Szent István University

MEASURING SHAREHOLDER VALUE IN VALUE BASED MANAGEMENT

Theses of PhD dissertation

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INTRODUCTION

The 1980s saw a considerable change in the business environment of the companies all over the world. As a result of changing economic and market conditions – expansion of private capital, globalization of markets, increasing international competition and information revolution -, businesses today are facing new challenges. The privatization of the Hungarian companies was an important phase in the transformation of the political and economic system, and it meant that people could start taking advantage on the benefits provided by the market economy model. In order to survive and to develop, it was necessary to adapt to the demand of the market, as well as to have a renewable structure of production and technology, a sale promoting distribution network, a smooth logistic network, and the management system of owners and managers to hold all these together. From that time the question most frequently asked by Hungarian company managers has been what expectations the owners have. The answer to this question is not at all that simple, because it happened and still happens quite often that the owner having just gained his property has to learn how to act as an owner and what to expect from the management. The majority of the largest companies are directly or indirectly in the property of investors. The main aim of the financial investors is that the company in which they invested their capital would increase its own value and at the same time the wealth of the owners, and as the majority of professional investors are also in the property of financial investors, practically all companies have to meet the requirements of value creation. Consequently, the most current policies of strategic management are connected to shareholder value and to the methods *of increasing shareholder value*.

The question arising is what exactly we consider as value. Depending on the context, the word 'value' can have several meanings, however, when businessmen talk about value, more and more often they mean *shareholder value*[1] (*SHV)*, or they think of a similar value-based index of performance. The shareholder value is equal to the equity value of the company, which is the difference between the value of the company and the market value of its total debt. And the value of the company means all the earnings the company acquires throughout its long-term business activities, during its lifetime, and which is at the disposal of those who provide the resources for the company. Shareholder value creation basically means the creating an increase in value: the shareholders providing resources for the company expect a profit which exceeds the cost of capital (the expected profit of alternative investments), this is what increase in value means for them.

Therefore, the primary aim of business organizations is to satisfy customer demand and to increase shareholder value at the same time, for which analysts have reconsidered the methods used for the analysis of businesses, and adjusted them to the requirements of value creation. The book Creating Shareholder Value: The New Standard for Business Performance by Alfred Rappaport[2] was published in 1986, and it contains the theoretical basis of the shareholder value approach. Based on these principles, after the publication of the book, several other fully elaborated, although in their details different methods of Value Based Management have been published. *Value Based Management* is a management approach which has an influence on the whole operation of the company, where all decisions are made and carried out in pursuit of the increase in the value of the company. However, shareholder value can only be increased if we can define and measure what we want to increase.

[1] The term 'shareholder' literally means the owner of shares, but in fact it can be interpreted as the equivalent of owner. The reason for this is that the term originates from the United States, where it is the character of the capital market that the majority of companies are marketed on the stock exchange, the rate of closed companies beyond the stock exchange or of those which are operating in other forms is small, so generally the owner is referred to as 'shareholder'.

[2] Professor at Northwestern University and – as partner of Carl M. Noble Jr. – founder of Alcar Group, developer of the ATP! program package, which, among others, supports the Alcar for Windows financial planning and analysing software and the calculation of capital-cost.

Measuring, therefore, is of key importance for all businesses, and this is a fact which has been rightly formulated by famous researchers in the references. As Lord Kelvin[3] stated: "when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind." In other words "what we cannot measure, we do not really know." As expressed by Harrington[4]: "Measuring is of key importance. If you cannot measure it, you cannot control it. If you cannot control it, you cannot manage it. If you cannot manage it, you cannot improve it." "If you can't measure it, you can't manage it." The previous statement made by Robert S. Kaplan[5] and David P. Norton[6] has become a slogan of reference books on management since 1996. According to the definition of Altyn Clark, research-worker at Performance Center "with the help of measurement we can describe the gap between what we have now and what we want, and this offers us such choices which bring us closer to what we want."

There are numerous methods used for the analysis and evaluation of businesses in different evaluation circumstances all around the world. There is a kind of consensus in the references, according to which the only optional solution for measuring performance is to measure the creation of shareholder value; those companies which perform well will create more value for all interest groups (shareholders; creditors; company management; employees; clients and suppliers; social environment of the company), than those which perform poorly. There is no agreement, however, on which method should be used to measure value creation. It would be wrong to believe that a single measuring and analysing technique would be perfectly suitable to support all kinds of financial decisions. In reality, all methods can be useful for us, but not for all purposes. In many cases, methods are different even in terms of their fundamental assumptions, and as a consequence, they do not give the same answers regarding the performance and perspectives of the businesses. Thus the main question is whether we can select the method which supports the given purposes the best, and whether we have the adequate amount and quality of information to apply this method.

In the years before the 1990s, shareholder value was measured with the help of discounted cash flow models, primarily for the purpose of evaluating investments and acquisitions. In addition to this, modern companies today incorporate the shareholder value based indexes in *planning* and also in *performance measurement* over all business activities. The analysis of shareholder value creation, as a method, is used in the development of complex *strategic plans*, and it also contributes to the successful management of the *implementation*. Value Based Management is made complete when it is integrated in a *bonus system* which effectively aligns shareholder interests.

Focusing on shareholder value at macro-economic level can improve employment possibilities, as the distribution of the created value brings more earnings to spend into the economy. This can increase consumption, creating new possibilities to grow and more shareholder value for the companies. The cycle can be restarted by cumulative effects. The lower level of savings and investments is compensated by the increased return on invested capital arising from higher capital productivity, which altogether ensures greater financial prosperity and higher standard of living. Empirical researches prove that there is a strong relationship between the countries' macro-economic performance and the company management based on the principle of maximised shareholder value. With the globalisation of capital market, those countries where the economic system is not built on the maximisation of shareholder value and so investors can obtain less return, are more and more often facing scarcity of capital, which causes more and more fallback/ means they are falling more and more behind.

[3] Lord Kelvin (William Thomson, 1824-1907), English physicist, scientist and professor at Glasgow University. He is renowned, among others, for the introduction of the absolute temperature scale, which is independent from the quality of the material, and for the invention of the reflecting galvanometer, which was also used for laying cables under the Atlantic Ocean.

[4] Diana R. Harrington, financial professor at Babson College, the author of more than 30 studies and books.

[5] Robert S. Kaplan Professor at Harvard Business School, among others, father of Activity Based Costing (ABC) and one of the creators of the Balanced Scorecard (BSC) system.

[6] David P. Norton President of Balanced Scorecard Inc. and, beside Robert S. Kaplan, the other main creator of BSC.

By now, the concept of *shareholder value creation* has become generally accepted all over the world, and its related methods are now widely used in the United States, and are becoming more and more popular and accepted in Great Britain, in Continental Europe, in Australia and even in Japan. Although as a result of changing economic and marketing conditions, the companies operating in Hungary are also facing new challenges, there are only few innovative companies in our country which use methods focusing on shareholder value – and even at these companies only certain elements of it are applied instead of an overall introduction.

The above facts motivated me that, within the frames of the present dissertation, I examined the methods of measuring shareholder value, their possible uses and the applicability and application of Value Based Management in practice.

Aims of the research

The primary aim of this research is to show just how urgent and imperative it is that company management focus on the maximum increase of their shareholder value, and that all decisions in the company are made by examining the effects on this shareholder value. In order to achieve this aim, it is necessary to examine what part this value focusing approach has, among others, in strategic alternatives, acquisitions, projects, investment evaluation, measure of performance and incentives.

At the beginning and finishing of my work, my aims were the following:

- to give an overview of the Hungarian and international references related to the topic, to synthesize the knowledge presented by this literature, and to reveal any overlap or possible deficiencies,
- to evaluate and compare the different assessment and measurement methods, to define their advantages and disadvantages, and to identify the most suitable techniques to solve certain tasks and problems,
- to examine those case studies which can be found in written form, in relation to both international, and the scarcely available Hungarian resources,
- to survey and compare the current practices and typical solutions used by those companies which operate in Hungary and are also ranked among the bests on various toplists,
- to reveal the failures, difficulties and improvement possibilities in the Hungarian practice, and
- to build up a model by synthesizing the content of various international and Hungarian references, the case studies found in these resources and my practical experience.

Hypotheses of the research

In connection with my empirical researches, I set up the following hypotheses:

- In the current practice of the companies operating in Hungary and ranking high in various toplists, we can find, at least some parts if not the overall use of certain methods for the application of Value Based Management and the measurement of shareholder value.
- At the above-mentioned companies there is significant and statistically verifiable relationship between the fact of applying certain value based methods and the indicators of the criteria of being presented in different toplists.
- Among the businesses operating in Hungary, there are such innovative, leading companies where the measurement of shareholder value and the Value Based Management has been realized, at least in some particular areas, at such a high level that they can be the examples of best practice for other businesses.
- In the Hungarian practice, the standard spreadsheet software (Microsoft Excel) is used for the measurement of shareholder value and for the IT support of Value Based Management, with all its disadvantages. By further developing the spreadsheet software, its applicability in Value Based Management can be greatly improved.

MATERIAL AND METHOD

During the preparation of the dissertation, by revising the references, I tried to summarize and synthesize the results achieved up to the present. My research on the references is of exploratory and explanatory nature, firstly, it includes the examination of Value Based Management and the methods supporting it, and secondly, it aimed to overlook and assort the major value measuring methods which can be applied within the frames of Value Based Management, and to define the advantages, disadvantages and application possibilities of these methods.

My empirical researches carried out after the review of the references can be divided into three parts, such as:

- to collect information about the practices of the companies ranking high on various toplists by questionnaire survey,
- to set positive practical examples by preparing detailed case studies, and
- to develop a model to eliminate the disadvantages of the widely used spreadsheet software and to support Value Based Management.

The questionnaire survey included those companies operating in Hungary which were present in any of the following lists: Dun Bradstreet Top100 based on sales revenue; Ecostat Top100 based on own revenue; Dun&Bradstreet Top50 based on operating earnings; Dun&Bradstreet Top50 based on earnings before tax; Dun&Bradstreet Top50 based on equity; Dun&Bradstreet Top50 based on the number of employees. Altogether 159 companies received a questionnaire, which consisted of two bigger parts. The first part contained some general questions, which helped categorize the company, for example according to the industry they represent, their turnover, equity, etc., and the second part was designed to survey the application of some financial, controlling and management methods and tools at the company. The survey has been carried out in accordance with all existing regulations on data protection, that is all information of the voluntary data supply is used only for statistical purposes, and any third party may gain access to summarized data only, which cannot be used to identify the specific organization.

The research is of exploratory nature; its aim above all is not to test the hypotheses, but to survey the practices of the companies on different toplists in terms of the methods they apply for Value Based Management.
Sub-questions of the research:

- What methods are used by the examined companies to evaluate strategic alternatives, acquisitions, projects and investments, to measure performance and to measure as part of the bonus system?
- What are the application levels of the methods for measuring shareholder value and of each elements of the value maximizing management at the examined companies, and how long have they been applied?
- What support systems and software are used at the examined companies?
- Has the Balanced Scorecard system been applied at the examined companies to support the implementation of the strategy, and has it been fully integrated with Value Based Management?
- Is there any link between meeting the criteria of being presented on various toplists and the full or partial application of Value Based Management?
- Does the strength of the link change if at the application of Value Based Management we also consider how long it has been present in the lifetime of the given company?

When preparing the statistical analyses, I used the method of the ratio of distribution, and I examined the relationships with the help of correlation calculating on the basis of the data available from thirty companies. Because only a small number of questionnaires have been returned and could be processed, the research may not be suitable for drawing general conclusions, but it can mirror one slice of the world where we live in today.

In addition to the evaluation based on the questionnaire survey, I did further examinations (by using case studies as the method of examination) at those businesses where Value Based Management has been applied for several years at a highly professional level, if not as an overall solution, but at least in certain areas, and which, for the purpose of benchmarking, can provide best practice for other businesses. In relation to the above-written, I carried out six detailed case studies at the following company groups and companies:

- MOL Group,
- Tiszai Vegyi Kombinát Plc.,
- Wallis Group,
- Béres Group,
- Allianz Hungária Insurance Co., and
- Continental Temic Hungary Ltd.

In the course of data collection, I used publicly available information, contents of internet home-pages, annual reports and articles on the companies, as well as the internal documents, analyses and presentations provided by the companies. Besides, I made in-depth interviews with altogether nine experts in the autumn of 2004 and during the spring of 2005, and I used – in relation to TVK – my own practical experience of several years. Among the persons I interviewed there were controlling directors, controllers, a managing director and a risk manager, on the whole such people who took part in the establishment of Value Based Management, or if they didn't take part in its establishment, they have an important role in its present operation and coordination. After the interviews, the interviewed persons, without exception, have been at my disposal to give more details to the case studies by discussing the questions and issues emerging during the process by e-mail connection, which opportunity I was glad to take.

When preparing the case studies, I carried out my examinations on six main topics – using the structure of the above-mentioned questionnaire as a basis to start, also allowing the person interviewed to give his or her own opinion – and I explored how the following processes are managed at the given group or company:

- strategy development,
- evaluation of strategic alternatives and acquisition possibilities,
- evaluation of projects and investments,
- performance measurement,
- measuring value as part of the bonus system, and
- application of the Balanced Scorecard system.

By presenting the case studies, my primary aim was to highlight on the differences between the content of the references and the practice in Hungary by making comparisons between the surveyed systems.

As part of the dissertation, on the basis of the detailed case studies and questionnaire surveys, I evaluated the applied methods, and by comparing the practical implementations with the content of the references, I worded my conclusions, suggestions and the possibilities for future development.

After carrying out the questionnaire survey and preparing the detailed case studies, by synthesizing the Hungarian and international references, the Hungarian and international case studies found in this literature, my own case studies and the practical experiences I gained during my work, I developed a model with the purpose of eliminating the deficiencies of spreadsheet programs and supporting Value Based Management. The model is based on Microsoft Excel, programmed in Visual Basic, and called e-VALEX (**e**lectronic-**Val**uation Compl**ex**), which name refers to the feasibility of an electronic, easy-to-use, but at the same time overall and complex evaluation.

EVALUATION OF THE RESULTS

RESULTS, CONCLUSIONS AND SUGGESTIONS ON THE BASIS OF THE REVISION AND SYNTHESES OF THE REFERENCES

The aim to increase shareholder value as the basic principle of company management by now has become globally accepted, it is widely used in the United States, gaining popularity in Europe, Australia and even in Japan, in relation to the accumulation of private assets, the globalization of the competitive and capital market, and the financial liberalization. Empiric researches prove that there is a strong link between the countries' macro-economic performance (GDP per capita, productivity) and the company management based on the maximization of shareholder value. With the globalization of capital markets, those countries, where the returns on capital investments are low, because the economic system is not based on the maximisation of shareholder value, are facing scarcity of capital, which means that these countries are falling behind in the global competition.

In order to increase shareholder value, first it is necessary to develop the attitude of Value Based Management, which attitude allow the management to recognise that their goals and the goals of the shareholders are the same, and therefore they attempt to reach these goals by increasing the value of the company by a steady and acceptable rate. To introduce this attitude in everyday practice at both strategic and operative levels, a tool system is needed. The best tool system suitable to realize these purposes is *Value Based Management*. Value Based Management is an approach of the management which covers the whole operation of the company, where all decisions are made and carried out in the interest of maximizing the value of the company.

Before the1990s, shareholder value was measured with the help of discounted cash flow models, mainly for the purpose of evaluating investments and acquisitions. The basic shareholder value model has not changed since – it reflects how the rational participants estimate the value of an asset in the market economy, in other words, how they see the future cash flow rate modified by the risks. Today, however, in addition to the evaluation of acquisitions and investments, modern companies are developing new strategies in order to maximize the value of the company, and then these strategies are turned into short and long term goals in performance, expressed in key value drivers. They also determine the actions to be taken in the following approximately one year to reach these goals, and they develop action plans and budgets. They integrate the value based indexes in planning and in performance measurement over all business procedures, and by examining strategic value creation they contribute to the management of the successful implementation of the strategy. Value Based Management becomes complete with a payment and bonus system which align the interests of the management and the shareholders.

It is a fundamental statement that *shareholder value cannot exist without consumer value, that is a long-term positive cash flow assumes satisfied consumers*, but at the same time, satisfied consumers and the value provided to consumers do not automatically result in the increase of shareholder value. The way of increasing shareholder value is to provide consumers with a surplus value, which is created when the usefulness of the sold product (service), as judged by the consumer, exceeds the expenditures to obtain it.

In my dissertation I highlighted on the fact that a company which aims at creating and maximizing the shareholder value, not only serves the interests of its shareholders, but also satisfies the demands of all the other stakeholders (shareholders; creditors; the management of the company; the employees; clients and suppliers; the social environment of the company), whereas if this company cannot create shareholder value, this will have a negative effect on all stakeholders. (It will not be able to maintain jobs, it can offer less favourable conditions to its employees, and it will not be able to serve the consumers, to pay the taxes, to undertake charity, etc.). Companies have to operate competitively if they want to survive and serve the interests of all their stakeholders in the future. The company management focusing on the maximization of shareholder value must keep in mind that they cannot create lasting shareholder value by exploiting other stakeholders, as the damage done by bad reputation can overshadow any short-term benefits on the long run.

Furthermore, I have explained that the principles of Value Based Management do not oppose to the realization of non-financial goals, but the merge or integration of the two tendencies can be beneficial for the implementation. The final aim of a company is generally set in the form of financial goals (shareholder value, profit, returns, etc.), and this can be regarded as the basic element of Value Based Management. However, it has to be clear for the management how much this aim weighs compared to other goals, as a company cannot be managed exclusively on the basis of financial data. Generally speaking, a company must have two sets of goals: financial goals to motivate senior management, and non-financial goals to stimulate the performance of the whole organization, such as the goal of consumer satisfaction, satisfaction of the employees, etc.

It makes up an important part of Value Based Management that we explore the key *value drivers,* determine those areas in the operation of the company which have an effect on the process of value creation, and identify all such variables and basic working processes (strategic management decisions; factors of operation, financing and investments; effects of the economy, industry or the competitor) which affect the value of the company. Value drivers can be connected to the decisions made on operation, investments and financing, which creates a link between the value of the company and the decisions of the management. Thus any improvement in value drivers directly increases the value of the company.

I have pointed out in my dissertation that in order to increase value, the most important task of the company management is to measure the *intellectual capital,* to be able to manage this intellectual capital efficiently. In order to help create value from intellectual capital, that is to manage the conversion of intellectual capital to financial capital at a strategic level, as well as to overcome the difficulties in the implementation of the strategy, it is necessary to establish strategy-focused organisations. With the establishment and maintenance of strategy-focused organizations it can be achieved that the mission, vision and strategic aims of all business and non-profit organizations will be more than just formal manifestations. The establishment and maintenance of strategy-focused organizations help the organizations implement the strategy more efficiently and effectively through the use of the *Balanced Scorecard*, and it enables an overall and balanced approach to measure performance. I have also mentioned that other methods for measuring and managing intellectual property – such as the Tableau de Bord, the Intangible Assets Monitor, or Skandia Navigator – have elements which can be used to complement or improve the Balanced Scorecard.

Furthermore, I have highlighted on the benefits of the integrated use of the *Balanced Scorecard* and the *Value Based Management*. The Balanced Scorecard supports strategy creation by deriving the strategic goals, and by assigning actions to the goals, it helps implement the strategy. It also appoints the responsible persons and deadlines to the actions, which ensures accountability. BSC makes clear the relationship between causes and effects, and it determines that from the different aspects what goals, directly or indirectly related to strategic or financial performance, must be achieved in order to increase the top indicator of a business. By defining cause and effect relations and carrying out sensitivity tests, we can identify the value generators, which are part of the concept of the Value Based Management (too). By combining the value based indicators with the non-financial performance indicator of the Balanced Scorecard, the probability of achieving the financial goals can be significantly increased, and at the same time by applying the appropriate indicators in the financial aspect of the Balanced Scorecard, there is no risk of motivating the operators of the company to achieve such an indicator which does not reflect the real value.

I have found that benchmarking or the continuous level comparison, which aims at the establishment of an apprentice company, could be an effective way to support the introduction of the different methods for measuring shareholder value, introducing Value Based Management and applying it in practice. The correctly performed benchmarking makes it possible for the businesses to compare their activities and processes with the processes of those businesses which represent the best practice, and as a result, to develop and implement continuous development programs on those areas which need to be changed. (However, we must be prepared for the difficulty that not all partners selected as model-companies will be ready to share their practical experiences, as these matters are considered as trade secrets, because they carry the potential of competitive advantage.)

I have also highlighted on the fact that the aim of maximizing shareholder value can be effectively supported, if businesses develop and operate a *risk management* system in the company. This is necessary when the capital structure of the company changes, and beside the tangible capital elements (such as physical assets), more importance is given to the intangible capital elements (client capital, organizational capital, staff competence), which may bear higher investment risk. In the growing competition a company may only be competitive, if it identifies and evaluates the risks of those capital elements which determine the extent of the intangible capital.

It is a fundamental statement that *the shareholder value may only be maximized, if we can define and measure what we want to increase.*

Nowadays we may need to define the companies' shareholder value in many different situations – we can talk about a single evaluation in a transactional situation, or continuous evaluation. We can carry out continuous evaluation for the purpose of managing company value, maximizing shareholder value, evaluating different investment possibilities, or selecting from alternative investments. Single evaluation may be necessary in case of capital initiation, public issuance, selling of a company, acquisitions or merges.

For the measurement of shareholder value various methods are used in different evaluation situations all around the world. By studying the references dealing with the subject of methods for measuring value, we find a complex set of procedures, which techniques have been developed by different consultant companies and/or schools. There is limited information on the efficiency of the different methods, considering that it is in the financial interest of the developers of a given method to emphasize the successful results of their own research. All of them insist on that we should use their unique conception and the acronym of this unique conception, although their method greatly resembles to the measuring methods of their competitors, containing a great number of obvious or sometimes less noticeable overlaps, which makes it difficult for the users to select and apply the best method to support the achievement of a specific goal. At the same time, the procedures can be different in many ways: they calculate with different cash flow, there may be differences in the definition of the capital cost used for discount, or in terms of the applied indicators for earnings and assets.

For greater clarity, I divided the methods of value measurement into groups according to the following criteria:

- By their aspect of time: *single-period* or *multi-period measurements*.
- By their complexity: *index-based or complex methods*.
- By their novelty: *traditional accounting or modern economic value measurements*.
- By their focus on the content: *capital value or residual-income conceptions*.

In addition to determining the above groups, I have also revealed the overlaps between the major methods, and filtered out those methods which were totally or in the main parts identical, although presented by different names in the references.

In my dissertation I aimed at contributing to the clarification of the advantages, disadvantages and application possibilities of the different methods of shareholder value measurement, and comparing the different value measurement methods – including, more specifically, the accountancy measurements, the shareholder value analysis published by Rappaport (1986), the Economic Value Added technique described by Stewart (1991), the Cash Flow Return on Investment approach of the HOLT Value Associates and the Cash Value Added method by Ottosson – Weissenrieder (1996, a, b).

I have summarized the major problems of accountancy measurements with regards to the measurement of shareholder value:

- The empiric researches described in the references did not show any significant correlation between the traditional accounting indicators and the economic performance of the companies.
- The accounting indicators provide subsequent and delayed information.
- A large number of accounting data focuses primarily on the profit and loss statement, and pays little attention to the cash flow derived partly from the balance.
- The different evaluation procedures are mixed in accountancy; there are alternative accounting methods, which make their comparability impossible.
- Accountancy manages risks one-sidedly. In accordance with the principle of prudence, no earnings can be indicated if the financial realization of the sales revenue and revenue is uncertain, but all predictable risks and presumable losses must be accounted for in the form of value loss or making provisions for liabilities and charges.
- The traditional accounting indicators are not generally connected to the strategy of the company.
- The indicators generally appear at an aggregated level; therefore they are not suitable to judge the performance of the operative level.
- The accountancy measurements do not take into consideration the equity requirements and the time value of money.

The traditionally used accounting measurements cannot be applied successfully in the management, because of their above-listed deficiencies. If we want to judge the success of a strategy, company, business area or project by considering the accounting measurements only, we may make a mistake. It can easily happen that we may give preference to such areas which do not produce real value, while we fail to give enough chance to the real value-creating areas. The traditional indicators calculated from accountancy reports do not reflect reliably the extent of shareholder value, and it may have the harmful effect that decision makers do not interpret correctly the information gained from these indicators.

Traditional accountancy-based measurements are necessary to prepare external reports in order to comply with legal regulations, however, they were not designed for company evaluation, for conducting strategic plans or measuring performance – and they are not suitable for these purposes. Therefore, for measuring value, we must find a method which is better than the accounting measurements and which must have the following two, very important characteristics:

1. it must focus on the *cash flow* and not on the revenue derived by accountancy, and
2. it must consider that all costs are in relation with the invested capital.

The modern economic value measurement methods were designed to meet the above requirements, and their common feature is that by considering certain financial and economic aspects, they try to correct the distorting effect of accounting standards, and instead of the approach of accountancy which focuses on past performances, they represent a future oriented approach. However, the number of corrections must be considered, and these corrections should be made only where the values are significantly distorted. This is important because the additional cost generated by the corrections should not exceed the value of the additional information gained by these corrections, and because every person in the organization must understand how the given indicator was calculated. According to the references, most companies do not need more than 15 accounting modifications. According to the Hungarian Accountancy Act, the most important areas for correction are the activation, evaluation and value loss of intangible assets and physical assets, the valuation of stocks, the valuation of assets and liabilities registered in foreign exchange-currency, and the accounting for the provisions for expected liabilities.

In my dissertation I have stated that there is no single technique for measurement and analysis which would be perfectly suitable for the support of all kinds of financial decisions.

The *Economic Value Added* method, for example, can be successfully applied for the performance measurement of the whole company or certain parts of it, while the *Cash Flow Return on Invest-*

ment indicator is useful for evaluating the long-term resource-allocation of a company, the *Shareholder Value Analysis* makes connections between the key strategic and operating objectives, and the *Cash Value Added* method can be used for measuring performance by periodic calculation of the *Net Present Value* in relation to cash flow analysis. The SVA cannot be used well in the compensation system, while the EVA^{TM} can. The EVA^{TM}, however, is not that suitable for analysing value generators or the sensitivity of strategies, while this is the strength of the SVA. Thus the SVA method is perfectly suitable for comparing the different plans, strategies and projects in the planning process. From the above-mentioned methods, perhaps the EVA^{TM} is the most widespread – it is relatively simple to use, and this indicator can be easily interpreted by both external and internal stakeholders. Unlike any other methods before, the EVA^{TM} illustrates the most vividly the value destroying effect of the inefficiently used capital. The CFROI^{TM} cannot be applied for planning in the company, but it is a useful tool for investors to select shares – the CFROI^{TM} is suitable for measuring the returns on investments, but this tool is very much orientated to the past, its application involves many restrictions, and although it is suitable for calculating the returns, it cannot help evaluate the company.

The truth is that all methods can be useful for us, but not for the same purposes. In many cases methods are different even in their fundamental assumptions, and so they lead to different conclusions and statements with regards to the performance and perspectives of the companies. Therefore it is an important question whether we can choose the method which supports the realization of the given aim the best, and whether we have the right amount and quality of information to use this method.

RESULTS, CONCLUSIONS AND SUGGESTIONS ON THE BASIS OF EMPIRIC RESEARCHES

In my dissertation I have expressed that some of the companies in Hungary now begin to recognize the importance of maximizing shareholder value and the related conceptions. They are gaining more and more popularity among those companies which are mostly in foreign ownership, subsidiaries operating in Hungary, certain quoted companies, and among analysts and consultants, while the same cannot be said about small and medium businesses in Hungarian ownership. Nowadays there is still a contradiction between the principles included in mission statements and the companies' performance measuring systems, and even those companies which set the increase of shareholder value as their primary aim, often use accounting indicators as a tool for measuring value.

Evaluation of the questionnaire survey

After examining the data collected from *thirty of those companies* which are ranking high on various toplists, I have found that from the different value measuring tasks, performance measurement is used by the examined companies in the largest proportion (97%), and 90% of these companies also use the different indicators of performance measurement in the bonus system. Project and investment evaluation tasks are present at 87% of the companies, while 67% of them evaluate strategic alternatives, fusions and acquisitions.

By processing the information provided by those thirty companies, I have made the following observations and statements:

- All companies which evaluate strategic alternatives, fusions and acquisitions also use, without exception, some kind of discounted cash flow-based method, and 45% of these companies complete this with some kind of method based on the residual profit conception.
- The methods and indicators used for project and investment evaluation give a very even picture – only 7% of the companies surveyed use some indicators other than the Net Pre-

sent Value, the Internal Rate of Return, the Return on Investment, the payback period and the Profitability Index.

- Six of the most frequently used indicators for performance measurement are still – despite all their disadvantages – purely accounting indicators. Between 63% and 83% of the examined companies take into account in performance measurement such indicators as the Profit Before Tax, price income, Earnings Before Interest and Tax, Earnings Before Interest, Tax, Depreciation, Amortization, Return on Asset or the Return on Equity.
- Among the value based indicators used for performance measurement, the Economic Value Added indicator is the most widely used – at nearly half of the companies surveyed –, as well as its different partial indicators, such as the Return on Capital Employed and the Net Operating Profit After Tax.
- The most frequently used indicator in the bonus system, with an application rate of 43%, is the Earnings Before Interest, Tax, Depreciation, Amortization, which, although it belongs to the accounting-based indicators, still, by returning depreciation, it includes one of the most important corrections.
- Every fourth companies (27%) consider the sales revenue in the bonus system – one of the indicators which are the least related to shareholder value –, and the same rate applies for the Economic Value Added indicator – which shows the changing of value in a given period the most accurately.
- More than half of the companies surveyed use the Balanced Scorecard system at some levels, however, only every fifth of these companies integrate it with Value Based Management.
- By using correlation calculation no significant relationship can be shown between the criteria of being presented on the toplists and the overall or partial application of Value Based Management in the companies.
- The above-mentioned relationship becomes stronger if in the application of Value Based Management we also consider how long a certain factor has been present in the history of the company. The correlation calculation made within the group of the surveyed companies suggests the presence of a moderate relationship.

On the basis of the information provided by the thirty examined companies, I have found that that the accounting indicators still play an important part in measuring value in Hungary, and although some value measuring methods of the Value Based Management are now present in the life of the companies, their overall use has not yet been achieved.

Evaluation of the detailed case studies

In addition to the evaluation based on the questionnaire survey, through *detailed case studies* I have also presented the practice of those companies where Value Based Management has now been applied for several years at a highly professional level, although not as an overall solution only in some parts of their businesses, but which companies or groups could still provide best practice for other businesses.

By focusing on six main topics (developing strategy; strategic alternatives; evaluating acquisition possibilities; evaluating projects and investments; measuring performance; measuring values as part of the incentive bonus system; applying the Balanced Scorecard system), I have made examinations based on which I could present the practice of the following companies as positive examples: MOL Group, TVK Plc., Wallis Group, Béres Group, Allianz Hungária Insurance Co. and Continental Temic Hungary Ltd.

I have demonstrated with the example of the *MOL Group* how the application of the methods and tools can be achieved at a fully integrated level, and how they can be made acceptable for the stakeholders by introducing them in the bonus system. (In securing acceptance of the stakeholders, MOL considers the invitation of external consultants as the key factor of success, as people accept the words of external consultants much more readily than those said by the employees of the company.) The group employs the latest managing and controlling tools and methods, and as such they are among the leaders not only in Hungary, but also in Europe.

I have presented the Discounted Cash Flow-based system successfully used by MOL for the evaluation of projects and investments since 1997. Post-evaluations show that proponents are too optimistic in judging the positive effects of the projects, or in many cases they use such results as the basis of efficiency calculations which cannot be measured later. Consequently, it is an important task to revise the content of the proposals.

Furthermore, I have presented the multi-level Balance Scorecard system used in the MOL Group, which can be regarded as functioning, but needs further revision in order to improve the non-financial aspect including, more specifically, the aspect of learning. Besides, more possibilities for improvement are emerging from the cascading of the system to the level of individuals as a further development of the system already cascaded to the level of departments, which development is among the main aims of the company.

I presented the practice of Tiszai Vegyi Kombinát Plc. as a positive example of the evaluation of strategic alternatives, which practice was developed on the basis of the Shareholder Value methodology as described by Alfred Rappaport. By this development, TVK became one of the leading companies in the country, where the methodology of Shareholder Value was adapted to practice at a high level, and where for the best implementations of the data content and the forecasts, they contacted world leading expert, analyst and auditor companies, and they exploited the possibilities and advantages of computing and information technology. (In quantifying the strategic alternatives, I had an opportunity to take part in this process as a TVK employee.) A good example to show how suitable the method is for evaluating strategic alternatives, is that after three years of preparation, a strategic alternative was approved at TVK followed by such development work which, by its extent and influence, can only be compared to the foundation of the company, and, therefore, it can be regarded as a milestone not only in the life of the company, but also in the history of industry in Hungary. As a result of the investment, the company reached the economies of scale by which it can keep its leading position in the Central-European region, and strengthen its presence in the European Union.

With the example of the *Wallis Group* I have highlighted on the fact that in case of a group which includes a large number of (in the given example almost 70) companies, the effort to maximize shareholder value has an important role in managing the company and supporting its acquisition strategy. Wallis Group set the increase of shareholder value as its fundamental aim, and accordingly, it is continuously seeking new takeover opportunities, and in case of a favourable offer it sells these takeovers. The value creating approach dominates in making decisions on investments – they build Free Cash Flow-based models and determine shareholder value with the help of these models. The models are thoroughly elaborated, and great emphasis is laid on the preparation of raw data which are necessary to calculate the free cash flow and to determine the weighted average capital costs. In case of the projects, the same method is used for the evaluation of material items (such as a building of a new production line or showroom) as in case of the acquisitions.

The evaluation of the acquisitions is performed at a high level at the Wallis Group, however, it must be mentioned as a deficiency of the system that various accounting indicators are used in the performance measurement and in the bonuses, that is the shareholder value maximizing approach has not yet been put into practice in these areas. In order to increase shareholder value, it can be suggested that the methods for measuring shareholder value should be used in performance measurement, and at the same time, or in the next phase, the performance measurement and bonus system should be integrated.

With the example of *Continental Temic Hungary Ltd.,* I demonstrated that the increase of shareholder value is based on the continuous development projects, the integrated management system, and the balanced and steady development of technological competence and company culture, while the integration of the systems and the strategy-focused management is ensured by the Balanced Scorecard system. Continental Temic Hungary Ltd. can be recommended as a model-company, implementing the strategy with great care and expertise. Value Based Management has been integrated with the Balanced Scorecard system – like in case of the MOL Group, but with the difference that while the MOL Group uses a BSC cascaded to the level of departments, Continental Temic has realized the cascading to the level of the individuals. This individual BSC is the top solution of the system according to its creators (Kaplan – Norton, 1999), and its practical implementation, as realized at Continental Temic, is very rare not only in Hungary, but even in Europe.

I illustrated with the example of Continental Temic Hungary Ltd., how a company can operate successfully where decisions on the implementation or rejection of a strategic alternative, project or investment are made strictly on economic calculations, without considering any other aspects. The Free Cash Flow method is used for quantifying and evaluating the different strategic alternatives, while the Continental Value Contribution (CVC) indicator is used as top indicator for performance measurement, which indicator is basically identical with the EVA^{TM} indicator. The practice of Continental Temic Hungary Ltd. is a good example for the possible integration of performance measurement and the bonus system – one fundamental element of the senior management bonus system is a CVC indicator. A premium bank is used for all employees in the bonus system, with the help of which the great fluctuations in premiums can be filtered out, and their effect can be delayed while it is assured that they are in relation with the permanent increase of shareholder value.

In my dissertation I have presented the practice of the Béres Group as a positive example of Economic Value Added-based measurement. In order to determine the real value, they aim at an optimal number of corrections which have a significant effect on the value, and these corrections are made with great care. Between the companies within the group, with regards to both the result and the tied up capital, typical examples of corrections are those made in connection with shares, business or company value or borrowings within the group, while research and development costs and marketing costs can be mentioned as the main corrections within the group. (The EVA^{TM} system and the integrated application of the individual performance measurement have already been tried in test operation, but there may be further corrections and developments in this area.)

I have also demonstrated in my dissertation how the new performance measurement system can be implemented in a company operating in Hungary on the expectations of the parent company. The Underlying Operating Performance (UOP) method, which embodies the operative performance measurement principles, was introduced at *Allianz Hungária Insurance Co.* on the expectations of the parent company, and the final product of this method is the primary indicator of performance measurement the Economic Value Added indicator. The EVA^{TM} is also present in the bonus system – as the most important bonus criteria for senior and department managers When examining the practice of Allianz Hungária Insurance Co., we can realize that in the calculation of the EVA^{TM} there are special features which are characteristic of the activity of the given company – at Allianz Hungária Insurance Co. in order to make the EVA^{TM} more accurate, the typical features and specialities of the insurance activity are also considered. They are calculating with the effects of creation of provisions regulated by law, the effects of the so-called still provisions, with the UOP guaranty capital necessary for the operation (Risk Adjusted Capital, RAC) with its elements referring to risks, but they also perform the result normalization of the UOP in order to balance volatility.

Table 1 contains the case studies performed at the six companies and company groups.

Table 1: Summary of the case studies

		MOL Group	**TVK Plc.**	**Wallis Group**	**Continental Temic Hungary Ltd.**	**Béres Group**	**Allianz Hungária Insurance Co.**
Initiator of the shareholder value focused operation		Foreign owner	Senior management	Senior management	Senior management	Senior management	Foreign owners
Content features	Strategic evaluations	Discounted FCF	Discounted FCF	Discounted FCF	Discounted FCF	Discounted FCF	No such task
	Projects and investment evaluation	Discounted FCF	Discounted FCF	Discounted FCF	Discounted FCF	Discounted FCF	No such task
	Cost of capital calculation	Sophisticated((WACC)	Sophisticated (WACC)	Sophisticated (WACC)	Sophisticated (WACC)	Not sophisticated	Sophisticated (WACC)
	Performance measurement	EVA™ based KPI system	EVA™ based KPI system	KPI system	EVA™ based (CVC) KPI system	EVA™ based KPI system	EVA™ based (UOP) KPI system
	Accounting correction	Not performed	Not performed	Partly performed	Not performed	Performed in optimal number	Performed in optimal number
	Bonus system	EVA™ based	EVA™ based	Accounting based (Pl.: PBT stb.)	EVA™ (CVC) based	EVA™ based (test phase)	EVA™ (UOP) based
	Long term incentive	Bonus bank	Bonus bank	Senior mngm property acquisition	Bonus bank	Bonus bank	Bonus bank
	BSC	Cascaded to the level of departments	Cascaded to the level of departments	Not used	Cascaded to the level of individuals	Not used	Company level
	BSC and VBM integration	Realized	Realized	Not realized	Realized	Not realized	Not realized
	IT support	Integrated system (SAP)	Integrated system (BPCS) + ALCAR	Integrated system (TM1) + MS Excel	Integrated system (SAP) + MS Excel	Integrated system (TM1) + MS Excel	Integrated system (SAP) + MS Excel
Possible areas of best practice		System integration; Project evaluation; WACC calculation	Evaluation of strategic alternatives; Application of specific software	Acquisition evaluation; WACC calculation	Absolute value based approach; Strategy creating; BSC on level of individuals	EVA™ based performance measurement with optimal corrections	EVA™ based performance measurement with industry - specific corrections
Main direction of development		Development the non-financial aspects of the BSC; Cascading BSC to lower levels	Enhancing integration with parent company	Integrating the bonus system in the value based operation	Revision of accuracy of raw accountancy data in performance measurement	Increasing WACC calculation accuracy	Cascading BSC to lower levels

Resource: Own survey

Some general observations can be made from the case studies, and some critical factors of success can be formulated, which can be found in some form in all of the surveyed companies, which use the methodology successfully. The critical factors of success can be determined as the following:

- The owner's commitment to Value Based Management,
- Commitment and expertise of the senior management,
- The expert use of the well-established methods widely used in the practice of the developed countries in company management and value measurement (Discounted Free Cash Flow, Economic Value Added, Weighted Average Cost of Capital, Key Value Drivers, Balanced Scorecard),
- Communicating the system in the organization and securing acceptance of the company employees,
- Developing a long term bonus system and integrating it in the value based operation,
- Providing IT support.

On the basis of the presented examples, we can say that there are weighty reasons to follow the shareholder value conception and apply the Value Based Management even in a less developed capital market, as the method can be successful not only if it used by quoted companies and if the capital market continuously provides picture of the company's judgement. With the help of the case studies I managed to present the practice of such companies where the Value Based Management has been used for several years at a high level, if not as an overall solution, but in certain areas, and they can provide best practice for other companies for the purpose of benchmarking.

After studying thirty of those companies which are ranking high in the various toplists and preparing case studies on six companies and company groups, I have come to the conclusion that although numerous companies in Hungary are now using the shareholder value maximizing management methods, apart from a few exceptions, this management system has not been extended to all levels of corporate hierarchy, as it focuses almost exclusively on senior management, and it has not been overall implemented, but applied only in certain areas. Therefore, it is recommended that the companies *vertically expand* their operation based on these shareholder value maximizing principles, and *enhance integrity*, so that these principles can be used not only for some specific tasks, but in all areas (strategy creation, strategic alternatives, evaluation of acquisition possibilities, project and investment evaluation, performance measurement, value measurement as part of the bonus system, application of the Balanced Scorecard).

Model-building

During my examinations and my former work experience I had to realize, that for the purpose measuring shareholder value, companies use *spreadsheet programs* (Microsoft Excel) almost exclusively, with all their *disadvantages* (models which are hard to overview, high possibility of making mistakes, a growing number of files, etc.). This negative experience motivated me in making a model which can be ideal for company managers and may be generally used for the measurement of shareholder value. The model, which was developed in order to eliminate the discrepancies of spreadsheet programs, is based on Microsoft Excel and supported by Visual Basic programming (e-VALEX), is very easy to use, and has various in-built options (scenario manager, control panel, time period selection, parameter possibilities for financing and investment opportunities, consolidator function, residual value calculating options, etc.), which help perform all shareholder value measurement tasks.

The program allows the simultaneous application of various value measurement methods, of which the user can always select the one which is the most suitable for solving the given value measurement task. Those reports which are in 100% relationship with each other may be automatically generated, without any logical mistake, so during the modelling only the voluntarily detailed input data and its quality had to be focused on. In compliance with the different value measurement methods, the model includes – while providing an easy-to-use monitoring system – the key value drivers which affect business value, and clearly determines those areas in the operation of the company which have an effect on value creation, while it also provide a common frame for reviewing the processes within the company.

By applying this model, we can eliminate the recording of redundant or recurring data, as the so-called scenario technique that makes it possible to use such data records selected by the user from those data records which have the same information content but different values. It allows us to keep records on a certain examined unit (company, strategic business unit, project, etc.), its versions with different data content and scenarios in just one file. The program also allows the automatic consolidation of the examination units modelled in one file, which can be quite useful, for example, if we keep records of several strategic business units in the company, or if we want to consolidate the different companies of a company group operating in the structure of holding.

On the whole, it can be said that, due to its feature which makes it possible to input data with various details and structures, the e-VALEX model, which I developed as part of my research work, provides support for measuring shareholder value in Value Based Management for all companies in any industry with its unique features and specialities, and it can be well integrated in the planning and controlling of the company, as well as it can contribute to the learning and understanding of shareholder value creation.

Summary of the empirical results

Table 2 contains the summary of the empirical results in co-ordination with the hypotheses of the research.

Table 2: Summary of the empirical results

Hypotheses	Examination	Result
In the current practice of the companies operating in Hungary and ranking high in various toplists, we can find, at least some parts if not the overall use of certain methods for the application of Value Based Management and the measurement of shareholder value.	Carrying out a questionnaire survey and evaluating the answers by using division ratios.	The survey proved that in the practice of the 'biggest' companies operating in Hungary – at a different level of application – the elements of Value Based Management has already been introduced.
At the above-mentioned companies there is significant and statistically verifiable relationship between the fact of applying certain value based methods and the index numbers meeting the criteria of being presented in different toplists.	Correlation calculations using the data of the questionnaire survey.	If we consider the period of using the methods as a weight factor in the calculation, a medium positive correlation can be indicated.
Among the businesses operating in Hungary, now there are such innovative, leading companies where the measurement of shareholder value and the Value Based Management has been realized, at least in some particular fields, at such a high level that they can be the examples of best practice for other businesses.	Preparing case studies.	The detailed case studies of six company groups and companies provide positive examples for the Hungarian practice.
In the Hungarian practice, the standard spreadsheet software (Microsoft Excel) is used for the measurement of shareholder value and for the IT support of Value Based Management, together with all its disadvantages. By further developing the spreadsheet software, its applicability in Value Based Management can be greatly improved.	Visual Basic programming.	The developed e-VALEX model eliminates the disadvantages of Microsoft Excel, on which it is based, and provides a useful tool for Value Based Management.

Resource: own

NEW RESULTS OF THE RESEARCH

A. By studying the references and the presented case studies, I have come to the conclusion that a modern company should adopt the approach of maximizing shareholder value in the decision making process and, having made the decision, this approach should dominate the implementation, too. Value Based Management must be developed in a vertically extended way, so that it would be present from the senior management to the lower level of employees, in the overall structure, and would not be restricted to the level of senior management. The management system is the most efficiently operated, if it enters deep into the company hierarchy, and it has been achieved that all employees are motivated to do their job in order to reach those targets which are set in accordance with the shareholder value maximizing approach. In addition to increase vertical expansion, efforts must be made to enhance integrity, that is to adopt the approach not only for certain isolated tasks, but for all areas (creating strategies, strategic alternatives, evaluation of acquisition possibilities, evaluation of projects and investments, performance measurement, value measurement as part of the bonus payment system, application of the Balanced Scorecard system). However, the company will benefit from it, even if it is implemented only in a certain area, and it can also increase shareholder value.

B. I have explained in my dissertation that the principles of Value Based Management do not oppose to the efforts made to achieve non-financial goals, on the contrary, the integration of the two tendencies will be beneficiary for the overall implementation. I have pointed out that the most important task for the management of the company is to efficiently manage intellectual capital, and in order to be able to manage it, they must measure this intellectual capital. For the strategic management of transforming intellectual capital into financial capital, and eliminating other difficulties which prevent the implementation of the strategy, it is necessary to establish and operate strategy-focused organizations, which help achieve that, through the application of the Balanced Scorecard knowledge, the mission, vision and strategic objectives of all business and non-profit companies will be realized.

I have highlighted on the benefits of the integrated application of the Balanced Scorecard and the Value Based Management. The Balanced Scorecard supports strategy creation by deriving the strategic objectives and indicators, and by co-ordinating the objectives and actions, it helps to introduce the strategy. It assigns the responsible persons and deadlines to the actions supporting the implementation of the strategy, which ensures accountability, and the sequence of these actions serves as basis for the implementation of the strategy. The Balanced Scorecard makes clear the relationships between causes and effects, and it determines that from the different aspects what goals, directly or indirectly related to strategic or financial performance, must be achieved in order to increase the top indicator of a business. By defining cause and effect relations and carrying out sensitivity tests at different levels of the company, we can identify those value generators which are part of the Value Based Management (too). By combining the value based indicators with the non-financial performance indicator of the Balanced Scorecard, the probability of achieving the financial goals can be significantly increased. In other words, in the financial aspect of the Balanced Scorecard, by using the right indicators of shareholder value, the financial goals take up the form of real measures of value, and there will be no risk that the parties involved in operating the organization will be motivated to reach such financial value which does not show the real value accurately and which gives a misleading picture.

C. I have pointed out that benchmarking or continuous level-comparison and risk management, which aims at the establishment of an apprentice company, could be effective ways to support the introduction and application of the different methods for measuring shareholder value, and the development and operation of Value Based Management. Benchmarking, if carried out properly, will highlight on those areas which should be developed, it makes possible for the companies to compare their practice with the best practice, that is the practice of the leading companies, and to develop continuous development programs. However, we have to be aware that not all the partners selected as model-companies will be ready to share their practical experiences, as these matters are considered as trade secrets, because they carry the potential of competitive advantage.

I have also pointed out that the efforts made for the maximization of shareholder value could be further supported, if businesses develop and efficiently maintain a risk-management system. This becomes necessary when the capital structure of the company changes. Beside the tangible capital elements (such as physical assets), more importance is given to intangible capital elements (customer capital, organizational capital, staff competence). Investments in intangible capitals, however, bear higher risks than the investments in tangible capitals and in the growing competition a company may only be competitive, if it also focuses on the standards of those capital elements which define the intangible capital and, at the same time, it identifies and evaluates the risks involved.

D. Shareholder value may only be maximized, if we can define and measure what we want to increase. Today's widely used accounting measurements, however, due to their characteristics (focus on the past and on short periods; subsequent, delayed information; too much focus on accounting results; mixture of evaluation procedures; alternative accounting methods; one-sided application of the principle of prudence; ignoring demand for capital and the time value of money; lack of correlation with economy performance, etc.) are not suitable for the measurement of shareholder value. Therefore, value measurement requires a better method than the accounting measurement, and this method must have two very important features:

a) it must focus on the cash flow and not on the accountancy derived earnings, and
b) it has to recognize that all costs are in relation with the invested capital.

The modern economic value measurement methods aim to meet the above requirements, and their common feature is that by considering certain financial and economic aspects, they try to correct the distorting effect of accounting standards, and replace the approach of accountancy which focuses on past performances, with a future oriented approach. The references dealing with value measurement methods presents a large number of entangled procedures, and among these methods there are numerous sometimes obvious, sometimes hardly noticeable overlaps, which make it more difficult for the user to select and apply the best method for the given purpose.

In my dissertation I have evaluated and compared the different evaluation and measurement methods usually found in the references, I have defined their advantages and disadvantages, and identified the most suitable techniques for the solution of specific tasks and problems. I have also revealed the overlaps in relation with the most important methods, and filtered out those methods which are altogether, or in their most crucial points, identical, although they may have different names in the references. Furthermore, I have come to the conclusion that there is no such single technique which is perfectly suitable for the support of decision making in all evaluation situations. All accounting analysis techniques have their strengths and weaknesses, and all give useful information about the value creating processes, therefore all of them can be useful for us, but not for the same purposes. The most circumspect solution is the co-ordination of measurements, which by considering the relations between the different methods provides useful self-checking possibilities and shows the analyst the most suitable aspects for the purpose of value measurement.

E. When comparing theory with practice, I found that in many cases the practice of the businesses operating in Hungary is still considerably behind the practice of those countries where the market economy is more developed.

I have explained in my dissertation that some of the companies in Hungary are now also recognizing the importance of the increased shareholder value and the shareholder value increasing conceptions. Among multinational subsidiaries, certain quoted companies and analyst and consultant companies, it is becoming more and more widely known and accepted, while in the small and medium businesses in Hungarian ownership, even many years after the privatization, it is still not clear for the owners how to behave as such. There is still great contradiction between the principles of mission statements and the performance measurements in the practice of the companies. With my examinations I showed that in some Hungarian companies the owners or managers did not changed their attitudes, and even at those companies where the increase of shareholder value is one of the most important strategic objective, the value measurement tools are basically still those accountancy based performance categories and indicators which indicate the shareholder value inaccurately.

After studying thirty of those companies which are ranking high in the various toplists and preparing case studies on six companies and company groups, I have come to the conclusion that numerous companies in Hungary are now using the shareholder value maximizing management methods, but apart from a few exceptions, the general experience is that this management system does not enter deep into the corporate hierarchy, but gets stuck on the level of senior management. Therefore, it is advisable that the companies vertically expand their operation based on these shareholder value maximising principles, and enhance integrity, so that these principles can be used not only for some isolated tasks, but in all areas (strategy creation, strategic alternatives, evaluation of acquisition possibilities, project and investment evaluation, performance measurement, value measurement as part of the bonus system, application of the Balanced Scorecard).

F. On the basis of my experience, it can be stated that spreadsheet programs (Microsoft Excel) are now widely used to support the measurement of shareholder value with all their advantages and disadvantages (models may be hard to overview, high error possibility, a growing number of files, etc.). In order to eliminate the discrepancies of these spreadsheet programs, I have developed a Microsoft Excel-based and Visual Basic-supported model (e-VALEX), which by its simple use and in-built options (scenario manager, control panel, time period selection, parameter possibilities for financing and investment opportunities, consolidator function, residual value calculating options, etc.), help efficiently perform the different shareholder value measurement tasks.

With its in-built reporting feature, the program allows the simultaneous application of various value measurement methods, of which the user can choose those methods which are the most suitable for solving the given value measurement task (evaluation of strategic alternatives, acquisitions, projects and investments; performance measurement; measurement in the bonus system). By integrating the key value creating factors, e-VALEX provides a useful tool for controlling shareholder value creation.

Among the many options of the model, the most important one may be that with its help we can eliminate unnecessary file-multiplications and the recording of redundant or recurring data, as the so-called scenario technique makes it possible to change certain data lines, so that the user can choose one from those data records which have the same information content but different values for that specific case to use. It means that it is possible to keep the records of a certain examined unit (company, strategic business unit, project, etc.), its versions with different data content and scenarios in one file. The program also allows the automatic consolidation of the examined units modelled in one file, which option can be quite useful, for example, if we keep records of several strategic business units within a company, or if we want to consolidate the different companies of a company group which is organized in a holding structure.

On the whole, it can be said that the e-VALEX model, which I developed as part of my research, by making it possible to input data with any details or structures, supports the measurement of shareholder value for any business of any industry, and due to its in-built options it provides a flexible and easy-to-use tool for Value Based Management, it can be well integrated in the planning and controlling of the company, and it can also contribute to the learning and understanding of shareholder value creation.

Summary of the new results of the research

The new results of the research can be summarized as the following:

- I have come to the conclusion that the vertical and horizontal extension of the Value Based Management and the increase of integrity will contribute to the increase of the shareholder value, and by this it is beneficial for all stakeholders.
- I have highlighted on the advantages of the integrated use of the Balanced Scorecard and the Value Based Management: by connecting the shareholder value based indicators with the non-financial performance indicators of the Balanced Scorecard, the probability of achieving the financial goals can be increased, and at the same time, by using the right indicators of the shareholder value in the financial aspect of the Balanced Scorecard, it can be avoided that the members of the organization will be motivated to realize a financial value which gives a misleading picture.
- I have pointed out that the application of continuous level comparison (benchmarking), which aims at the establishment of an apprentice company, and the development and operation of a company risk management system, can provide an efficient way to support the introduction and application of different shareholder value measurement methods, and to develop and operate a Value Based Management.
- In my dissertation I have evaluated and compared the most frequently mentioned value measurement methods in the references, I have defined their advantages and disadvantages, and identified the most suitable techniques to solve specific tasks or problems.
- By carrying out a questionnaire survey, I demonstrated what methods are used for the different value measurement tasks by those companies which operate in Hungary and which are ranking high in various toplists, and I found that although some of the businesses use the management methods for maximizing shareholder value, these methods do not generally enter deep into the company hierarchy, and apart from some exceptions, they mix with the methods of accountancy based measurement.
- Through the detailed case studies of six companies and company groups, I have shown positive examples for solving some specific tasks, such as strategy creation, strategic alternatives, evaluation of acquisition possibilities, projects and investments, performance measurement, value measurement as part of the bonus system, and the application of Balanced Scorecard, while operating according to the principles of shareholder value maximization.
- In order to eliminate the disadvantages of spreadsheet software, by using the Visual Basic program, I developed a Microsoft Excel based model called e-VALEX, which is easy and flexible to use in Value Based Management for the support of shareholder value measurement.

SUMMARY

As a result of changing economic and market conditions – expansion of private capital, globalization of markets, increasing international competition and information revolution -, businesses today are facing new challenges. In order to meet these challenges and increase competitiveness in micro and macroeconomic levels, the latest financial and strategic management policies are related to such methods which were developed to increase shareholder value. This effort to increase shareholder value, as a basic corporate management principle, has now become generally accepted all over the world, yet, in Hungary it started to become known only in the last few years. Now it is gaining more and more popularity and acceptance in our country, too, among multinational affiliates, certain shareholder companies, analysts and consultants, but the majority of the companies have not yet been acquainted with these methods, or they have heard of them in general terms, but have not yet seen the opportunity in them.

Motivated by the influence of the above facts, I chose to set as the primary aim of my research to show just how urgent and imperative it is that company management focus on the maximum increase of their shareholder value, and companies make all decisions by examining the effect on this shareholder value. In order to achieve this aim, I examined what part the approach of maximum shareholder value plays, among others, in strategic alternatives, acquisitions, projects, investment evaluation, measure of performance and incentives. My research was also aimed to give an overview on the main value measuring methods, within the frame of value based management, to examine their advantages, disadvantages and application possibilities, and to find out about the practice of the Hungarian companies (by using case studies as a method of examination).

Nowadays, in order to maximize shareholder value at a company with a state-of-the-art system of operation, the company or business develops a strategy, then uses it to determine various short- and long-term goals for performance, expressed in key value drivers, defines all the specific measures to be taken to reach these goals in approximately 12 months, and prepares the related action plans and budgets. In addition to this, performance measurement and various incentives are added to the system, to compare performance and align employees' motivation with the set goals.

It is not possible to maximize shareholder value unless we are able to define and measure what we intend to increase, therefore, measuring is a key issue for all businesses. Today's widely used accountancy-based measurements, however, are not suitable for measuring shareholder value, so the latest methods to measure economic value must focus on cash flow rather than the earnings defined by accountancy, and they must take it into account that all costs are related to the invested capital.

In my dissertation, I evaluated and compared those assessment and measurement methods which are usually discussed in most reference books, by describing their advantages and disadvantages, and identifying the most appropriate techniques to solve specific tasks and problems. I found that the most prudent solution is to use the co-ordination of measurements, which, by recognizing the relations between the different methods, may provide useful self-controlling possibilities, and make some specific aspects, which are suitable for value measuring purposes, more expressive for the analyser.

To learn more about the practices of the Hungarian companies, I collected information from 30 different companies, all of which are ranked among the bests in various top lists, and I found that accountancy-based indexes still have a major part in value measurement in Hungary; and although some of the value-measuring methods of the value based management can be found at the companies, their overall adoption has not yet been realized. The attitude of management in some Hungarian businesses has not changed, and even those companies which consider the increase of shareholder value their most important strategic goal, are still using accountancy-based indexes to measure value, which often produce misleading results.

In addition to overall statistic evaluation, by using some more detailed case studies, I demonstrated the practice of some companies where shareholder value based management has now been applied for several years on a highly professional level, although not all but only in some parts of their businesses, and which companies or groups could therefore provide best practise for other businesses. By examining six main topics (developing a strategy; evaluating strategic alternatives and acquisition possibilities; evaluating projects and investments; measuring performance; measuring values as part of the incentive bonus system; applying a balanced strategic index number system), I managed to present the practice of the following companies as a positive examples: MOL Group, TVK Rt., Wallis Group, Continental Temic Hungary Kft., Béres Group, and the Allianz Hungária Insurance Co..

Based on practical experiences, I concluded that although numerous companies in Hungary are now using the shareholder value maximizing management methods, apart from a few exceptions, this management system has not been deeply accepted in corporate hierarchy. Therefore, it is advisable to vertically expand the operation based on these shareholder value maximising principles, and to enhance its integrity, so that it is not used isolated to perform specific task only, but to reach all areas (which formed the topics of the detailed case studies). (At the same time, applying these principles on any of the areas may contribute to the increase of shareholder value.)

In order to prevent that Hungarian businesses take an unfavourable position in the global market competition, and that they struggle with scarcity of capital, because return is less on the invested capital, it is necessary to introduce the latest methods for measuring shareholder value, and to widely implement and operate the concepts focusing on the increase of shareholder value. With the appropriate and efficient use of value based management, more expendable earnings would flow back to the economy, which would improve employment possibilities. The increasing consumption would create more value for the companies, which would induce a cumulative circular flow. The lower rate of savings and investments would be compensated by the increased investment yield from higher productivity, and finally it would result in a financial prosperity and a higher standard of living. Therefore, it is important to greatly increase the number of those companies in Hungary which operate according to value based management principles, not only to maintain their competitiveness in the market, but also to improve the country's macroeconomic performance.

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