Doctoral (PhD) School of
Business Economics

SUMMARY OF THESES

Annamária Kazai Ónodi

The performance measurement at the service of VBM

PhD Dissertation

Thesis supervisor

Dr. László Reszegi
titular university professor

Budapest, 2008.

Department of Business Economics

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Contents

I. Antecedents of the research

Value Based Management (VBM), one of the decisive trends to date[1], partly means a value-maximisation approach (long-term shareholder value creation is the primary goal of the company), and partly embraces the management procedures and processes required to implement that approach. The implementation of value-based management is a long and complex process, in which soft organisational factors as well as complex strategic issues and the performance measurement methods and techniques being applied all play a part. The performance measurement system has a priority role in the development and operation of value-based management, and my dissertation focus on the discussion of this priority area.

Simultaneously with the appearance of VBM, the issue of putting value in the centre of performance measurement was put on the agenda. The international technical literature reflected consensus as to the three levels of performance measurement being 1) the capital market performance of the company (realised shareholder return); 2) the internal value of the company; 3) the value drivers. The ultimate financial goal is to achieve adequate capital market performance, but company managers must focus on the enhancement of the internal value of the company, while keeping an eye on its market value and consciously managing the latter through investor communication. Another decisive component of VBM is the identification and measurement of the key value drivers of the company, i.e. the points through which the development of these values can be influenced most effectively. The various trends differ in the financial indicators used to measure change in realised shareholder return and in the internal value of the company**.**

Corporate performance measurement has been the subject of almost continuous scientific inquiry since the 1980s. Its research has been quite extensive, with a variety of focus points. Ittner D. C. and Larcker D. F. [2000] systematise and review its results from the perspective of value-based management. One of the key conclusions offered by the international surveys

[1] From the 1990s on, several authors have dealt with/committed themselves to value-based management. (Copeland et al [1999], Rappaport, A. [2002], Black – Wright – Bachman. – Davies [1999], Koller T. [2005]) International consulting companies play a decisive role in the development and mainstreaming of the arsenal of VBM tools: McKinsey, Boston Consulting Group, PriceWaterhouseCoopers, Alcar Consulting Group, Stern Stewart & Co., HOLT Value Associates.
The survey of Ryan H. E. and Trahan E. A. [1999] covering companies in the vanguard of their respective industries in the US showed that 87% of companies (184 companies) involved in the survey knew the concept of VBM.

is the decisive role of the context of performance measurement. From the point of view of my dissertation, three main streams of the international empirical studies deserve special attention. One of the neuralgic points of the development of value-based performance measurement systems (subject to most debate) is what the primary internal performance measure should be. There were frequent attempts to confirm the "adequacy" of the chosen measure by demonstrating significant correlation between the internal measure and shareholder return. (See Bacidore et al. 1997., Biddle G. C. et al. 1999., 1997., Clinton B. D. – Chen S. 1998., Lehn K. – Makhija A. K. 1999.) The controversial results are attributable to the short-term divergence of market value from the internal value of the company and the specific features of capital market behaviour. I deem more important the stream which tests the "adequacy" of the indicators by whether the application of a financial measure enhances value-adding behaviour and whether it ultimately contributes to better capital market performance (see Biddle G. C. et al. 1999., Kleiman R. T. 1999.). The third main research trend explores the relationship between non-financial value drivers and shareholder value creation. The results are again controversial. In general terms, managers realise the importance of non-financial value drivers, but find it problematic to measure them.
The surveys have shown that companies applying "value-driven" indicators to measure performance or making the causal relations between the value drivers explicit generally outperform their industry rivals.

The review of the relevant Hungarian technical literature warrants the conclusion that the concept of value-based management has appeared in the country; the most recent trends and methods of performance measurement are known there. (See Reszegi L. 2004., Dorgai I. 2004., Fiath A. 2004., Becker P. et al 2006). However, we do not know the exact spread of the concept of shareholder value adding, nor the distinctive features of companies committed to it. My research was meant to remedy, at least partly, these deficiencies.

Research objective and hypotheses

My research investigates two indirectly related issues. On the one hand, I try to identify the typical features of the performance measurement systems of Hungarian companies committed to shareholder/owner value creation and, on the other hand, I study the financial performance of this group of companies. I checked Hypothesis 1 and 2, through a number of sub-hypotheses.

Hypothesis 1.

Hungarian companies committed to shareholder/owner value creation pay more attention to PM and apply the new PM methods to a larger extent than Hungarian companies which do not concentrate on shareholder value creation.

H1a: As compared to companies not committed to shareholder/owner value creation,. Hungarian companies committed to shareholder/owner value creation apply EVA analysis, cost-sensitiveness testing, corporate capital-cost analysis in investment decisions in a significantly higher rate.

H1b: All Hungarian companies committed to shareholder/owner value creation apply financial indicator analysis, CF statement, the separation of fixed/variable costs and the calculation of the break-even point.

H1c: Under certain conditions, as compared to companies not committed to shareholder/owner value creation, Hungarian companies committed to shareholder/owner value creation apply analysis of indicators pertaining to the market value of the company, activity-based costing, target costing and the analysis of stock turnover indicators in a significantly higher rate.

H1d: In Hungarian companies committed to shareholder/owner value creation, higher consistency can be demonstrated between the application and declared usefulness of performance measurement methods.

H1e: As compared to companies not committed to shareholder/owner value creation, the IT systems of Hungarian companies committed to shareholder value creation provide significantly more support to business-related decision-making, planning, the analysis of deviations from the plan, reporting, valuation of company performance, development of the internal corporate processes, the exploration of cost-trimming options, the investment decisions, pricing decisions, the calculations of the profitability of products/product groups.

H1f: As compared to companies not committed to shareholder/owner value creation, the IT systems of Hungarian companies committed to shareholder/owner value creation provide significantly more support to the measurement of non-financial value drivers in addition to that of the financial ones.

H1g: As compared to companies not committed to shareholder/owner value creation, value drivers are present in a higher proportion in the controlling reports of Hungarian companies committed to shareholder/owner value creation.

H1h: As compared to companies not committed to shareholder/owner value creation, the controlling reports of Hungarian companies committed to shareholder/owner value creation rely to a higher extent on other information sources in addition to financial statements.

Hypothesis 2.

The operation of Hungarian companies committed to shareholder/owner value creation is characterised by significantly higher efficiency and better financial performance than that of Hungarian companies which do not concentrate on shareholder/owner value creation.

Hypothesis 2 is indirectly related to Hypothesis 1. I contend that companies committed to shareholder/owner value creation pay more attention to PM and achieve higher efficiency. I do not state direct causal relationship between better financial performance and the quality of the PM system; only that concentration on shareholder/owner value leads to better financial results (the better financial result being the effect) and, furthermore, that concentration on shareholder/owner value presumes an adequate PM system, that is, I consider PM a

necessary condition, not a cause. I checked Hypothesis 2, too, through a number of sub-hypotheses.

H2a: The financial performance of Hungarian companies committed to shareholder/owner value creation is higher in terms of return on invested capital (ROIC) than that of their industry rivals.

H2b: On the basis of the traditional accounting measures (ROE, ROA), no significant difference can be demonstrated between the performance of Hungarian companies committed to shareholder/owner value creation and that of their industry rivals.

I formulated the above Hypotheses H2a and H2b on the basis of the research findings of Biddle G. C. et al. [1999], namely that companies strive to achieve what they measure; companies applying EVA indicator produce significantly higher EVA return, whereas the same cannot be demonstrated for the traditional accounting measures.

H2c: The better financial performance of Hungarian companies committed to shareholder/owner value creation is underpinned by "operating excellence". In agreement with their better financial performance, company managers deem their own activity better in several areas than that of their rivals (e.g. cost-effectiveness, profitability, technical standards, product quality, capacity utilisation, qualification of employees).

H2d: As compared to companies not committed to shareholder/owner value creation, Hungarian companies committed to shareholder/owner value creation produced more marked performance improvement from 1992 to 2002.

II. Research methodology

II /1. Database

My studies relied on the database of the Competitiveness Research survey of 2004. (For the project plan of the research, see Chikán A. – Czakó E. 2006.) The company sample was

compiled, as a general principle, by addressing incorporated companies with more than 50 staff, keeping an eye also on representativeness. In 2004, a total of 1 300 companies were addressed, the response rate was 23% and, finally, 301 companies provided questionnaires suitable for evaluation. In terms of staff size, the majority (57.2%) of companies belongs to the category of medium-sized enterprises, whereas the rate of large enterprises (>250 staff) is 37.7%. (For a description of the sample of the questionnaire survey of 2004, see Lesi M. 2005 and Wimmer Á. – Csesznák A. 2005.)

II /2. Identification of companies committed to shareholder/owner value creation

I had to settle a critical issues before embarking on the testing phase, namely the identification of the circle of companies committed to shareholder/owner value creation. In the corporate sample, the upper managers generally (94%) agreed that it was important to take into account the interests of the shareholders in decision-making. 83% of financial managers thought that shareholder satisfaction was a decisive criterion of the assessment of financial performance. The analyses, however, pointed to uncertainties in regard of the real meaning of taking shareholder interests into account. Only 34% of companies in the sample attributed a major role to high owner return in the development of financial strategy and the measurement of financial performance. The financial managers of most companies kept thinking in terms of return of sales or return on assets as primary financial objectives, and not in terms of shareholder value creation. Value-driven company management, on the other hand, considers it crucial that company managers should understand clearly that company value and, through it, shareholder/owner value, is determined by long-term performance which takes into account also the risks, and manifests itself in cash-flows, and not by short-term accounting results. Return on sales and return on assets do not measure the change in owner value; both are partial indicators. To realise value-driven management, it is not sufficient the declare the importance of owner value creation at the level of the upper management – the entire organisation must be made aware of it and appropriate measures must be taken to measure value creation. This was the point of departure of my classification, but I gave "commitment to shareholder/owner value creation" a relatively broad interpretation[2], and hence 45% of the

[2] Subsequent research revealed that managers could often not interpret the question concerning "the role of high shareholder return in financial strategy". Therefore, I assigned to the category of companies committed to

company sample was assigned to this category. In the course of the analyses, I shall often refer to this group of companies as "value-driven companies". Although a somewhat looser term, I find it necessary to use this "abbreviated" form to ensure the transparency and easier interpretation of the analyses.

Companies committed to shareholder/owner value creation were present in every branch of the economy**,** the majority in the size categories of medium-sized (44%) and large (42%) enterprises. It follows from the composition of the corporate sample that the majority (54%) is in majority domestic ownership. The rate of companies in foreign ownership (25%) exceeded the corresponding rate in both the entire corporate sample and the total population, and majority state-owned companies were represented as well (21%).

II /3. Applied statistical methods

I adopted an explanation-oriented approach in my research[3]: I used empirical data to test the accuracy of the system of hypotheses formulated prior to the research.[4] In the opinion of Friedman [1986], a hypothesis is discarded if our predictions are "often" (or at least more often than predictions deriving from other hypotheses) in contradiction with the facts, and we consider it highly reliable if it "survived" countless such tests. That is, if empirical testing confirms our theory, then we can accept it temporarily. In testing the accuracy of the preliminary hypotheses, I do not content myself with supporting it with statistical calculations based on empirical data, but I also investigate, to some extent, the possibility of its disproval.[5]

Furthermore, the research applied basic statistical methods and multiple statistical analyses; two of which had special importance. My hypotheses being based on a comparison of companies committed/not committed to shareholder value creation, the independent samples T test was essential to test each sub-hypothesis. Furthermore, I had to examine for both hypotheses whether concentration on shareholder value – i.e. the importance attributed to performance measurement and to focussing on shareholder value – and better financial

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shareholder value creation those entities where the upper management and the financial management committed itself to shareholder value creation at the level of declarations, and considered high shareholder return and important criterion in the financial strategy, and also companies that could not interpret the question, but considered profitability an important criterion and possessed an adequate set of PM instruments.

[3] On explanation-oriented and understanding-oriented approaches, se Kieser A. [1995]

[4] Friedman M. [1986], albeit not discarding the possibility of logical testing, considers empirical testing decisive. Popper 1976 emphasises disproval on the logical plane.

[5] When disproving a hypothesis, I do not aim at comprehensiveness, my ultimate goal being to confirm, not to disprove the hypotheses.

performance actually correlated, to exclude apparent correlations; and the relationship between the two variables cannot be explained by a third one that would serve as the cause of both. The application of the Lazarsfeld model (see Babbie E. 2003, pp.475-493.) is essential for testing both hypotheses. The Lazarsfeld model examines the nature of the relationship between two variables by studying the effect of the introduction of further variables. It breaks down the original sample into sub-samples on the basis of the new variable, and then it defines the relationship of the original variables in each sub-sample. It is most important in the context of the application of the Lazarsfeld model to identify correctly the variables to be regarded as control variables. The selection of the control variable is supported by correlation and regression analysis.

III. Research results

III. /1. Hypothesis H1 –Performance measurement and commitment to shareholder value creation

III./ 1.1 Application of PM instruments

(Sub-hypotheses H1a, H1b, H1c, H1d)

A very high and significantly higher proportion of Hungarian companies committed to shareholder value creation applied financial indicator analysis (98%), cash-flow analysis (93%), distinguished fixed and variable costs (89%), analysed the break even point (82%), and cost sensitiveness (77%), made capital cost calculations (77%) and used stock turnover indicators (79%) and activity-based costing (71%). Sub-hypothesis H1b had to be modified: instead of the assumed 100% application rate, it was only possible to demonstrate the significantly higher application rate of the performance measure under study. Sub-hypotheses H1a and H1c were confirmed for the corporate sample. (For a summary of the sub-hypotheses of Hypothesis H1, see Table 1 at the end of Section III./1.3.) In relation to companies not committed to shareholder value creation, the most marked differentials were shown for cost sensitiveness examinations, capital cost calculation and the calculation of the break even point. These performance measurement instruments play an important part in shareholder value maximisation decisions, and represent an essential part of the advanced executive information system.

The analysis of the Competitiveness Research database gave no reliable answer as to the measure used to approximate the internal value of the company, and as to what they considered the primary value measure. Only 35% of companies committed to shareholder value creation applied the EVA indicator (they considered it useful). As for the distribution of the application rate of the EVA indicator in a breakdown by company size, within the group of companies committed to shareholder value creation, large enterprises boasted the highest rate at 40%, which approximated the application rate demonstrated by international studies. As for the non-value-driven companies, on the other hand, the highest application rate was shown by the small enterprises (23.6%), but that is probably due to the misinterpretation[6] of the relevant question and the resulting erroneous answers.

The shareholder value creation approach manifests itself in performance measurement also in that cash-flow calculation and capital cost calculation was regarded much more useful by companies committed to shareholder value creation than by their uncommitted peers (Sub-hypothesis H1d). Sub-hypothesis H1d had to be modified, as no stronger correlation could be shown between the application rate and declared usefulness of the performance measurement method; in general, value-driven companies considered the performance measurement methods more useful. That is, presumably, there exists a circle of Hungarian companies which already think in terms of company and shareholder value, not only in terms of accounting profits.

III./ 1.2. Development level of the IT system – measurement of value-drivers
(Sub-hypotheses H1e, H1f)

The financial, marketing and production managers and the representatives of the top management evaluated the development level and supportive function of the IT systems of their respective companies through some 80 questions. In responses to related questions, value-driven companies rated their IT system higher without exception than non-value-driven ones. The ratings of the financial managers were the most different. Their subjective value judgements indicated the biggest difference in the areas of IT support to investment decisions (3,61; 3,05)[7], followed by planning (3,92; 3,37 and profitability calculation (3,96; 3,45)

[6] I assume that some respondents confused economic value added and simplified entrepreneurial tax, both abbreviated as EVA in Hungarian.
[7] On a 5-point Likert scale.

The companies were assigned to three clusters on the basis of the level of development of their IT system: good, moderate, weak.[8] In the group of value-driven companies possessing a "good" IT system, profitability calculation and planning was provided most support reflected in significantly better self-evaluations (scores of 4.58 and 4.55, respectively). The other extreme was occupied by the tracking of staff and customer satisfaction (scores of 3.16); value-driven companies deemed their own performance much poorer in this respect than the non-value-driven ones.

All things considered, companies committed to shareholder value creation had more advanced IT systems, according to the self-evaluation of their managers; consequently, their IT system provided more support to measure value drivers (sub-hypotheses H1e was confirmed). Support provided to measure financial value drivers was significantly higher, but no significant difference could be shown in regard of the non-financial value drivers (Sub-hypotheses H1e restricted validity). My results agreed with those of the international special literature: managers consider the non-financial value drivers important, but even the most advanced corporate IT systems give maximum medium support to measure customers or staff satisfaction.

III./ 1.3 Content of controlling reports

(Sub-hypotheses H1g, H1h)

It was found that 93% of companies committed to shareholder/owner value creation prepared controlling reports; this rate was higher than the 82% sample average. The most frequent components of the controlling reports (performance as related to the plan, financial measures, cost analyses, sales quantity information) were applied to a small extent (10%), but in higher proportion (87%) by value-driven companies. The indicators referring to productivity, resources utilasition and profitability also figured in significantly higher proportions (higher by 10-15 percentage points) in the controlling reports of value-driven companies. Non-financial value drivers show the largest scatter. The controlling reports of value-driven companies showed higher rates of occurrence of information on pruduct quality (by 22

[8] The rate of value based company in good information sysem: 48%, in moderate information system: 38%, in weak information system: 16%. The rate of company not commited to sharholder value creation in good information sysem: 30%, in moderate information system: 47%, in weak information system: 23%.

percentege points), customer satisfaction (5,6 percentege points), position of competitors (6 percentege points), employee performance (1 percentege points).

According to the value-driven companies, the most important pieces of information in the controlling reports are the following: information on sales (4,49)[9], cost analyses (4,45), and product profitability (4,44). I analysed the group considering controlling an important component of the success of the entire company apart. Interesting deviations occurred in two cases. Firstly, a companies committed to shareholder value creation deemed product quality much more important in their controlling reports (3,88) than "uncommitted" companies (3,39). Secondly, non-value-driven companies deemed the role of only the financial measures significanlty more important (4,38 v. 4,31). The accountig approach is more typical of non-value-driven companies, this is supported also by the fact that, within the group of companies deeming their executive information system better than the average, the non-value driven companies judged the importance of the role of accounting information int the controoling reports very high (4,82), significantly higher than their value-driven peers (4,48).

96% of controlling reports by value-driven companies included information originating from financial statements, and 87% included non-financial data. This high application rate notwithstanding, non-value driven companies include data originating from financial statements in the controlling reports to a a small (2,5%), but significantly higher rate, whereas value-driven companies rely on information sources other than financial statements to larger extent. The biggest difference occurred in terms of non-financial data originated from the information system of the company (87%, 74%), fact data originating from external sources (84%, 35%), and the use of information based on the opinion of the customers (46%; 31%). The more marked accounting orientation of non-value-driven companies manifested itself also in that they regarded controlling report data based on financial statements more important than their value-driven peers. The value-driven company, on the other hand, rated information based on external sources and customer opinion significantly higher.

All things considered, the controlling reports of companies committed to shareholder value creation referred to value drivers more frequently, and they had a more marked tendency to

[9] On a 5-point Likert scale.

rely on information sources other than financial statements. Table 1 gives a summary of the testing results of the sub-hypotheses of Hypothesis H1.

Table 1. Hypothesis H1: Summary table

Sub-hypotheses		With reference to the corporate sample	Note	Amended hypothesis for the total population
H1a	„Value-driven companies" apply EVA analysis, cost-sensitiveness testing, cost of capital analysis in investment decisions in a significantly higher rate.	Confirmed	EVA requires further investigation.	Cannot be disproved; probable.
H1b	All „value-driven companies" apply financial indicator analysis, CF statement, the separation of fixed/variable costs and the calculation of the break-even point.	Modified	The modified sub-hypothesis – namely the higher rate of application of the priority analytical instruments by companies committed to shareholder value creation – was confirmed.	Cannot be disproved; probable.
H1c	„Value-driven companies" apply analysis of indicators pertaining to the market value of the company, activity-based costing, target costing and the analysis of stock turnover indicators in a significantly higher rate.	Confirmed		Cannot be disproved; probable.
H1d	Higher consistency can be demonstrated between the application and declared usefulness of performance measurement methods.	Modified	The modified sub-hypothesis - value-driven companies consider CF statement and cost of capital calculation more useful than non-value-driven companies - was confirmed.	Cannot be disproved; probable.
H1e	Provide supporting of IT systems I. (planning, reporting, decision-making)	Confirmed		Cannot be disproved; probable.
H1f	Provide supporting of IT systems II: non-financial value drivers	Restricted validity	Statement true for the entire corporate sample, but a comparison of companies with a more advanced IT system revealed no significant difference in most cases; staff satisfaction tracking was provided significantly less support by the IT system of value-driven companies.	It is likely that financial value drivers enjoy more support. It will probably not be possible to demonstrate significant gaps in the use of non-financial value drivers.
H1g	Value drivers are present in a higher proportion in the controlling reports of value-driven companies.	Confirmed		Cannot be disproved; probable.
H1h	The controlling reports of value-driven companies.rely to a higher extent on other information sources in addition to financial statements.	Confirmed		Cannot be disproved; probable.

III./ 2. Hypothesis H2–Financial performance and commitment to shareholder value creation

III./ 2.1 Return on invested capital, 2002
(Sub-hypothesis H2a)

Within the company sample, the rates of return on invested capital (ROIC) recorded in 2002 indicated definitely higher average profitability in the group of companies committed to shareholder value creation (11.84% as opposed to 4.75%). This, however, does not mean that a higher proportion of companies committed to shareholder/owner value creation actually created value for their shareholders – this is based on assumptions only. Owing to the absence of data on company cost of capital and the fact that no reliable industry-specific comparisons could be made, I "called on" the Lazarsfeld model to prove the hypothesis, selecting the group features by regression analysis.

Regression analysis revealed that, within the corporate sample, profitability development was influenced to a significant extent by the entity's capacity to react to changes in the market environment. Value-driven companies preparing for market changes produced the highest return on invested capital (18.2%), whereas the performance of companies reacting with a delay or not at all was poorer (3.6%) than that of non-value-driven companies prepared for change.

Another decisive feature of the development of profitability (according to the regression calculation) was the type of main owner. The calculations showed that, in the category of majority state-owned entities, the companies where the management underwent a change in approach (they strove to be profitable and create value for the shareholders), or which managed to prepare for change in their market environment produced higher returns. This, however, does not mean that they produced value: given their very low profitability, the majority probably destroyed value.

Majority foreign-owned companies committed to shareholder value creation achieved much higher rates of return (15%). Regression analysis demonstrated significant stochastic correlation between profitability and commitment to shareholder value creation and also company size in the category of majority foreign-owned companies. Within the group, large enterprises recorded the highest rates of return in 2002, but no significant difference could be identified in terms of return on invested capital between value-driven and non-value-driven companies (16% and 17%, respectively).

The group of companies in majority domestic ownership raised the most questions. True, significantly higher ROIC was shown, but regression analysis failed to confirm the stochastic correlation of commitment to shareholder value creation and profitability, as opposed to the full corporate sample and the groups of majority state-owned and majority foreign-owned companies, respectively. According to the calculations, the profitability of companies in majority domestic ownership was influenced most forcefully by whether they could prepare for change.

Finally, I compared the profitability rates of the 11 sub-groups identified on the basis of the Lazarsfeld model; in 75%, companies committed to shareholder value creation produced higher ROIC. All in all, my research did not disprove the hypothesis that if shareholder value creation is a clearly declared objective of the management of the company (irrespective of its exact place in the hierarchy of company objectives and its relationship to the objectives of the other stakeholders), that is conducive to more favourable financial results.

III./ 2.2 Traditional accounting measures
(Sub-hypothesis H2b)

My calculations confirmed the problems associated with the traditional accounting indicators in part. Given the significant gap in the profitability of value-driven and non-value-driven companies, in 2002, in 50% of the sub-groups, significant profitability differences could be demonstrated also by the traditional measures, and longitudinal analysis showed an even more marked divergence. Measured in terms of ROIC indicator, it was possible to show that, from 1996 to 2002 companies committed to shareholder value creation produced higher returns, but that result was not confirmed by the ROE[10] and ROA indicators from 1995 to 1998.

I examined this issue on the basis of the database of 50 companies covering 11 years to see whether the ROIC, ROE, ROA profitability indicators shifted in the same direction (improvement or deterioration) from period to period. An average inconsistency of 28% was shown, which is indicative of the fact that the accounting measures do not always meet the most important requirement set to performance measures: the principle of encouraging ranking.

[10] ROE = Return on Equity, ROA = Return on Assets

The original sub-hypotheses H2b was modified: on the basis of the traditional accounting measures (ROE, ROA), it is not always possible to demonstrate significant difference between the performace of Hungarian companies committed to shareholder value creation and that of their industry rivals. Under certain circumstances, the ROE, ROA, ROIC indicators show profitability changes of a contrary tendency. The modified hypothesis was confirmed by the calculations made for the corporate sample.

III./ 2.3 Operating excellence
(Sub-hypothesis H2c)

The comparison of the self-evaluatins provided by companies committed and not committed to shareholder/owner value creation, respectively to the industry average shows that, with the exception of product quality, where no significant differeence could be shown, companies committed to shareholder/owner value creation give significantly better self-evaluations. The difference is biggest in the rating of market share (3,34; 3,01)[11] and of profitability (3,06; 2,78)

The CR questionnaire asked the managers to rate their companies as compared to their strongest competitors according to 42 criteria. Within the companies committed to shareholder value creation, they judged themselves better in terms of the survey criteria in 59% of the cases, and worse in 18% only than companies not committed to shareholder value creation.

According to the self-evaluation of the managers, Hungarian companies committed to shareholder/owner value creation had better cost efficiency ratios; they made better forecasts of their market environment; judged their market share, as well as customer service standards, the competitiveness of their market prices and their degree of capacity utilisation, logistics system and IT system better. The self-evaluation of the managers may, of course, include subjective elements but, even so, the research findings testify to the value-conscious approach of the managers of companies committed to shareholder value creation.

[11] On a 5-point Likert scale.

III./ 2.4 Longitudinal analysis of profitability development
(Sub-hypothesis H2d)

According to the international surveys, companies adopting VBM perform better in the financial sense even if their performance did not differ from that of their rivals prior to the adoption of the new approach.

The databases of the Competitiveness Research studies of 1999 and 2004 give an opportunity to examine profitability development from 1992 to 2002. The results of my longitudinal analysis carried out on a sample of 50 and over 11 years do not contradict the statements of Kleiman [1999]. In 1992, the average ROIC of companies not committed to shareholder value creation still exceeded significantly that of companies committed to shareholder value creation, whereas in 2002, the profitability of the latter was clearly higher. The self-evaluation of the managers indicated stable average return on capital for value-driven companies, and **a** deteriorating tendency in the group of non-value-driven companies, with significant changes in ownership structure, demand and competition ranking.

Table 1. Hypothesis H1: Summary table

Sub-hypotheses		With reference to the corporate sample	Note	Amended hypothesis for the total population
H2a	The financial performance of value-dviven companies is higher in terms of ROIC than that of their industry rivals.	Confirmed, with addendum	In addition to commitment to shareholder value creation, reaction to changes in the market environment is also a decisive factor. Value-driven companies prepared for change produced the highest average rate of return on investment in 2002.	Cannot be disproved. Shareholder value creation needs to be investigated further.
H2b	On the basis of the traditional accounting measures (ROE, ROA), no significant difference can be demonstrated…	Modified	The modified sub-hypothesis – on the basis of the traditional accounting measures (ROE, ROA), it is not always possible to demonstrate significant difference between the performace of value-driven and non-value-driven company – was confirmed.	Cannot be disproved.
H2c	The better financial performance is underpinned by "operating excellence".	Confirmed		Cannot be disproved; probable.
H2d	Value-driven company produced more marked performance improvement from 1992 to 2002.	Confirmed		Cannot be disproved.

III./ 3 Summary

My study covers what is a critical period in the history of the Hungarian corporate sector: the period of “learning” following economic restructuring and the transformation of the ownership relations. At that time, Hungarian companies were busy learning whatever they could about the market, their rivals, the owner’s behaviour and objectives; at the same time, due to the openness of the Hungarian economy, they had to hold their ground in keen competition also on the domestic market. I studied the attitude of Hungarian companies to shareholder value creation in this "learning” period. Despite the combined effect of the significant environmental “noises”, my research did not disprove that shareholder value creation was present in the approach, the internal value system, the system of objectives and the performance measures being applied by significant company groups, and there were several signs that commitment to shareholder value creation was concomitant also with operating excellence. These signs may encourage in practice the company management and the shareholders to apply performance measures supporting value creation and to put it into the centre of business management. Furthermore, the results of my research can be used in university education, in company practice and they will, hopefully, represent the starting point of further research in the future.

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