represented as a separate line in the right side of the statement. Subsequently, in IFRS statements of revenues and costs, the net revenue includes the minority shares represented as a separate line. In US GAAP the net revenue is defined after subtraction of minority share (figure, 1).

US GAAP
Consolidated statement

Own capital	xxx
Minority share	xxx
Long-term liabilities	xxx
Current Liabilities	xxx

Consolidate Account Regarding profit and loss Regarding Profit and Loss

Profit before tax	xxx
Tax	xxx

Consolidate

IFRS
Consolidated statement.

Fixed capital	xxx
Undistributed profit	xxx
Minority shares	xxx
Capital total	xxx
Liabilities	xxx

Account

Profit after tax	xxx
Minority share	xxx
Annual net profit	xxx

Profit before tax	xxx
Income tax	xxx
Net income	xxx
Belonging:	
Company shareholders	xxx
Minority share	xxx

Figure 1: Minority share differences according to IFRS and US GAAP

Regardless all the above-mentioned, in American environment, majority of statements minority shares are kept in total and operational profits. Of course, minority shares are different in operational profit and the statements of revenues and loss aiming to determine the net profit. However, the computation of EVA should be relevant to only the controlling shareholders. It is worth to consider, that consolidated return, consolidated operational costs and even the consolidated revenue tax participate in the computations. For instance if minority share equals to 30% (in terms of capital size relative to minority share)m the the net operational revenue (NOPAT) should be reduced by the same size. Which means deduction of minority shares from operational profits of every daughter company. The outstanding problems, is that this type of information is unavailable in financial statements. It can be obtained only if the user will have accessibility to parent company's internal information.

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