The role of accounting in analyzing the company's performance

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At a company it is unimaginable to have a successful management without available, understandable and up-to-date information. An organization's performance must be measured and analyzed, based on adequate information.

Accounting, as one of the company's information subsystem, has the task to provide the required information to different internal or external stakeholders by financial statements. Analyzing the used methods, six groups of valuation methods can be defined, which try to measure the company's value: balance sheet oriented, income statement oriented, mixed oriented, cash flow oriented, value creation oriented and options oriented methods.

The aim of this research is to find out which performance indicators can be designed using financial statements' items and how we can organize the accounting department in order to meet the managers' information needs. In connection with this, the quality of the information included in financial statements is also an interesting question.

Keywords: performance measure, indicators, financial statement, accounting

1. Introduction

Performance is present in every part of people or company's life. Although past years' and centuries' companies also had their strategic goals and in some way measured the achieved performance, nowadays performance is more emphasized if we talk about the success of management. For successful strategy implementation, we need the evaluation of the company's performance. Strategies vary from company to company depending on the company's size, financial power, possibilities, market conditions and other circumstances. Required performance measures can also differ from company to company. It's all right, but if these measures differ from each other, the question rises, how can we compare different companies' achieve-

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ment? Applying international accounting standards (IFRS/IAS, GAAP) the differences between financial statements are minimized, but they still exist, as these regulations define only a framework for accounting.

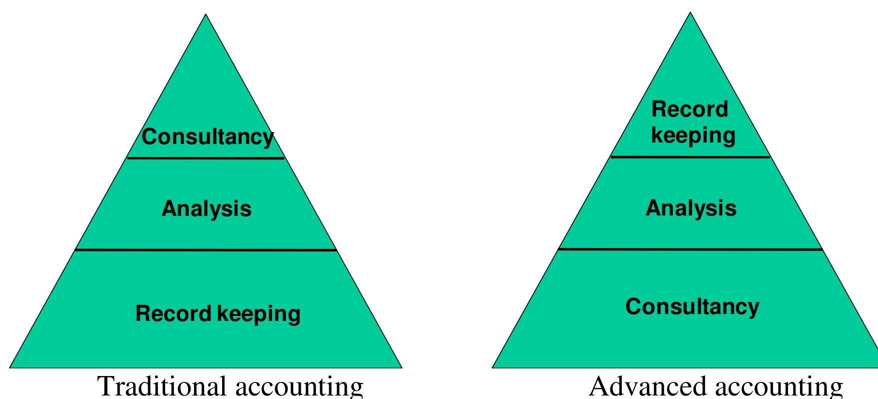
The aim of this research is to find out which performance indicators are suggested to be used by accounting literature. In order to get a practical review about this topic a case study was made at a small and a medium sized company. The aim, defined in abstract, that is to find out which performance indicators can be designed using financial statements' items, is not achieved. This research can be a starting point for other research activities with the aim to create a unique model for evaluating different companies' performance.

2. The role of accounting in analyzing company's performance

The basic part of company's information system is the accounting information subsystem. (Rac 2008) It collects, records, processes, analyzes and keeps data of business transactions, and as a final output, presents information in the form of financial statements or in other reporting forms. Based on accounting documents, which prove that business transactions did happen, every company must keep records, according to the law and international accounting standards.

Nowadays accounting must have a „modern" or "advanced" role, to provide consulting activities to the managers. (Figure 1.) At multinational and large companies this role of accounting is provided by controlling system. At small and medium sized companies this kind of controlling activities are not established. Of course the basic must be a record keeping activity, and then the analyzing activities based on the collected data, but accountants must accept this new role to be open for changes and new techniques in their accounting profession. Record keeping could be automated thanks to information technology's achievement, so accountants could have more time to analyze the information and to think about new possibilities and improvements. The first step of this improving process toward "modern" accounting is to estimate the current situation of accounting processes in the company. At the same time we must investigate the managers and the external stakeholders information needs, in order to find out what information must accounting function prepare, at which level of specification, in which form, how often and for which period of time. According to these requirements, we must create an optimal process of accounting activities by eliminating wastes and focusing only on those activities, which create value for the end-user (following the five lean-thinking principles: value, value stream, flow and pull, empowered people, perfection (Rac et al. 2009)). A good relationship between accounting and other business functions must be created, as we must consider the company, as a whole, where business functions are in active interactions.

Figure 1. Traditional and Advanced accounting



Source: own creation

It's true, that the output of accounting is the financial statement, which is based on financial data, but we cannot forget the importance of non-financial data as well. This non-financial data is significant, because it speaks about the other aspects of production or business processes, not just the financial dimension is considered. If a company wants every employee and maybe partners (customer, supplier) to take an active part in the organization's life, to think about the possible improvement opportunities, the information about the achieved and planned performances must be understandable and accessible for everyone inside and outside the company. Accounting must collect and organize the records in the way to be available at all time, in any form (financial, non-financial) and for every internal or external stakeholder, as it is required, of course according to professional and legal regulations.

Due to globalization there is a big interest to provide comparable financial reports, in order to get new investors and to be transparent in the international level. In order to meet this need, the International Accounting Standards Board defined and is defining International Accounting Standards (IAS 1 – IAS 41) and International Financial Reporting Standards (IFRS 1 – IFRS 8) which are professional accounting regulations with the aim to assure the harmonization of the financial reports at the international level. As don't exist two very same companies, financial standards define only main evaluation techniques, the list of possible methods to calculate the amortization, depreciation, and other accounting problems. Legal regulations also give some directions, how to keep the records in the national level, according to professional regulations. As companies have the freedom to choose between some possible methods, their decisions must be written down, and be publicized together with the financial reports, in the form of Notes to the financial statements.

We must define in our accounting policies, whether certain expenses should be capitalized or expensed. Costs expensed appear on the financial statement as a cost that was incurred that period. On the other hand, costs capitalized are amortized over multiple years. Most expenses are clearly either expensable or capitalisable, but some could be treated either way according to the preference of the organization. Depends on what option is used, the financial result will differ.

In order to provide all the necessary information, we must organize our accounting and controlling department in the way to collect the data of business transactions by cost-pools or by activity-pools, by products and services, by departments, in relation with the target, comparing planned and achieved quantities. We must collect and after that provide financial and non-financial data as well. Our bookkeeping is as much accurate, as more detailed data is recorded. Parallel to this, the data specification costs, so we must always make a cost/benefit analyze. If it is possible, we must try to automate the routine tasks, to achieve the advanced accounting, which role is to give a support and assistance to other organization's department.

3. Valuation methods

It is stated in the previous chapter that companies are different. Due to this fact the organization of accounting function can be also different. As a result the companies' financial statements present the information about the organization's financial position in similar way, but we must be careful by comparing this information, as we have to consider the relevant circumstances and accounting policies.

The authors of the paper have analyzed the accounting literature on performance measures and indicators of successful companies. The results are colorful.

The main literature on valuation methods was presented in 1986, by Rappaport A., in his book Creating shareholder value: The new standard for business performance. (Rappaport 1986). His book was revised and printed in 1998 with the title Creating shareholder value – A guide for managers and investors. (Rappaport 2002). He deals with shareholder values, with the different objectives of shareholders as well as with the measures. It's very important not to focus on the short time objectives, but on the value creation processes. He stated that accounting measures have drawbacks, and analyzers must be aware of these malfunctions. These are: different accounting methods could be used; the change in capital engaged is not taken into account, and the time's financial value is not considered by most of the accounting measures. (Rappaport 2002). In his book different performance measures are described and analyzed. By Rappaport the financial result included in income statement is the poorest, as investments and risks are not considered, includes accounting distortion, doesn't notify the value maximization and doesn't project the value changes. ROI and ROE takes into account the investments, but the risk is not considered, includes distortion and doesn't have the ability to project the value creation.

The residual income and EVA (economic value added) methods focus on investment and risk, but other aspects are also not included. The change of residual income and change of EVA deals with investments and risks, excludes accounting distortion and can show the value maximization. The SVA (shareholder value added) method is the most perfect, as gives positive answer all the required aspects. (Rappaport 2002)

Johnson L. and Soenen L. (Johnson et al. 2003) in their study „Indicators of Successful Companies" identify the factors which are important for companies to achieve the defined performance. By them, financial performance is measured by three methods: Sharpe's ratio, Jensen's alpha and Economic Value Added (hereinafter EVA). The Sharpe's ratio is defined as the rate of return on a particular stock in excess of the risk free rate divided by the standard deviation of the returns on that stock during a certain time period. Jensen's alpha is defined as the realized rate of return on a security, and it should be a linear function of the risk-free rate of return plus a risk premium that is a function of the security's systematic risk, plus a random term. The EVA is calculated as net operating profit after taxes minus weighted average cost of capital, multiplied with the capital employed. The EVA is actually the amount of money, which remains after all providers of capital have been compensated, it is the residual income. In connection to these methods, they defined 10 different indicators which have bigger or smaller influence on the performance. These indicators are: (1) book-to-market ratio, (2) total assets, (3) sustainable growth rate, (4) capital structure, (5) liquidity, (6) cash conversion cycle, (7) earnings volatility, (8) profitability, (9) research and development expenditure and (10) advertising expenditure.

Cho and Pucik (Cho et al. 2005) investigated the relationship between innovativeness, quality, growth, profitability and market value in their study. Their hypothesis is that the higher the quality and the innovativeness are, the higher the performance will be. By them performance is measured in three different ways: growth performance (growth rates of total assets, total revenues and market capitalization), profitability performance (return on assets, return on equity and return on investment) and market value performance (market-to-book ratio and Tobin's q ratio).

Höbarth L. (Höbarth 2006) examined a three dimensional approach to performance measures. He combined different field of a company's success. He takes into account three measures: market performance, profitability and cash flow performance. The market performance is measured by the current market value which refers to the increase or decrease of the price of a listed stock during one period of time. This measure can provide some information about the company's future perspective. The profitability performance is measured by the return on investment ratio and shows how efficiently the invested money of the shareholders was employed. The cash flow performance is calculated as shareholder cash flow, which is a proportion of the sum of all dividends paid out to the shareholders in relation to the total market value. As Johnson and Soenen did, Höbarth also defined potential indicators which influence the performance. His list of indicators are similar to Johnson's list,

the new indicators that are not included on Johnson's list of indicators are: capital expenditure, auditor's opinion, current ratio and quick ratio as forms of liquidity ratios, sales percentage change, EBIT margin, domestic long term issuer credit rating, domestic short term issuer credit rating and common stock rankings. These additional indicators take into account the qualitative aspect of a company's performance.

In the 1960s Edward Altman dealt with the problem of bankruptcy. Investigating different indicators, finally he defined the so called ZETA Model (Z = 1.2A+1.4B+3.3C+0.6D+1.0E), where A refers to the ratio of working capital and total assets, B is equal to retained earnings divided by total assets, C means the ratio earnings before interest and tax divided with total assets, D is market value of equity divided by total liabilities and E refers to the ratio of sales and total assets. The lower „Z", the more likely the company is going bankrupt within two years. (Horn 1997)

In Serbian literature Rodić J. (Rodić et al. 2007) also defines three aspects of measuring the company's performance, as follows: profitability position, property position and financial position. A company's profitability position could be defined by analyzing its financial result, the risk of achieving the result, the profit margin, the financial power and the return on capital invested. All these information can be got from the income statement. Analyzing the structure of assets, the structure of fix assets, the structure of current assets as well as the assets' efficiency (turnover ratio) a company's property situation can be presented. The financial position refers to the ratio of current and quick liquidity, the solvency, indebtedness, the competence of reproduction and the ability to save the real value of the capital. This information could be gotten from the balance sheet.

Another author from Serbia, Stevanović N. (Stevanović et al. 2006) investigating the measurement issues, defined three aspects of measuring performance: ratio of liquidity, ratio of solvency and ratio of profitability. All these ratios have different sub-ratio indicators.

Examining the different studies' results, the authors create six general groups of valuation methods as follows:

1. balance sheet oriented methods,
2. income statement oriented methods,
3. mixed oriented methods,
4. cash flow oriented methods,
5. value creation oriented methods and
6. options oriented methods.

By Balance sheet oriented methods a company's value is estimated based on the value of its assets (assets can be evaluated by book-value, adjusted book value, liquidation value, re-purchase value and substantial value). The basic statement which provide information for this kind of methods is of course, the balance sheet, specialized in order to meet the stakeholders' informational needs. The advantage of

these methods is their simplicity as they do not need special calculations or additional costs to get the needed data. The main drawback is that these methods provide static and historic data; the focus is on the past. For making future decisions balance sheet oriented methods are not significant, but their data can be used as a starting point for further analyzing processes.

Using the information that is included in the income statement dynamic data is gotten, so one of the drawbacks of balance sheet oriented methods is eliminated. The company's value is defined through its earnings, sales, costs, revenues and incomes. This information is not static as refers to a certain period of time, but like balance sheet oriented methods, these methods are also historical, thus the future is not analyzed. Based on the information of income statement positions, some trends could be recognized, but it does not mean the real estimation of future transactions. This would be only a forecast, based on past period's information, not considering the new potential circumstances.

As income statement oriented methods also have drawback like balance sheet oriented methods, the mixed oriented methods try to eliminate these drawbacks by combining the previous two methods. Simple measures exist here such as: return on capital employed, return on investment and earnings per share. These methods are often used by investment analysts. As these methods use a mix of balance sheet's and income statement's positions a complex result could be calculated, but the basic drawback, that is, the information historical characteristic is still presented, so using these methods we could get a real picture about the current situation of the company. As it was mentioned in the previous part of the paper, if different accounting policies are used, we must be careful in comparing the given information between different companies. Different evaluation methods could easily lead to distorted interpretation of the regularly collected and prepared information.

The fourth group of evaluation methods doesn't focus on the past, but emphasizes the future. This group can be named as cash flow oriented methods. They estimate the future cash flow and discount them at a discount rate, equivalent to the specific flows' risk. These methods show the net present value of all the future cash flows. The focus is on the future, the company's value is evaluated based on future assumptions. The main concept is that the value of a company is defined on how much cash flow is generated in the future and how much the present value of these cash flows is. These methods' drawback lies in the task to define the appropriate discount rate. Determining the discount rate forecasts must be used. Our aim must be to provide as objective information as it is possible, so we must be very careful considering all the relevant future circumstances by determining the discount rate.

Value creation oriented methods are the fifth group of valuation methods, defined by the authors of the paper. The main method which is placed to this group is the EVA, which is a new and little bit complicated method. The economic value added is the difference between capital employed and net operating profit multiplied with the weighted average cost of capital. It refers to the amount that remains after

the company's shareholders and all other providers of capital have been compensated. This new concept says, it's not enough to create a profit, but profit has to exceed a certain level to create value. Other value creation oriented methods are: market value added and total shareholder return.

The newest and most complicated methods are the option pricing methods. They are very complex, thus rarely used in practice. Because of this reason authors put them into a separate group. Option pricing methods try to estimate the value of a company by valuing future events, which will occur with a certain probability. These methods are similar to the discounted cash flow methods, but more complex, as not use only the discount rate.

Following this categorization, the former described methods from accounting literature on performance measures can be also put in these groups. Methods described by Johnson R and Soenen L. (Johnson et al. 2003) are value creation oriented methods. Cho and Pucik (Cho et al. 2005), Edward Altman (Horn 1997), Rodić J. (Rodić et al. 2007) as well as Stevanović N. (Stevanović et.al. 2006) define mixed oriented methods to measure a company's performance from different aspects. They combine balance sheet's and income statement's data. Höbarth L. (Höbarth 2006) combines three aspects of company's success, the market performance, the profitability and the cash flow performance. His measures could be categorized as mixed oriented and one measure is cash flow oriented.

4. The importance to evaluate a company

As performance is present at everyday life, the need to evaluate a company is also presented at every transaction. In earlier parts of the paper different performance evaluation methods were described and categorized based on accounting literature. To successful strategy implementation, different objectives must be achieved. A manager or shareholder could control the strategy implementation process by using different financial and non-financial performance measures.

The evaluation process is not important at strategy level only, but at operation level too. Beside for strategy creation, control and correction, the company's evaluation process could be important in other fields of activities also. One of the basic tasks is to define the goods' or services' price. We buy and/or sell goods and services at certain price. This price mostly depends on the demand and offer of the goods, but the country's economic-political situation is also influencing the level of price. Beside these factors, the price of goods depends on the company's value too, which actually refers to its goodwill, brand or market image. In everyday transactions customer always defines the highest price to pay, and the vendor the lowest price at which he is prepared to sell. Defining these lowest and highest prices they take into account all the available information in connection with the prices and

goods or services. To define the best price, top or middle managers must know the value of the company.

If we speak about a listed company, the importance of a company's valuation is more evident. A company's value must be known in order to compare the share's price on the stock market with the aim to make the best decision whether to sell, buy or hold the shares. The information for the public about these listed companies' operations is given by share's price. Potential investors would like to know the company's potential value creation power in the future, while for banks it is very important to know the company's value while accord a credit.

Different stakeholders require different information for their decision making. As financial statements for external stakeholders have fix, by international accounting standards and legal regulations defined form, external stakeholders have to combine the data in different ways according to their needs, but keeping in mind the potential differences in valuation the assets, obligations, capital, revenues and expenditures.

For internal stakeholders the form of financial reports is not defined, managers can create unique reports. Managers must know the organization's value to be able to create a real and useful strategic plan for a longer period of time. Based on strategic planning, a short-period decisions are must be made in order to define exactly what has to be done. It is essential to define clearly the strategic goals, as all other activities are derived from them. According to strategy, different reports could be prepared. Managers must evaluate the past performance regularly to analyze if all the strategic aims are realized. Of course if there is a difference between the planned and realized values, further analyzes are required. Information about the past and potential performances is important for the managers because of subjective reasons also. At almost every organization a managers' bonus depends on value that is created by them. This system of bonus can create problems in evaluation, as often managers at the end of the year distort some data in order to have nicer result. As company operates on "going concern" principle, first or last these corrections come to light (like well-known accounting scandals).

For different objectives, derived from strategy, different performance valuation methods, measures and indicators are useful. Every company must find a unique set of indicators which the best way meet its needs. But if we would like to compare and analyze different companies' performance, we must establish a unique evaluation model, which applied to different companies, would give a comparable result. In order to be able to set this kind of model, beside the accounting literature, companies performance measures have to be analyzed, taking into account all the circumstances which influence the company's activity.

5. Practical issues

As it was described before, accounting literature has many different issues related to the evaluation of the company's performance. The question is, whether these methods are used in Serbia by small and medium sized companies. A case study is made on this topic, involving a small and a medium company at Vojvodina.
The examined small company is a trading company; its profile is technical accessories for houses. By its parameters, according to the Law of accounting and auditing in Serbia, it is a small company (Zakon o računovodstvu i reviziji 2006). The average number of employees is 32, yearly revenues are 1.750.000 Eur, and total assets are 1.050.000 Eur. It was established in 1992, and nowadays has 5 stores in four cities in North Vojvodina. At the company the book-keeping as well as the analyzing function is being done by the same accountant. The top manager has no much knowledge about accounting, so accountant must prepare simple reports about the company's past performance. They use income statement oriented method, as the report includes only revenues and expenditures. These categories are grouped only by main groups of revenues and expenditures and shown by months. Beside this report monthly by profit centers are shown purchased and sold stock and in connection with this calculated and realized price margin. There are not any indicators as for liquidity, profitability, cash flow, some future trends, or others.

The medium sized company was established in 1993 as company for production, trade, transport, export and import. Its basic profile is production of two series of bicycles, low cost and high quality bicycles. As this is a seasonal product, company trades with fitness gyms and skies during winter time. According to Law of accounting and auditing, company is medium sized, as the average number of employees is 125, yearly revenues are 5.700.000 Eur, and total assets are 4.600.000 Eur. At the examined medium sized company the analyzing process is more serious then at the small sized company is. There exists an accounting department with employee to make analyzes, plans as well as to correct the plans. They also emphasize the positions of income statement, but use some data from the balance sheet as well. We can conclude that the studied medium sized company uses mixed oriented method. Their reports are divided into two parts: performance measures at company level and performance measures at level of profit centers. Of course all the information is considered monthly. At company level they analyze the planned and realized revenues, all by goods or products and by the criteria if domestic or foreign, the planned and realized expenditures by types of costs, the operation result after costs of material and goods sold, the operation result after all expenditures and the financial result before interest and after interest. At company level the information focuses on the expenditures and revenues as well as on the financial result.

At the level of profit centers the average monthly costs of the store are calculated, as well as the cost structure in percentages, the revenues by goods or products,

the realized price margin as a percent of total revenues, the net financial result of the center, the turning point of the business and the stock turnover ratio.

The difference between the two studied companies is in the information depth, which influences the power of analysis. As they are not listed companies with shares, they couldn't use performance measures like earnings per share and similar measures. Considering the past accounting activities of these companies, we can say, that they are improving its accounting function by focusing on analyzing process. This must be a never-ending process with continuous improvement. Based on theoretical issues and case study the further step of this research is to create a questionnaire for small and medium sized companies.

6. Conclusion

Every company is interested in creating value for customers and at the same time achieving its strategic goals. To control, if the defined aims are achieved or not, managers must measure the company's past performance, not forgetting to project the future circumstances. In globalization managers must be prepared to challenges and is desirable to react proactively. All this is possible if they use accurate, up-to-date and useful information.

Accounting could play main role in preparing such required information, if this function is well organized and the accountants are well educated. A continuous improvement as well as a continuous education for accountants is needed, always trying to find out a more efficient and effective methods. Book keeping must collect and organize the information by cost pools, activity cost pools, profit centers, cost centers, in order to be able to give important and useful information for making successful decisions. In accounting literature many studies were made regarding the issue of performance measures and the indicators of success. We have to analyze these thesis, the context and assumptions of these studies, as we have to implement the ideas in our specific circumstances. For different purposes of the company, different performance measures are appropriate. The most widely used measures are: profitability measures, revenues and expenditures structure, ROA, ROE, market-to-book ratio, and financial and liquidity ratios. As factors of success are almost at every company different, if we would like to compare the companies, we must create a relative measure or some relative measures, combining performance indicators with the company's size, age, industry and other key factors.

The evaluation must be done in order to find out which value drivers are creating value for customer and which presents only wastes. Of course our attention must focus on eliminating the wastes.

There doesn't exist a perfect performance measure without disadvantages. We must be aware of these disadvantages and try to combine these performance categories in order to finally get the most suitable performance measure model.

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