Doctoral Thesis

The relation between shareholder value orientation and shareholder value creation

Stephan Hecking

Advisor: Prof. Dr. Mª Antonia Tarrazón Rodón

Universitat Autònoma de Barcelona
Departament d'Economia de l'Empresa

Bellaterra, October 2002

To Maria

Acknowledgments

I am very grateful to the advisor of this doctoral thesis, Prof. Dr. Mª Antonia Tarrazón Rodón, for her support during the research period. During that time we spent countless hours discussing the numerous issues concerning shareholder value that are covered by this thesis. Prof. Tarrazón read the text with great care and attention, raising many thought-provoking questions and always offering the most insightful of comments.
I also owe a debt of gratitude to Prof. Dr. Joan Montllor i Serrats who made many excellent and very useful suggestions.
It is finally a pleasure to thank my father, Ludger Hecking, for his careful revision of the text.

TABLE OF CONTENTS

1. MOTIVATION OF THIS DOCTORAL THESIS

The focus on shareholder value has gained much importance in last years. Although the objective of any investment and therefore the principal objective of every enterprise is the maximization of investor's wealth, in fact it has not had an adequate importance in most firms during various decades. The power of banks as lenders, the interest of managers to maximize their own benefits instead of those of shareholders, and the general public orientation towards stakeholder value as the sum of all people and institutions that have some stake or interest in the firm had put shareholders' wealth on the same level of firms' hierarchy of objectives as others. However, the capital concentration in pension or investment funds as well as mergers and acquisitions, and other concentrations of shareholdings in recent years have led to an empowerment of shareholders. Meetings with financial analysts have become most important for CEOs and CFOs. Moreover, in the early 1980's financial sharks discovered the possibility of profiting from those firms that do not exhaust their potential and substituting in most cases inefficient directors by managers orientated to the maximization of shareholders' wealth. This gave managers a strong incentive to put first priority on the creation of shareholder value. (Rappaport, 1998: 19, 20) The wave of mergers and acquisitions as well as the tendency of joint stock companies to create and strengthen internally investor relation departments or corporate offices that depend directly on the CEO or the Board of Directors show that **the topic "Shareholder Value" is highly relevant in business practice. In recent years an increasing number of firms declares creation or maximization of shareholder value the foremost objective or at least one of the most important goals.**

A successful management toward the creation of shareholder value requires knowing what are the crucial shareholder value variables and how to apply them. However, it is necessary but not sufficient to only know what is basic to generate wealth for the firm's owners. Shareholders claim at least an adequate return on their investment, and in fact aim to maximize that return. Therefore, **the problem consists in finding out whether or in how far orientation toward creation of shareholder value, well founded in theoretical concepts, already creates shareholder value measured as increasing stock prices. This doctoral thesis analyses the relation between shareholder value orientation and shareholder value creation.**

If shareholder value orientation proves to be a relevant factor for value creation, the results of this research are of theoretical and practical importance: academics may have a fundament for further researches aimed at providing companies with concepts to increase their performance in the sense of value creation, executives get an additional justification for their focus on the topic, and investors and analysts dispose of a new methodology, developed in this thesis, when making their investment decision or evaluating a company's perspective.

The topic shareholder value can be viewed from different points such as a component of stakeholder value or as a philosophical object that is assessed in line with other values a company may have like staff welfare or environmental protection.

The **general background for the thesis** will be the **Financial Theory**, in Anglo-Saxon literature often referred to as **Corporate Finance or Financial**

Management. This thesis considers exclusively the financial objective "creation of shareholder value", proceeding on the assumption that it is the objective of any investment to earn a maximum return, and hence every investor aims to maximize his or her wealth.

Within the framework of the Financial Theory does not exist a specified shareholder value theory. Rather, there are a lot of different theories affecting shareholder value.

For example, The Agency Theory developed by Michael C. Jensen and William H. Meckling (1976) can be used as a fundamental basis for the derivation of a management remuneration system that drives executives (agents) to act strictly on behalf of shareholders (principles).

Fischer Black and Myron Scholes' Option Pricing Theory (1973) provides elemental tools for managers to evaluate correctly investment projects and chose only those which generate net (i.e., shareholder) value (real options).

Option Pricing Theory is also necessary to engineer shareholder value optimal financing instruments.

The Signaling Theory presented by Stephen A. Ross in 1977 explains how managers can inform owners about the "real" value of their firm, and converts so to an instrument of a shareholder value orientated dividend and capital structure policy.

The also by Stephen A. Ross developed Arbitrage Pricing Theory (1976) or the sometimes better manageable Capital Asset Pricing Model of William F. Sharpe (1964), John Lintner (1965), and Jan Mossin (1966) can be used by risk

managers to select only projects which earn more than risk-adjusted capital costs.

F. M. Redington's Immunization Concept (1952) also helps to minimize risks.

All theories support managers to make shareholder value efficient decisions and aid investors to select stocks that will earn an adequate return or to control management. And they contribute to the theoretical framework, in which topics concerning shareholder value are researched.

Countless publications in financial literature prove that the topic is extraordinary relevant from an academic point of view too. There is also an increasing tendency of acknowledged journals to publish articles referred to shareholder value. **However, the question to which extent shareholder value orientation and shareholder value creation are related is still waiting for an answer. This thesis pretends to contribute to close this gap.**

The research proceeds in four steps. After determining the variables of shareholder value orientation an empirical study evaluates first the value orientation, and then the value creation of a sample of companies. Finally, a statistical analysis quantifies the relation between shareholder value orientation and shareholder value creation.

Chapter 2 is dedicated to lay the theoretical foundations of this research, that is, to derive theoretically the value of a company, present the commonly used metrics to quantify the value added in a period of time (e.g., during one financial year), and discuss comprehensively the most important value drivers.

Value drivers are factors that have a strong influence in **value creation** from a theoretical point of view:

Investments is a fundamental direct shareholder value variable. If an investment project earns more than its capital costs the company creates shareholder value.

Flexibility of executives during lifetime of an investment project increases the probability to earn more than pre-calculated at the beginning of the project, and so allows to increment further shareholder value.

An adequate ***human resource*** **policy** motivates staff and helps to save costs (for example, prevention of costly labor accidents). An outstanding factor is a compensation system considered as a powerful sub-variable.

Dividend payments as such do not alter a firm's value. However, ***dividend*** **policy** is a powerful instrument in managers' hands to communicate important news in an efficient way to investors, and thus reduces monitoring costs.

Growth of turnover contributes to the creation of shareholder value if and when additional projects earn more than their capital costs.

"A ***merger*** adds value only if the two companies are worth more together than apart" (Brealey, Myers 2000: 940). Sometimes a merger does not fulfill this stringent condition but an ***alliance*** may strengthen competitive advantages of the implicated companies, or help cutting costs, for example, through a common research and development program.

Liquidity of shares may also be "a major determinant (as important in fact as systematic risk or 'beta') on the level of expected stock returns. Less

liquid stocks earn proportionally higher rates of return (before transaction costs) over long periods of time, thus representing a higher cost of capital for corporate management." (Stern, Chew 1998: 55)

Risk determines the value of a project or the value of the total enterprise as the sum of all projects if the time-structure of cash flows is given. Therefore, risk is a highly important shareholder value variable.

Microeconomics teach that in competitive markets high margins tend to be eliminated rapidly because innovative processes, products, or services are imitated by other firms in a short time. If a company pretends to earn permanently a high margin it has to defend a ***competitive advantage*** over the competition or seek steadily new opportunities to reestablish its competitive advantages.

Costs in general are a very important variable. Every monetary unit a company can save *ceteris paribus* contributes to the creation of shareholder value.

These ten value drivers and the *general attitude* of managers *towards* the objective of *value creation* for shareholders are the eleven variables that will be used in chapter 3 to measure the shareholder value orientation of a sample of Spanish and European blue chip companies. The research period comprises the financial years 1998, 1999, and 2000. Financial years coincide with calendar years in all cases.

The sample consists of the 35 companies that belonged to the selective Spanish share index IBEX 35 in its composition as per July 1st, 1999, and ten more companies: **five representatives of the Spanish New Market**

(NM) and five European firms included in the EuroStoxx 50 index (July 1st, 2001), which stand for industrial sectors that are infra-weighted in the IBEX 35 index. The IBEX 35 companies have been chosen since they form a set that is acknowledged to represent the leading Spanish companies. The set is also big enough to conduct statistical analyses. Codes as listed in the following table are those commonly used by stock exchanges.

Code	Company	Index	Sector
ACE	Autopistas, Concesionaria Españo-la, S.A.	IBEX 35	Infrastructure
ACS	ACS, Actividades de Construcción y Servicios, S.A.	IBEX 35	Construction
ACR	Aceralia Corporación Siderúrgica, S.A.	IBEX 35	Steel
ACX	Acerinox, S.A.	IBEX 35	Steel
AGS	Agbar, Sociedad General de Aguas de Barcelona, S.A.	IBEX 35	Water
ALB	Corporación Financiera Alba, S.A.	IBEX 35	Investment hold-ing
ANA	Acciona, S.A.	IBEX 35	Infrastructure
ARG	Argentaria, Caja Postal y Banco Hipotecario, S.A.	IBEX 35	Banks
AUM	Autopistas del Mare Nostrum, S.A., Concesionaria del Estado	IBEX 35	Infrastructure
BBV	Banco Bilbao Vizcaya, S.A.	IBEX 35	Banks
BCH	Banco Central Hispano, S.A.	IBEX 35	Banks
BKT	Bankinter, S.A.	IBEX 35	Banks
CAN	Hidroeléctrica del Cantábrico, S.A.	IBEX 35	Electricity
CTE	Centros Comerciales Continente, S.A.	IBEX 35	Retailer
CTG	Gas Natural SDG, S.A.	IBEX 35	Oil and gas
DRC	Dragados y Construcciones, S.A.	IBEX 35	Construction
ELE	Endesa, S.A.	IBEX 35	Electricity

FCC	Fomento de Construcciones y Contratas, S.A.	IBEX 35	Construction
FER	Grupo Ferrovial, S.A.	IBEX 35	Construction
IBE	Iberdrola, S.A.	IBEX 35	Electricity
IDR	Indra Sistemas, S.A.	IBEX 35	Electronic and electric equipment
MAP	Corporación Mapfre, Compañía Internacional de Reaseguros, S.A.	IBEX 35	Insurance
NHH	NH Hoteles, S.A.	IBEX 35	Hotels
POP	Banco Popular Español, S.A.	IBEX 35	Banks
PRY	Centros Comerciales PRYCA, S.A.	IBEX 35	Retailer
PUL	Puleva, S.A.	IBEX 35	Food producers
REP	Repsol, S.A.	IBEX 35	Oil and gas
SCH	Banco Santander, S.A.	IBEX 35	Banks
SOL	Sol Meliá, S.A.	IBEX 35	Hotels
TAB	Tabacalera, S.A.	IBEX 35	Tobacco
TEF	Telefónica, S.A.	IBEX 35	Telecoms
TPZ	Tele Pizza, S.A.	IBEX 35	Food producers
UNF	Unión Eléctrica Fenosa, S.A.	IBEX 35	Electricity
URA	Uralita, S.A.	IBEX 35	Building materials
VAL	Vallehermoso, S.A.	IBEX 35	Construction
VIS	Viscofan, Industria Navarra de Envolturas Celulósicas, S.A.	IBEX 35	Cellulose casings
AMS	Amadeus Global Travel Distribution, S.A.	IBEX NM	Travel distribution
AMP	Amper, S.A.	IBEX NM	Electronic and electric equipment
TPI	Telefónica Publicidad e Información, S.A.	IBEX NM	Telecoms
TRR	Terra Networks, S.A.	IBEX NM	Telecoms

ZEL	Zeltia, S.A.	IBEX NM	Pharmaceutical / Biotech
ANZ	Allianz AG	EuroStoxx 50	Insurance
AVT	Aventis SA	EuroStoxx 50	Pharmaceutical / Biotech
DAN	Groupe Danone	EuroStoxx 50	Food producers
DCR	DaimlerChrysler AG	EuroStoxx 50	Automobile
NOK	Nokia Corp.	EuroStoxx 50	Information technology

Table 1: Companies in the research sample

In this table appear 46 companies. However, at the beginning of the research period two IBEX 35 companies merged (Banco Santander, S.A. and Banco Central Hispano, S.A.) to form the new company Banco Santander Central Hispano, S.A. (SCH). This research uses data from both entities to determine the shareholder value orientation of Banco Santander Central Hispano, S.A. but treats both companies apart from that as one.

Some companies disappeared during the research period and / or changed their name after a merger or an important acquisition. However, initial codes are kept unchanged throughout this doctoral thesis. Decisive for the determination of that code is the answer to the question who of the two merger partners is the economically dominant one.

- Autopistas del Mare Nostrum, S.A., Concesionaria del Estado (AUM) became AUREA Concesiones de Infraestructuras S.A.C.E.

- Banco Bilbao Vizcaya, S.A. (BBV) and Argentaria, Caja Postal y Banco Hipotecario, S.A. (ARG) merged to be Banco Bilbao Vizcaya Argentaria, S.A. For the purpose of calculating the shareholder value

creation of the new company continuity of BBV is assumed in accordance with the real economic weigh of the two companies.

- The two French retailer groups Carrefour SA and Promodès SA merged being Carrefour the economically dominant part. After the merger of the two parent companies the new group merged also its two listed Spanish subsidiaries Centros Comerciales Pryca, S.A. (PRY) (former Groupe Carrefour) and Centros Comerciales Continente, S.A. (CTE) (former Groupe Promodès) and renamed the new company Centros Comerciales Carrefour, S.A. Again, economic dominance (on group level) was the argument to maintain the PRY code and base the calculation of shareholder value creation on Pryca data.

- Puleva, S.A. became Ebro Puleva, S.A. (PUL) after its merger with Azucarera Ebro Agrícola, S.A.

- The French tobacco group Saita and the Spanish tobacco group Tabacalera merged, and renamed in Altadis, S.A. (TAB).

- Aventis SA is the result of the merger between the French Rhône-Poulenc Groupe and the German Hoechst AG being the French the stronger partner (database Rhône-Poulenc).

The analysis of shareholder value orientation bases on information that comes directly from the researched companies. Since the annual report is an official and the most comprehensive medium by which a firm informs its shareholders about the development of their investment those

documents should contain sufficient information about firms' strategies and measures to increase and maximize shareholder value. The elected companies belonging to the most important in Spain and Europe can be supposed to be particularly observed and studied by investors and analysts, so their annual reports may be most suitable for the purpose of this research. However, since companies are to a large extent free to design their annual reports a questionnaire was sent to the Chief Executive Officers of all of these companies in order to obtain additional information and further explications (see annex 7.2)**.** Chapter 3 contrasts statements coming from annual reports and questionnaires with theoretical findings derived in chapter 2 and scores the shareholder value orientation of each company.

The primary objective of this doctoral thesis is to find out whether or not shareholder value orientation materializes finally in shareholder value creation. Therefore, it is necessary to quantify also the creation of shareholder value. Chapter 4 develops a model that takes share prices of the sample companies during the research period 1998 – 2000 and calculates for each company a rate of value creation. **Assuming that an efficient market reflects all available information in the share price at every moment, research periods concerning the orientation and creation of shareholder value must be identical.** So, starting point is the last quotation of the financial year 1998 set as 100% price level for each share. Then, twelve share prices of the following three years, namely the final prices of each calendar quarter, are taken to determine **the average relative value creation that is fit to be compared directly to the value creation of other companies.**

If shareholder value orientation leads to shareholder value creation, then a positive relation between both magnitudes should become evident when a statistical analysis is carried out. Chapter 5 **examines by means of a regression analysis in how far shareholder value orientation explains the creation of shareholder value. The zero hypothesis that value orientation is not related to shareholder value creation can be rejected. Shareholder value orientation determines shareholder value creation by between 15.9% and 23.4% depending on the inclusion or omission of information coming from questionnaires in the calculus of shareholder value orientation.**

Finally, chapter 6 summarizes the results of this research and makes some proposals for further researches.

2. THE THEORETICAL FUNDAMENT OF THIS RESEARCH: THE ROOTS OF VALUE CREATION

The present chapter lays the theoretical foundations for the following empirical analysis. It is not intended to discuss and evaluate different theoretical approaches or review financial literature regarding the different variables. This chapter rather reflects the "state of the art" rendering the results of scientific research or the leading opinion(s) as they are prevailing today. The view on the theoretical background is limited to shareholder value implications. Based on these considerations, a huge number of textbooks and articles (in particular those original sources that meant a milestone for financial researches such as the articles of Modigliani and Miller) were examined so as to get the best depiction of a variable's impact on the creation of shareholder value. As a consequence, out of the various hundreds of textbooks and articles, which were consulted, only a relatively small number of authors are cited in this doctoral thesis. In many cases it was also preferred to take over larger passages of some sources instead of quoting various authors. So, a more concise and fluent depiction could be achieved. Although this chapter is a quite large one, it is only thought to fundament the evaluation of shareholder value orientation in the next chapter.

Starting point is a definition and justification of shareholders' and managers' rights and obligations, respectively. The contractual relations between both groups of stakeholders derive out of it: shareholders employ managers to maximize that value of the firm that is attributable to the owners. A precondition to create shareholder value is the determination of the value of a firm (pre-

sented in subchapter 2.1) and measurement of changes (increase or decrease) of shareholder value (2.2). For this purpose executives must know the levers, which influence value creation. The identification of these value drivers is the result of a preliminary empirical research of this thesis (Hecking 2000): In a first approach the 1998 annual reports of the companies which formed part of the selective share index IBEX 35 as per July 1st, 1999, were taken in order to find out which value drivers are considered important by the firms. The following table shows the findings listing in the left column possible value drivers as suggested by a first review of mentioned annual reports. The right column comments the treatment of the empirical results after contrasting them with the theory: A lot of value drivers detected in this first review of the 1998 annual reports were identified as very significant, and will be treated as shareholder value variables in the scope of this research. Some value drivers can be considered as part of a shareholder value variable. Others did not appear to be interesting for this research since there are only very few companies which cite these value drivers, or the value driver is not concrete enough, or there is not a theoretical background so that the importance of the value driver can not be determined.

Value driver	Treatment
diversification	treated in the context of *risk management*
dividends	variable *dividend payments and dividend policy*
competitive advantages	variable
liquidity of shares	variable
corporate restructuring	treated in the context of *corporate control: mergers and alliances*, if not an internal restructuring only

improvement programs	to many aspects, every company has another understanding of this value driver
buy back of own shares	treated in the context of *dividend payments and dividend policy*
capital increases	measure that does not constitute a shareholder value variable; consider the background, for example *investments*
cost reductions	must be seen in the broader context of *cost management*
risk management	variable
leadership	depends on the specific context, most times a means to achieve *competitive advantages*
profitability	theoretical deficiencies
Research and Development	little information about shareholder value impact in annual reports, sometimes treated as *investment*
going public	treated within the context of the variable *liquidity of shares*
real options	important concept within the context of *managerial and organizational flexibility*
success factor staff	part of the variable *human resources*
increases of productivity	depends normally on *investments*
company strategy	to dispose of a corporate strategy is a necessary underlying of the correct application of most variables
creation of shareholder value as an objective	variable *general attitude towards the creation of shareholder value*
growth of … (everything imaginable that can grow)	variable *growth*
mergers	within the context of *corporate control: mergers and alliances*

managers' remuneration	*human resources*
tax policy	very important, but in all not enough explanations in annual reports
alliances	within the context of *corporate control: mergers and alliances*

Table 2: Preliminary identification of value drivers

Summing up, eleven shareholder value variables were identified to be crucial for the creation of value:

General attitude towards the creation of shareholder value
Investments
Managerial and organizational flexibility
Human resources
Dividend payments and dividend policy
Growth
Corporate control: mergers and alliances
Liquidity of shares
Risk management
Cost management
Competitive advantages

Table 3: Shareholder value variables

Subchapter 2.3 presents the current theoretical knowledge of every variable[1] but the first one (*general attitude towards the creation of shareholder value*) which does not need theoretical explanations. These theoretical findings

[1] In the context of the introduction of this chapter "value drivers" have been considered as candidates to be "shareholder value variables" for semantic reasons. From now on, both terms have the same meaning in the sense of "shareholder value variable".

will be the valuation basis in the next chapter which quantifies the companies' orientation towards the objective of value creation for shareholders.

2.1. THE VALUE OF SHAREHOLDERS' INVESTMENT IN A FIRM

A company is an economic entity based on the initiative of its owner (who holds the company, or – if there is more than one owner – who hold shares of the company, shareholders) aiming at selling goods and/or services in a market in order to obtain an income. Shareholders may direct the company themselves or, as it is usual when there are a lot of shareholders, they delegate this function to managers so that those agents act on their behalf.

This initiative requires from shareholders to make available certain financial resources, for example in order to buy machinery for production. Banks may help owners by lending them money to establish, maintain, and extend their business. But they limit the period of conceding credits, and claim interests and the security to get their money back after the agreed lending period even if the business fails. So, the second function of shareholders' investment is to take risk.

Shares or stocks, terms that will be used synonymously in this doctoral thesis, represent that part of a firm's value which is attributable to its owners (shareholders). This is precisely the whole value of the firm less the part that belongs to other stakeholders which have contracts with shareholders to provide some input and will be remunerated for that. There are employees, suppliers, or banks, and those who are entitled to impose by virtue of their legal status contributions on the company, as for example the state or commercial chambers. Likewise belongs to shareholders that part of the current income which

remains after paying the rest of stakeholders: invoices of suppliers, interests, taxes, salaries, and others. This income attributed to shareholders may be positive or negative. Whereas people that deposit their money in bank accounts opt to receive a fixed income which is exactly computable, shareholders aim to maximize the return on investment. The return may consist in revaluations of the share value, dividends and other pay-outs.

In order to determine which facts, policies, measures, behaviors, and other magnitudes of influence affect shareholders' wealth, it is necessary to derive the firm's.

Financial analysts have created a lot of different methods to determine a firm's value. Some are based on the balance sheet; others are based on the profit and loss statement. There are also "mixed methods" that make special reference to the goodwill. Another approach calculates a firm's value as the sum of its different businesses, the so-called "break-up value". However, the methods, which prevail nowadays, are based on discounted expected future cash flows. (Fernández 1999: 24)

Shareholders' equity as stated in the balance sheet, or after adjusting assets and liabilities for market values, liquidation value and substance value (the investment necessary to construct a company identical to the one that is for valuing) are traditional metrics rooted in the firm's balance sheet. They are static measures which do not take into account possible future developments of the enterprise, the time value of money, and other factors as, for example the current situation of the sector in which the firm operates, problems with human

resources, organization, contracts, and other circumstances that are not reflected in the company's accounts. (Fernández 1999: 25-27)

Methods based on the profit and loss statement take magnitudes as profit, dividends, or sales to compute firm's value. Frequently, cement companies are valued by multiplying their annual production capacity in tons by a coefficient, or insurance companies by multiplying premium income by a coefficient. Also methods based on price earnings ratios belong to this category of firm valuations. (Fernández 1999: 27-34) These methods are also very static. They are founded on past experiences but cannot be justified and substantiated objectively. Moreover, the benefit of a company is to a large extent an arbitrary magnitude because the valuation of expenses and, partly as well, the valuation of revenues is due to (subjective) hypotheses of accounting standards.

The mixed method of valuation takes net assets from the balance sheet (gross assets less liabilities) and adds the "goodwill", in this case defined as a multiple of net benefits or as a percentage of sales income. There are many variants of this method that use more or less complicated formulas, all of them combining figures obtainable from the balance sheet and the profit and loss account (see, for example, Fernández 1999: 34-38) These methods seem to be more sophisticated, but in the end, they share all the problems inherent in methods which refer only to the balance sheet or the profit and loss account. Principal shortages are the omission of the value components future and risk.

Therefore, the most adequate method (or family of methods) bases on discounted expected future cash flows since the value of a firm is founded on its

capacity to generate money for shareholders in the future and cash flows are objective data unlike the more arbitrary benefit of a firm.[2]

The net value of a company attributable to shareholders is the value of the firm less its debts. The total value can be split into three components:

1. The discounted value of the cash flow proceeding from the firm's activities during the planning period.

2. A "residual value" which represents the discounted value of the period following the forecast horizon.

3. The market value of all assets and investments that do not generate cash flow and could be sold.

In order to determine future cash flows one can proceed on the assumption that total sales of the previous period are the basis for next period's sales:

$$\begin{aligned} &\textit{cash flow} = \textit{cash in} - \textit{cash out} = \\ &[(\textit{turnover previous year}) \cdot (1 + \textit{percentage of growth of turnover}) \cdot \\ &(\textit{operating margin}) \cdot (1 - \textit{tax rate on profit})] \\ &- (\textit{incremented part of investments in fixed and current assets}) \end{aligned}$$

Here, the operating margin is defined as the ratio of profit of exploitation before interests and taxes on sales. Costs of sales and administration, and those costs of amortization that do not implicate spending of money have to be deducted to calculate the profit of exploitation.

[2] The following mathematical analysis of the shareholder value summarizes Rappaport (1998): 59-80.

The incremental part of investments in fixed assets is that amount which exceeds the costs of amortization. In other words:

incremental part of investments in fixed assets =

total investments in fixed assets - costs of amortization

There exist two common methods to calculate the cost of capital to determine the correct discount rate applied to expected payoffs in order to get the net present value. One method computes the weighed cost of shareholders' equity and liabilities. Both forms of financing have to be weighted according to the forecasted proportion in each planning period. The rate of capital costs of own funds can be assumed to be as the expected returns on the share price:

costs of own funds = risk-free interest rate + β · (*expected profitability - risk-free interest rate*)

β refers to the factor that quantifies the risk in the Capital Asset Pricing Model derived by William F. Sharpe (1964), John Lintner (1965), Jan Mossin (1966), and Jack Treynor (unpublished).[3]

The other method has been developed by Stewart C. Myers, professor at Massachusetts Institute of Technology (Brealey, Myers 2000). He evaluates an investment as if it would have been financed totally by own funds. Then he proceeds to evaluate separately the secondary effects of financing as, for example, the fiscal deduction of interests or subsidized financing.

Both methods lead to the result that only investments, which produce profitability above the cost of capital, contribute to increase shareholders' value.

[3] The model is explained in more detail in the context of shareholder value variable *risk management* (2.3.8.1.2.1).

Despite the fact that the “residual value” often represents a major portion of the company’s value, there does not exist a formula to calculate it. A precise analysis of the expected competitive position at the end of the planning period is necessary.

In any case, if the liquidation value of a company exceeds the value of the discounted future cash flows, the former value has to be based on the calculation of the firm’s value.

This computation is absolutely correct if managers surely realize all projects as planned. However, environmental conditions may alter in the course of time such that a company decides to adapt its strategy to the new conditions. Trigeorgis calls “real options” the possibilities “to defer, contract, shut down, or abandon a capital investment” which may “occur naturally” or actions that “may be planned and built in at some extra cost from the outset (e.g., to expand capacity or build growth options, to default when investment is staged sequentially, or to switch between alternative inputs or outputs)”. (Trigeorgis 1996: 4) These options can be valued with the tools of the option pricing theory based on the conceptional foundations developed by Fischer Black and Myron Scholes (1973). Since options represent rights without obligations, their value has to be added to the net present value of a static project (planning status at the time when the project's value is determined) as described above.

The example of a growth option (taken from Trigeorgis 1996: 344-347) illustrates the importance of real options: A pharmaceutical project may generate the cash flows (in million $) c_0=-500; c_1=100; c_2=200; c_3=300; c_4=400 during the period [t_0;t_4]. If the cost of capital is k=20%, the net present value is V_0=-56. Un-

der these conditions management would reject the project because it would lessen shareholders' value. Maybe there is an opportunity to extend the lifetime of the project by an additional investment of $c_{4,2}$=-1,500 in t=4 that prospects to generate cash flows of c_5=300; c_6=600; c_7=900; and c_8=300 in the following 4 periods [t_4;t_8]. If the market conditions keep unchanged until the end of period 8, the negative net present value in t_0 would increase and total V_0=-127. However, conditions can change. Suppose that the standard deviation for the future cash inflows is σ=35% and the risk-free interest rate is r=10%. Then the value of the option to grow with an exercise price of E=1,500 is C=71 applying the option pricing formula derived by Black and Scholes. As a result the total net time value of the project turns to be positive: V_0=-56+71=15 and the management should undertake the initial investment payout.

One purpose of this subchapter has been to portray real options as a crucial component of the firm value. Because of the great importance that real options have for shareholder value creation the variable *flexibility* will be treated in an own section later (2.3.2).

In this doctoral thesis the definition of the net present value includes the value of real options.

To summarize, the measure for the orientation towards shareholder value of a company is the readiness and capability of its management and staff to maximize at every time and on all account the firm's net present value.

2.2. PERFORMANCE MEASUREMENT

As discussed above, a company's foremost (financial) objective should be to increase its value. Therefore, internal (managers) and external (investors

and analysts) interested parties seek for instruments to make created wealth transparent. A lot of performance measures are used for this purpose in practice. This subchapter examines whether or not they are appropriate in the sense of cohesion with the findings of subchapter 2.1. A second requirement should be that a fitting performance measure is operational for both firm insiders and firm outsiders. Section 2.2.1 presents and critically analyses the most popular and used traditional metrics of company performance. Section 2.2.2 introduces the EVA®™ concept as a representative of a new generation of performance metrics. Section 2.2.3 discusses *general* implications for the creation of value derived from findings about correct performance measurement. *Special* implications for the eleven shareholder value drivers – of course coherent with the general implications – will be presented in chapter 3.

2.2.1. Some traditional metrics

This section summarizes the analysis of traditional indicators of shareholder value creation developed in Amat 1999: 15-29. The use of other sources is explicitly mentioned.

2.2.1.1. Stock prices

The stock price seems to be an objective and easily obtainable indicator if the joint stock company is listed on a stock exchange since the market takes into account all relevant parameters such as published information about current and expected future projects, the risk of the firms operations, and liquidity generated by the company. Profitability is easy to calculate: increment or reduction of the share price plus dividend payments plus other (bonus) payments plus value of coupons for capital increases (rights). One of the most significant disadvantages of the metric is that the majority of the companies is not listed. For

example, out of the about two million enterprises in Spain just 600 are listed. Often, stock price movements are driven by forces that have nothing to do with the concrete management of executives and cannot be influenced by them (for example market cracks). So, stock prices are only on the long term a reference figure for executives to control their managerial success. (Amat 1999: 15-17)

2.2.1.2. Net income

It speaks for this metric that it is easy for everybody to understand it. Furthermore, net income can be calculated for subunits like divisions in order to obtain not only an indicator of success of the company as a whole but also of its profit centers. On the other hand it is easy to manipulate net income by directors since legislation allows them to make use of generous leeway of accounting principles. Accounting principles vary from country to country so that net profits of, for example, two identical companies *ceteris paribus* in two different countries are not comparable. Calculated benefits only reflect past performance but do not consider future perspectives and expectations. Also, net benefits do not show the risks of the firm's operations that may be inadequately high. Finally, net income does not indicate if investments gain their capital costs. (Amat 1999: 17-19) Also, "empirical research suggests that cash flow, not accounting earnings, is what drives share performance." (Copeland, Koller, Murrin 2000: 55)

2.2.1.3. Dividend payments

A dividend payment is as well a very clear metric. But it shares most of the inconveniences of the metric "net income". Furthermore, firms use to pay out only certain part of the benefits as dividends. This part normally depends on the short-time financial interests of management and the tradition of the firm's dividend policy. Sometimes accounting principles allow to pay out a dividend although the company realizes losses in fact. On the other hand, highly profitable and successful firms sometimes do not pay dividends in order to use the resources to finance internally promising investment projects. (Amat 1999: 19, 20) A good example is Telefónica, S.A. The company's stock price reacted positively on the announcement of its president to cut dividends for the purpose to use the money for attractive investment opportunities.[4]

Dividends, therefore, is not a suitable *performance metric*. Dividends as *shareholder value variable* are analyzed in section 2.3.4.

2.2.1.4. Cash flow and free cash flow

Cash flow is calculated by adding to net income all costs that do not generate cash outs like amortizations, depreciations, impairments of fixed assets or increases / decreases of pension liabilities and similar obligations. As cash flow is derived from net benefits it shares most of the disadvantages of that metric. Free cash flow rests from cash flow necessary investments to maintain the capability to going concern. The so called "free cash flow for shareholders" rests from the free cash flow financial costs and adds new credit cash ins. This metric shows better the generation of liquidity. It is the best measure to evaluate an

[4] Now, in 2002, the scenario has changed and the company considers returning to dividend payments.

enterprise although the disadvantages of the net income calculus remain inherent. Also, managers could be incited to take too many credits and wait too long with needed investments if they do not pay shortly. So, the firm's competitive standing may be weakened. (Amat 1999: 21, 22)

2.2.1.5. Return on investments

Return on investment is usually computed as *ROI = benefits before interests and taxes / assets*. Unfortunately, this metric does not consider capital costs and operating risks. It may cause managers to act against the interests of shareholders if they shorten investments which do not pay on the short term or invest in projects that improve return on investment but do not earn their capital costs (most likely if the return on investment is very small before investing newly). Furthermore, it is hard to evaluate assets of certain age. Recently acquired assets may have higher book values than old ones. This inconvenience affects chiefly real estates and buildings. (Amat 1999: 22-24)

2.2.1.6. Return on equity

The return on equity (*ROE = net income / own funds*) is a relatively transparent metric and fair independent from stock exchange movements. It can be used to measure the opportunity costs of shareholders. The metric permits to evaluate positively all investments with their capital costs and leads managers to act as if they were shareholders. Besides the problems of net incomes discussed above also the calculus of the equity is problematic since accounting figures normally do not consider inflation effects. The balance sheet shows, for example, the subscribed capital with the same amount as it stated at the moment when it was paid in, may be at the foundation of the company 30 years

ago. Finally, it is hardly possible to compute ROEs for subunits as divisions, especially if they were installed at different times. (Amat 1999: 24, 25)

2.2.2. EVA – a theoretically founded metric

All the traditional metrics discussed in section 2.2.1 have in common to be easily computed and understood. However, they show serious limitations and deficiencies if one uses them as performance metrics that measure the creation of shareholder value.

In order to provide a performance measure that is more generally applicable and results consistent with the NPV criterion (see subchapter 2.1) some consulting firms like McKinsey or Stern Stewart Management Services developed instruments which compute figures that are highly correlated with the created shareholder value. The most known formula is Stern Stewart's EVA®, the Economic Value Added:

EVA = net operating profit after-tax – (weighted average cost of capital) · (adjusted book value of net capital)

So, EVA can be defined as the residual amount after deducting from incoming revenues the totality of costs including capital opportunity costs and taxes. Therefore, EVA considers the productivity of all factors utilized in order to develop entrepreneurial activities. (Amat 1999: 32)

However, the determination of "net operating profit after-tax" and the adjustment of "book value of net capital" are magnitudes that depend on the concrete interpretation of the generally accepted accounting principles (GAAP) which themselves may vary from country to country. Regarding the US-GAAP

Stern Stewart detected the necessity for more than 120 corrections to obtain a theoretically faultless EVA calculation but find it sufficient to make only 15 to 25 adjustments in practice. (Stern, Stewart, Chew 1998: 483)

These adjustments must not considered to be static since GAAPs are subject to a permanent evolution, and managers dispose of certain leeway to interpret accounting principles giving them a possibility to alter, for example, consumption sequences or amortization periods. Firm auditors can play an active role to assure that EVA will be computed correctly and that managers do not abuse of the GAAP inherent grades of freedom.

In order to give an idea what kind of adjustments have to be made, some of the most common corrections are (Amat 1999: 33):

- Stocks have to be valued according to the FIFO method.
- Expenditures of research and development activities may not be counted as costs.
- Provisions for outstanding debts (trade receivables) must not be rested from assets.

The conception of EVA allows directors to apply the performance measure also to sub-entities of a company.

2.2.3. General approaches to enhance performance

Before discussing and presenting eleven highly important value drivers (variables which influence decisively creation of shareholder value) in the next subchapter, five basic strategies to improve EVA (Amat 1999: 36-39) are listed

briefly in this short section in order to set a theoretical framework for further analyses:

1. EVA increases when the efficiency of existing assets is enhanced. The company can increase the sales margin or the rotation of stocks in order to generate more cash, but without new investments. On a divisional level, investing in EVA generating divisions and divest in value destroying entities belongs to the same sort of strategy.

2. If possible fiscal pressure should be reduced taking into account in every decision the fiscal consequences.

3. Investments in assets, which generate profitability above capital costs, increase EVA.

4. If the same result can be achieved by less assets, those unproductive assets should be sold.

5. Also the reduction of capital costs is a shareholder value efficient strategy. The interests a company has to pay depend certainly on market conditions but also on the management's capability to negotiate with banks. The reduction of risk also reduces capital costs.

Since the five basic strategies are compatible to each other executives should try to pursue all of them.

2.3. SHAREHOLDER VALUE DRIVERS

While subchapter 2.1 offered a theoretical basis for the determination of a firm's value, subchapter 2.2 analyzed performance measures concerning their cohesion with theoretical requirements. On this basis, the present subchapter pretends to offer a "short" presentation of the theoretical background of ten[5] of the most influential variables that contribute to the creation of shareholder value. Each section treats one variable, or, in other words, one shareholder value driver. It will theoretically be determined (in) how (far) the variable influences the creation of shareholder wealth.

2.3.1. Investments

Investments are the very basis of every enterprise. *Investments* as a shareholder value variable is defined here as a capital expenditure that serves to acquire a fixed intangible asset (for example, a license such as a computer software), tangible asset (for instance, a machine for production or a factory building) or financial asset (maybe a minority share in another company that is not consolidated in the balance sheet), or a research and development expenditure. The characteristic of an investment is its long-term orientation. That means that the acquired good or right, or knowledge in case of a R&D expenditure, is not foreseen to be consumed in production or sold as merchandise (although that may happen occasionally if the fixed asset could also be a current asset, for example a personal computer if the manufactured good determined to be sold as merchandise contains a personal computer).

[5] Shareholder value variable *General attitude towards the creation of shareholder value* does not need further theoretical explanations.

The same basic rules of shareholders' investment decisions presented in subchapter 2.1 apply also when making an investment decision in the firm so that this section can build on the knowledge of the cited introduction chapter. The present section focuses on the creation of shareholder value through the selection of the right investment projects as part of a corporate strategy oriented towards the increment of shareholders' wealth (2.3.1.1) and treats the capital budgeting process as investment controlling also destined to help creating shareholder value (2.3.1.2).

2.3.1.1. Investment projects

Investments use to be treated by companies as individual projects or sub-projects in the wider context of big investment capital expenditures in order to define, plan, and control them. One important success condition is that the investment fits in the corporate strategy. The other important success condition is that the best project alternative is chosen from the set of possible investment projects that are compatible to the corporate strategy. Both topics are subject of this subsection. At the end of this subsection the special cases of the replacement of fixed assets and international investments are shortly addressed.

2.3.1.1.1. Corporative strategy

Investments are normally an essential part of a corporate strategy. Shapiro (1998) brings corporate strategy and investments together by stating that the objective of a corporate strategy should be "creating and then taking advantage of imperfections in product and factor markets. Thus, an understanding of the strategies followed by successful firms in exploiting and defending those barriers to entry created by product and factor market imperfections is crucial to any systematic evaluation of investment opportunities." (Shapiro 1998: 36

38, 39) In other words, “successful investments (those with positive NPV) share a common characteristic: they are investments that involve creating, persevering, and even enhancing competitive advantages[6] that serve as barriers to entry.” (Shapiro 1998: 40)

Shapiro summarizes five “lessons” for investments that make a corporate strategy successful (Shapiro 1998: 40-45):

1. “Investments that are structured to fully exploit economies of scale are more likely to be successful than those that are not” because “in order to take advantage of scale economies in production, marketing, or new product development, firms must often make enormous up-front investments in plant and equipment, research and development, and advertising. These capital requirements themselves serve as a barrier to entry.”

2. “Investments designed to create a position at the high end of anything, including the high end of the low end, differentiated by a quality or service edge, will generally be profitable.” This theoretical statement means that “it is possible to differentiate anything, even commodity businesses such as fast food, potato chips, theme parks, candy bars, and printing.”

3. “Investments aimed at achieving the lowest delivered cost position in the industry, coupled with a pricing policy to expand market share, are likely to succeed, especially if the cost reductions are proprietary [for example, legally-enforceable patents].”

[6] *Competitive Advantages* is also an independent shareholder value variable (2.3.10)

4. “Investments devoted to gaining better product distribution often lead to higher profitability.” For example, “one way the Japanese drug firms have found to get around this entry barrier is to form joint ventures with American drug firms, in which the Japanese supply the patents and the American firms provide the distribution network.”

5. “Investments in projects protected from competition by government regulation can lead to extraordinary profitability. However, what the government gives, the government can take away.”

2.3.1.1.2. Project selection

Investments should not be undertaken without following a selection procedure that guarantees that the chosen project is the best of all available projects. The evaluation of an investment project is thereby often the most crucial point and will hence be analyzed separately.

2.3.1.1.2.1 Procedure of project selection

“The starting point in any conscious attempt at rational decision-making must be the recognition that a problem or opportunity exists.” (Canada, White 1980: 4) When it becomes clear that an investment solves the problem or converts the opportunity in an increase of the company’s value “five basic elements of a systematic analysis” should be taken into consideration and can be followed as successive steps. They “are: definition of objectives, formulation of measures and effectiveness, generation of alternatives, evaluation of alternatives, [and] selection.” (Canada, White 1980: 5)

A firm committed to create shareholder value declares this always the primary objective of its investment decision. But there are means to that end in form of other objectives such as the realization of a competitive advantage.

The definition of measures of effectiveness is necessary to evaluate an investment project.

Often, managers dispose of various investment alternatives. If those alternatives are not obvious it is worth to develop them. “The need for imagination and creativity in the generation of alternatives cannot be overstated, for its lack is a common defect of many analyses. To emphasize the point, no matter how good an analysis and selection among two or more alternatives is made, if there exists any yet unidentified alternative that is superior to any of the alternatives considered, then the solution will be suboptimal – indeed, it may be drastically less than optimal. The search for alternatives may be thought of as involving two kinds of tasks – the identification of classes or functionally different alternatives and the identification of the most attractive variations or operationally different alternatives for each particular class. For example, a crowded plant space problem might be alleviated by classes of alternatives such as building more space, leasing more space, re-layout of existing space, subcontracting work, reducing product lines, increasing shift work, etc. Within each of these classes of alternatives there may be any number of variations to be considered. The analyst can create great benefits to the organization by ensuring that the problem and objectives are clearly stated. Such statements facilitate the identification of applicable classes of alternatives. Also, variations for each class must be judiciously selected for analysis so that no significantly superior alternative is overlooked or eliminated from consideration.” (Canada, White 1980: 6)

2.3.1.1.2.2 Evaluation of projects

The evaluation of all the found or created investment options is especially crucial since only a correct evaluation assures that shareholder value will be created.

“In comparing investment alternatives a number of different measures of economic effectiveness are often used.” Managers can choose between various analysis methods as there are “present worth, annual worth, future worth, rate of return, [or] benefit-cost ratio.” (Canada, White 1980: 51) Which method the analyst uses depends on his or her personal preferences or additional information that maybe interesting for the company always if and when the method delivers the decision that is coherent with the discounted cash flow postulate.

“Since all of the methods of comparing alternatives that have been considered will yield the same recommendation, an obvious question is which method should be used? … The primary reason for selecting a particular method of comparing alternatives appears to be management preference. Some prefer to express the net economic worth of an alternative as a single sum; hence, either the present worth method or the future worth method is used. Others prefer the annual worth method, since the cash flows are spread out uniformly over the study period; the annual worth is felt, by some, to provide greater insight into the impact of the alternative on annual budgets during the study period. Yet another group prefers to express the probability of an investment in such financial terms as ‘yield on investment’, ‘return on investment’, and ‘percentage return’; a rate of return method would be preferred by such a group. … Organizations sometimes adopt a particular method of comparing investment

alternatives. So long as the method provided a rational basis for comparing investment alternatives, it is recommended that it be used; in this case, rational means that the method yields the same recommendation as would be obtained using one of the discounted cash flow methods." (Canada, White 1980: 100, 101)

"Only cash flows need be considered in determining the economic desirability of an alternative in an economic analysis. Income taxes are relevant cash flows and should be considered whenever their omission may cause the selection of an uneconomical alternative. Although depreciation write-offs are not, in themselves, cash flows, they do affect income taxes, and hence affect cash flows." (Canada, White 1980: 106)

2.3.1.1.3. Replacements

Besides investing in new projects that promise an increase of shareholder value companies also have to replace fixed assets when they are *economically* written off, that is when a replacement increases the firm's value. "Replacement studies are of two general types. The first type involves studies on whether to keep an old asset (sometimes called defender) or to replace the old with a new asset (sometimes called challenger) at a given point in time. The second type involves determining, in advance, the economic service life of an asset. … The economics of replacement can generally be studied by any of the methods used for economic analyses of alternatives; e.g., rate of return, annual worth, present worth, future worth, or benefit-cost ratio. … The formulation of a replacement policy plays a major part in the determination of the basic technological and economic progress of a firm. Undue or hasty replacement can leave a firm pressed for capital that may be needed for other beneficial uses. Fur-

thermore, if replacement is postponed beyond a reasonable time, the firm may find that its production costs are rising; whereas, the costs of its competitors who are using more modern equipment are declining. This can result in the firm's loss of ability to meet price competition and a consequent technological and economic trap of drastic consequences." (Canada, White 1980: 142-146) So, the special challenge of a replacement is to find the optimal moment for the investment.

2.3.1.1.4. International investments

When a company plans to invest internationally it usually faces a major capital expenditure. Furthermore, investment project is often more complex.

"The ability to pursue systematically policies and investments congruent with worldwide survival and growth depends on four interrelated elements.

1. The first, and the key to the development of a successful global strategy, is to understand and then capitalize on those factors that have led to success in the past. In order for domestic firms to become global competitors, therefore, the sources of their domestic advantage must be transferable abroad. A competitive advantage predicated on government regulation, such as import restrictions, clearly doesn't fit in this category.

2. Second, this global approach to investment planning necessitates a systematic evaluation of individual entry strategies in foreign markets, a comparison of the alternatives, and selection of the optimal mode of entry.

3. The third important element is a continual audit of the effectiveness of current entry modes. As knowledge about foreign market increases, for exam-

ple, or sales potential grows, the optimal market penetration strategy will likely change.

4. Fourth, top management must be committed to becoming and/or staying a multinational corporation. Westinghouse demonstrated its commitment to international business by creating the position of President-international and endowing its occupant with a seat on the company's powerful management committee. A truly globally-oriented firm – one that asks, 'Where in the world should we develop, produce, and sell our products and services?' – also requires an intelligence system capable of systematically scanning the world and understanding it, along with people who are experienced in international business and know to use the information generated by the system." (Canada, White 1980: 50, 51)

2.3.1.2. The capital budgeting process as investment controlling

Shareholder value oriented investment policy does not limit itself to prepare the optimal decisions to realize investment projects. Rather, only those companies which establish the complete controlling cycle – planning, realization, control of deviation, and if necessary corrections – will maximize their shareholder value. In this doctoral thesis capital budgeting is defined in that broad sense that encompasses all the phases of investment controlling.

When the planning phase is concluded and the decision for a concrete investment is made, the project has to be financed. Under perfect market conditions capital structure, that is the proportion of equity and liabilities, does not matter since capital costs are always the same when the investment decision is taken. If the proportion of own funds rises, risk also increases so that the capital

costs of own funds go up. In the case of incremented debt, lenders will ask for a higher risk premium. (Modigliani, Miller 1958) However, perfect market conditions do not exist in reality. Fiscal incentives may favor one of the financing alternatives. Or in the case that a company does not have access to the capital market (because it lacks volume of debt required or is not rated), it negotiates with banks and/or leasing companies and may find very different conditions to finance the investment project. Therefore, the second step of the capital budgeting process (realization) is also very important with respect to the objective creation of shareholder value.

Once an investment is made the project evolves as planned or deviates from the plan, because, for instance, the market environment changes.[7] In order to react on time the project must be revised permanently. Therefore, "the provision of a system for periodic postmortem reviews (post-audits) of the performance of consequential projects previously authorized is an important aspect of a capital budgeting system. That is, the earnings or costs actually realized on each such project undertaken should be compared with the corresponding quantities estimated at the time the project investment was committed." (Canada, White 1980: 233)

Financial literature recommends to begin post-audits as soon as the first pay-out is accounted and not to wait until the investment process is closed. For example, Clark, Hindelang and Pritchard (1989) propose to split the control "into two major categories" or phases:

---

[7] Managerial *flexibility* in both dimensions, the attitude of executives and the real options executives have when they manage investments flexibly, is a separate shareholder value variable that is analyzed in the following section 2.3.2.

1. “The review and control of projects in the process of being implemented. These are called *in-progress* projects. This review and control entails auditing the cash outflows related to the acquisition of the project. This process results in information of cost underruns or overruns.

2. The review and control of projects as they are used in the firm’s operations. This entails auditing the benefits generated by the project, as well as the operating expenses incurred as the project is used. The goal is to determine the cash flows generated over the life of the project.” (Clark, Hindelang, Pritchard 1989: 510)

Finally, when the investment project is finished a post-completion audit should take place. Clark, Hindelang and Pritchard (1989: 511) detect four benefits for companies who audit projects after completion:

1. “The audits provide an on-the-scene verification of the profitability or savings generated by the project. The audit attempts to isolate the effects of the project under study as far as possible. The auditor, as part of his or her investigation, should seek out reasons why projects turned out either significantly more or significantly less profitable than projected on either an absolute dollar or a percentage basis.”

2. “Divisions and managers are more likely to act in their own (as well as the organization’s) best interests relative to the implementation and operation of new capital projects if they realize that post-completion audits will be performed and that they will be held accountable for the results.”

3. “The post-completion audit is beneficial in identifying the causes of difficulties in project implementation and/or operation. The variances of actual re-

sults from projected results raise questions that demand explanation and point to possible areas where breakdowns may have occurred. The insight here will often suggest corrective action that should be taken or point to alternative courses of action (including the possibility of project abandonment) that should be explored."

4. "The results obtained through post-completion audits provide managers of divisions – as well as the members of the capital budgeting review committee – with information that should be helpful in evaluating similar projects in the future. Audits enable organizations to learn from past successes and difficulties so that their operations will be more effective and efficient in the future."

2.3.2. Managerial and organizational flexibility

Flexibility has become one of the key words in business management during the last 20 years. Flexible production processes, just-in-time logistics, or flexible working hours (flexitime) are just a few examples of flexibility that helps companies to reduce costs and hence increase wealth and shareholder value. Lean organizations and flat hierarchies serve for the same objective. But flexibility is not only a characteristic on a tactical level. Managers proceed flexibly as well in the formulation and implementation of strategies. The environment is too complex that executives could foresee all possible future events and circumstances that allow them to formulate a strategy at first and afterwards to implement it. "Hence it is logical that one proceed[s] flexibly and experimentally from broad concepts towards specific commitments, making the latter concrete as late as possible in order to narrow the bands of uncertainty and to benefit from the best available information." (Quinn 1980: 56)

Apart from the cost optimizing character of flexibility that may represent a significant part of the shareholder value the uncertain future provides flexible managers with “real options” which can be even more decisive for shareholders’ wealth, as has been shown in subchapter 2.1. However, real options are not traded in financial markets. Whether their value forms part of the market valuation of a company or to what extent it enters in stock prices depends much upon the quality of management. Flexible organization, production, reactions on changed demands of the market, workforces, or managerial decision-making and implementation of strategies (i.e. exercise the best real option at the right moment) are indicators in what way flexibility is a value driver in a concrete case of a firm. Since real options exist as a potential of value that has to be activated and materialized, lacking flexibility may indicate to investors that a takeover with a subsequent exchange of management could be a profitable deal. In fast growing and high-technological industries like telecommunications the value of managerial flexibility even seemed to include the anticipation of the future generation of real options, since otherwise the exorbitant stock prices registered until March 2001 could not be explained.

However, real options not only constitute a decisive value component that justifies a higher valuation as if it was based solely on static NPV calculation but also are crucial magnitudes on the shareholder value variable *investments*. The little example of a growth option presented in subchapter 2.1 already shows that investment decisions that include real options can be contrary to those that are taken on the basis of traditional capital budgeting procedures only.

This section gives an overview of the most important sorts of real options: situations or pattern of situations that provide managers with valuable degrees of freedom. The following subsections treat those kinds of real options that have been identified by Trigeorgis as the most common. (Trigeorgis 1996: 2, 3)

2.3.2.1. Options to defer

The decision whether or not to defer an investment for x periods of time can be motivated by the nature of the project or by environmental conditions, first of all the evolution of interest rates.

McDonald and Siegel studied “the optimal timing of investment in an irreversible project.” (McDonald, Siegel 1986: 707) To start a project at the first possible point in time implies “uncertainty about the project’s value and the cost of the project” which will be resolved later on. (McDonald, Siegel 1986: 710) The authors showed that “the value lost by sub-optimally adopting a project with zero net present value can easily range from 10 to 20 percent or more of a project’s value”. (McDonald, Siegel 1986: 724, 725) They put the example of a synthetic fuel plant. While “the decision to build the plant is irreversible” and “the plant cannot be used for any other purpose”, “the decision to defer building, however is reversible.” This asymmetry “leads to a rule that says build the plant only if benefits exceed costs by a certain positive amount”. (McDonald, Siegel 1986: 707) McDonald and Siegel indicate that their model to calculate the value of an option to defer an investment they derive in the quoted article can as well be “applied to the scrapping decision. Simulations show that this option value can be significant, and that for reasonable parameter values it is optimal to wait until benefits are twice the investment costs.” (McDonald, Siegel 1986: 707)

Even if a project can assume to be certain concerning its positive cash flows and “the project itself has no option characteristics”, “the ability to delay a project means that almost every project competes with itself postponed”, always if the project is an one-time opportunity that can be taken now or later. (Ingersoll, Ross 1992: 1, 2) The reason lays in the positive probability of a favorable evolution of the interest rates: “In particular, then, even naive investors who ignore the embedded options in their projects and use simple equivalent cash flow projections may well be sensitive to the options inherent in possible changes in financing costs.” (Ingersoll, Ross 1992: 3) The longer a project takes (“duration”), the more volatile is the underlying asset and hence the higher is the value of the option to defer the project. Also the acceptance interest rate decreases with an increasing commitment amount for the project. (Ingersoll, Ross 1992: 10, 11) The third parameter is the uncertainty of the economy: the more uncertain it is, the higher is the value of the option. (Ingersoll, Ross 1992: 12) The authors conclude “that the proper investment rule can be substantially different from the classical NPV rule even for projects that can be postponed only for a relatively short period.” (Ingersoll, Ross 1992: 17) In consequence, “corporate hurdle rates” should be set “above the cost of capital” or in other words, under the stipulated conditions “an investment should not be undertaken until its projected rate of return is substantially in excess of its break-even rate.” (Ingersoll, Ross 1992: 27)

Real options to defer an investment decision occur particularly in “all natural-resource-extraction industries; real-estate development; farming; [and] paper products.” (Trigeorgis 1996: 2)

2.3.2.2. Sequential exchange options to switch and time-to-build

"Sequential exchange opportunities exist whenever an exchange of assets creates the potential for further exchanges." (Carr 1988: 1235) Sometimes various staged options exist allowing one party to exchange repeatedly, to decide whether or not to acquire another asset depending on previous decisions. Peter Carr's article "The Valuation of Sequential Exchange Opportunities" offers a comprehensive overview of sequential exchange options and their valuation. (Carr 1988)

For example, a shareholder of the target firm has a sequential exchange option when receiving an exchange offer of shares being the share of the bidding company an option on its assets. If the shares of the bidding firm and the target firm do not have a constant value relation the shareholder of the target firm has a sequential exchange option. (Carr 1988: 1235) Managers always dispose of sequential exchange options, "if investing in a project unveils further opportunities. " (Carr 1988: 1236) The value of the sequential exchange opportunity is that of a compound option. (Carr 1988: 1236)

The two main sorts of sequential exchange options are options to switch and time-to-build options.

Trigeorgis describes options to switch as "product flexibilities" which allow management to "change the output mix of the facility" "if prices or demand change". "Alternatively, the same outputs can be produced using different types of inputs (process flexibility)." (Trigeorgis 1996: 3) "A flexible manufacturing process adds value to the firm that can be attributed to changes in direct and indirect cash flows, operating flexibilities that enhance the firm's ability to cope with uncertainty, and non-pecuniary effects such as learning value. An evalua-

tion of such an investment must weigh these against the incremental initial investment costs of installing an FMS [flexible manufacturing system].” (Kulatilaka 1988: 250) The management may dispose of “a flexible technology with two modes of operation A and B”. “If switching between modes is costly, though, the decision rule must take into account the effects of a current switch of all future production scenarios. The process describes a set of sequential options that are nested. We can value such options using results from compound-option valuation.” (Kulatilaka 1988: 251) Options to switch are important for “any good sought in small batches or subject to volatile demand (e.g. consumer electronics); toys; specialty paper; machine parts; [and] autos”. (“output shifts”) Input may be shifted in “all feedstock-dependent facilities; electric power; chemicals; crop switching; and sourcing”. (Trigeorgis 1996: 3)

Trigeorgis’ definition of a time-to-build option as the opportunity to “abandon the enterprise in midstream if new information is unfavorable” may be considered as a special case of a sequential exchange option: “Each stage can be viewed as an option on the value of subsequent stages and valued as a compound option. “ These rights are “important in all R&D-intensive industries, especially pharmaceuticals, long-development capital-intensive projects (e.g. large-scale construction or energy-generating plants) [and] startup ventures.” (Trigeorgis 1996: 2) Also when “investment decisions and associated cash outlays occur sequentially over time”, that is “it takes time to build”, “it might pay to go ahead with the early stages of the project even though *ex ante* the net present value of the entire project is negative.” (Majd, Pindyck 1987: 7, 8) Majd’s and Pindyck’s researches on sequential investment decisions in a project with time to build lead to the conclusions that “the effects of time to build are greatest

when uncertainty is greatest, when the opportunity cost of delay is greatest, and when the maximum rate of construction is lowest." (Majd, Pindyck 1987: 25) The authors applied numerical examples to their model in order to evaluate time-to-build options: "The difference between the results of our calculations and those based on a 'naive' application of DCF [discounted cash flow] rules will depend on the parameters of the problem, but […] for very reasonable parameter values, these differences can be large, […] so that the naive DCF rule will be grossly misleading." (Maid, Pindyck 1987: 23)

2.3.2.3. Options to abandon

Options to abandon are similar to time-to-build options as a special variant of the sequential exchange option family. However, while the latter give managers valuable rights to stop initiated projects with partial payouts and save future outlays, options to abandon relate to current projects presuming the investment payout has been fully undertaken: "If market conditions decline severely, management can abandon current operations permanently and realize the release value of capital equipment and other assets on second-hand markets. (Trigeorgis 1996: 2) "The option to abandon a project is formally equivalent to an American put option on a dividend-paying stock: The exercise price of the put is the salvage value of the project; the cash flows from the project are equivalent to the dividend payments on the stock. Also, the project can be abandoned at any time." (Myers, Majd 1990: 3) Myers and Majd define "the salvage value at any time" as "the market value of the asset in its next productive use." (Myers, Majd 1990: 6) If, for example, the "initially forecasted value" of a project is 100, and the value of an option to abandon the project "is about 6% of the project value" then, "if this project requires an initial investment of 100, mak-

ing its NPV without abandonment value zero, the abandonment value makes the project worthwhile." (Myers, Majd 1990: 9)

Options to abandon have a special importance in "capital-intensive industries (e.g. airlines, railroads); financial services; [and] new-product introductions in uncertain markets." (Trigeorgis 1996: 2)

2.3.2.4. Options to alter operating scales

Often, changed conditions do not oblige management to abandon definitely a project but to decline the scale of output or on contrary to increase the operating scale adapting to more favorable market conditions. So, the irreversibly investing firm has to decide about the optimal capacity: "the value of the [ultimate] unit [of capital] must exceed the purchase and installation cost, by an amount equal to the value of keeping the firm's option to invest these resources elsewhere alive – an opportunity cost of investing." (Pindyck 1988: 969) The value of that marginal unit of capacity that the company can utilize or not depends upon the demand of the market. The firm has one option at every future time t_x to produce. If it exercises this option the exercise price will be equal to the production cost. The determinant variable of the option price is the volatility of market demand. However, the conclusion that a firm should increase its capacity the more volatile is the demand is wrong since "uncertainty also increases the value of the firm's investment options, and hence the opportunity cost of irreversibly investing. Although the value of a unit of capacity increases, this opportunity cost increases even more, so the net effect is to reduce the firm's optimal capacity." (Pindyck 1988: 970) Pindyck has found that $\sigma \geq 20\%$ "would not be unusual. Thus an implication […] is that for many firms, the fraction of market value attributable to the value of capital in place should be one-

half or less. A second implication is that this fraction should be smaller the greater is the volatility of market demand." (Pindyck 1988: 979)

McDonald and Siegel (1985) developed "a methodology for valuing risky investment projects, where there is an option to temporarily and costlessly shut down production (with no effect on future prices and costs) whenever variable costs exceed operating revenues", that is they researched the impact of volatile output prices. (McDonald and Siegel 1985: 331) Their principal results are analogous to those of Pindyck (1988):

- "Increases in the variance of the output price can either raise or lower the value of a project. An increase in output price variability raises expected future profits for a given capital stock […], but may lower the present value of a claim on future profits. The net effect depends upon the extent to which cash flows from the project co-vary with other uncertain income streams in the economy." (McDonald, Siegel 1985: 332)

- For a given project with a fixed capital stock, it is possible for claims of uncertain profits several years in the future to have greater current value than claims on uncertain profits in the immediate future. However, claims on profits sufficiently for in the future will always have a current value below that of claims on profits in the near future. (McDonald, Siegel 1985: 332)

Options to alter operating scale have to be taken into consideration above all in "natural-resource industries (e.g. mining); facilities planning and construction in cyclical industries; fashion apparel; consumer goods; [and] commercial real estate." (Trigeorgis 1996: 2)

2.3.2.5. Growth options

Growth options are valuable rights to alter *investment* scales. The example presented in subchapter 2.1 shows that it may be efficient to undertake an early investment although the net present value of the investment is negative. The rationality stems from the possibility to further invest in the project at later stages which turns the net present value of the whole investment to a positive amount because of the volatile future market conditions. To translate this theoretical condition in a practical, Kee H. Chung and Charlie Charoenwong formulate: “Growth opportunities exist when the competitive process that drives the rates of return on capital investment projects toward the firm’s cost of capital is halted or delayed. Generally, the firm can delay the competitive process when there barriers to entry exist arising from economies of scale, product differentiation, brand loyalty, or patents.” (Chung, Charoenwong 1991: 21) “Numerical simulations suggest that for many firms, ‘growth options’ should account for a substantial fraction of market value, and the more volatile is demand, the larger is this fraction.” (Pindyck 1988: 970) Growth options are particularly important in “all infrastructure-based or strategic industries – esp. high tech, R&D, and industries with multiple product generations or applications (e.g. computers, pharmaceuticals); multinational operations; [and] strategic acquisitions.” (Trigeorgis 1996: 3)

2.3.2.6. Multiple interacting options

From the description of several categories of real options in previous subsections it is easy to imagine that managers dispose normally of various real options when investing and have to take them into account in order to avoid decisions that destroy shareholder value. Trigeorgis examined “The Nature of

Option Interactions and the Valuation of Investments with Multiple Real Options." (Trigeorgis 1993) His numerical examples show that "the value of an option in the presence of others may differ from its value in isolation." (Trigeorgis 1993: 13) "Interactions are seen to depend on the type, separation, degree of being in or out of the money, and order of the options involved, factors that impact on the joint probability of exercise. " (Trigeorgis 1993: 18) Generally, "the incremental value of an additional option, in presence of other options, is [..] less than its value in isolation, and declines as more options are present. Therefore, valuation errors from ignoring a particular option may be small. However, configurations of real options exhibiting precisely the opposite behavior are identified." (Trigeorgis 1993: 1)

2.3.3. Human resources

Martín González de Valle y Herrero, Chairman of Hidroeléctrica del Cantábrico, S.A. and its Group titles his letter to the company's shareholders: "Management efficiency was the key factor in obtaining these good results". (CAN 1998: 5)

Indeed, both academic literature and the annual reports of the top Spanish and European companies which compose the sample of this research coincide that personnel plays a decisive role for the success and capability to generate value for shareholders. If managers are able and willing to make the best decisions, to adapt the firm in a flexible manner to permanently changing market conditions and to act always on behalf of shareholders, they have a great impact on firm's net value. Subsection 2.3.3.1 shows that employment contracts and the remuneration system set the course for managers' efficiency.

Working contracts with top executives may be considered as (one of) the most important component(s) of human resource management (HRM) regarding the creation of shareholder value. So, the research on the influence of other HRM-measures such as job rotation, total quality management (TQM), training or promotion rules, is less extensive. Nevertheless, there is no doubt that HRM in general has an impact on organizational performance. Subsection 2.3.3.2 summarizes the corresponding findings of recent academic research

2.3.3.1. Incentives for managers

2.3.3.1.1. Importance of variable remuneration

An increasing number of firms pay some variable bonuses to (top) managers in addition to their fixed income. The variable part of remuneration has the purpose to stimulate executives to pursue firm's objectives in a committed and emphatic way (incentives) and to compensate them for their effort and success (compensation). So, practice and theory talk about compensation and incentive systems. However, the incentive is what conducts managers' behavior whereas the compensation is the result of successful work. (see Stern, Stewart, Chew 1998: 485) Therefore, this doctoral thesis refers to incentives, incentive payments, and incentive systems as parameters in the process of value creation for shareholders.

The framework of the academic incentive discussion is the Agency Theory founded by Adolf Berle and Gardiner Means, who published in 1932 "The Modern Corporation and Private Property", as well as Ronald Coase with his famous article "The Nature of the Firm" (1937).

A very important contribution was made by Michael C. Jensen and William H. Meckling who developed the concept of agency costs in their paper “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure” (1976).

They “define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent. If both parties to the relationship are utility maximizers there is good reason to believe that the agent will not always act in the best interests of the principal. The principal can limit divergences from his interest by establishing appropriate incentives […] In most agency relationships the principal and the agent will incur positive monitoring and bonding costs (non-pecuniary as well as pecuniary), and in addition there will be some divergence between the agent’s decisions and those decisions which would maximize the welfare of the principal. The dollar equivalent of the reduction in welfare experienced by the principal due to this divergence is also a cost of the agency relationship, and we refer to this latter cost as the 'residual loss'.” (Jensen, Meckling 1976: 308) In summary, incentive payments can be interpreted as agency costs that reduce the “residual loss” and have to be assumed by shareholders in order to align managers’ interests with their own.

A review of recent academic literature shows that managers and employees in general respond sensitively to incentives. (Prendergast 1999: 55)

Rappaport writes that remuneration agreements that align the interests of directors with those of the shareholders are fundamental for the process of value creation. (Rappaport 1998: 156)

A lot of empirical researches support this thesis. Banker, Lee and Potter made a field study and found that if “agents are rewarded for performance” the performance increases “persist and increase over time”. (Banker, Lee, Potter 1996: 222)

Groves, Hong, McMillan, and Naughton quote as an example experiences from the liberalization of the Chinese economy: “With autonomy in output decisions and with higher marginal profit-retention rates, enterprises increased their use of bonus payments and hired more fixed-term contract workers. This strengthening of workers’ incentives was correlated with higher productivity.” (Groves, Hong, McMillan, Naughton 1994: 208)

In accordance with the theory and empirical findings about the relation between incentive payments and performance, investors usually react positively on the announcement of incentive schemes. Tehranian and Waegelein researched the “market reaction to short-term executive compensation plan adaption” and write that “evidence indicates that the announcement of short-term compensation plan adoption is associated with positive abnormal returns”. (Tehranian, Waegelein 1985: 131, 141) Also Brickley, Bhagat, and Lease, who examined “the impact of long-range managerial compensation plans on shareholder wealth”, found “that on average these plans are met with positive market reactions, i.e., shareholder wealth increases.” (Brickley, Bhagat, Lease 1985: 115)

2.3.3.1.2. Conditions for a shareholder value efficient reward system

So that incentives are efficient, they have to be linked unmistakably to the creation of shareholder value. Therefore, a suitable performance measure has to be implemented. The relative portion of the incentive payment concerning the total remuneration and its composition (cash, shares, options, …) is also important. Moreover, it is relevant *when* the incentive can be liquidated by the manager taking into account the more long-term aspect of value creation.

2.3.3.1.2.1 Appropriate performance measures

A shareholder value efficient reward system must be consistent with regard to the relation between creation of additional net present value and incentive payments for managers.

Accounting proxies are by no means fitting performance measures for creation of shareholder wealth. Earnings per share or the growth of that figure, returns on equity, and profit margins do not quantify, if and when, how much managers have increased firm's net value. And companies which motivate executives to "achieving some annually negotiated profit figure" "make the matters worse". (Stern, Stewart, Chew 1998: 484)

The net present value (NPV) as the sum of discounted future cash flows, however, is also an inappropriate measure since it does not inform about past performance which is intended to be compensated. Instead, requested is a measure that quantifies the creation of shareholder value during a period of time and indicates to what extent the net present value has been increased. (Milbourn 1998: 134)

Theoretically, the generated net value can be determined as $NPV_t - NPV_{t-1}$. The inconvenience of that computation is that it depends on the forecasts of the same managers who receive the incentive payments because these managers dispose of these figures. Therefore the measure should be more objective.

A very objective indicator for the firm's value is its stock price. The additionally generated value for the shareholders during the period [*t-1;t*] is $stock\ price_t - stock\ price_{t-1} + value\ of\ reinvested\ dividends\ and/or\ other\ payments\ to\ shareholders\ during\ the\ period$. Besides the disadvantage that such calculation is applicable to stock exchange quoted companies only, there are other serious objections: On the one hand, factors exist that influence the stock price but cannot be controlled by managers such as noise trading or portfolio insurance transactions. On the other hand, a comprehensive responsibility for the success of a company takes solely the Chief Executive Officer or the Board of Directors. Other top executives, line managers, and the middle management contribute as well actively to the creation of shareholders' wealth but have little impact on the stock price. (Bacidore, Boquist, Milbourn, Thakor 1997: 11, 20)

A performance measure that is consistent with the rules of shareholder value creation, namely the NPV criterion is, for example, the Stern Stewart concept Economic Value Added - EVA (see section 2.2.2).

EVA's strength is that the instrument can directly be used to constitute a proportion between the creation of shareholders' wealth and incentive payments for managers. It is not dependent on management's projections of future cash

flows but utilizes objective data that reflect the achievements of a completed period of time.

The conception of EVA allows the board of directors to apply the performance measure also to sub-entities of a company. Principally all profit centers of a firm can be made subject to an EVA performance management and hence their managers be incited through EVA based bonus payments to make the creation of shareholder value their own objective.

In an attempt to further enhance the correlation between the performance measure and changes in shareholders' wealth, Bacidore, Boquist, Milbourn, and Thakor developed a "**R**efined **E**conomic **V**alue **A**dded" analytical framework (REVA). "The key distinction between EVA and REVA is that REVA assesses its capital charge for period t on the market value of the firm at the end of period t-1 (or the beginning of period t) rather than on the economic book value of the assets in place." (Bacidore, Boquist, Milbourn, Thakor 1997: 15) For the non-publicly traded firms or divisions, a typical ratio of market value to book value for comparable firms could be used to convert existing book values into market values" (Bacidore, Boquist, Milbourn, Thakor 1997: 20) At least in the case of top executives and board members who take responsibility for the whole company REVA seems to be theoretically superior to EVA "because it is a truer measure of whether the firm has surpassed the market's expectation and thereby added shareholder value." (Bacidore, Boquist, Milbourn, Thakor 1997: 18) The recommended application of "typical ratios", however, is from a theoretical point of view problematic since it may be difficult to find sufficiently coinciding parallels. Furthermore, the adjustment complicates the performance computation. If division or branch managers are not convinced of the performance

measure's correctness and fairness they may be less motivated. Recognizing that the application of REVA could be more problematic for directors who do not take full responsibilities for the whole organization the authors "concluded that REVA could be used to compensate senior executives and EVA could be used to compensate those at lower levels in an organization." (Bacidore, Boquist, Milbourn, Thakor 1997: 20) An empirical study comprising 25 REVA and 25 EVA applying companies, respectively, during the 1988-92 period showed that REVA outperformed EVA. (Bacidore, Boquist, Milbourn, Thakor 1997: 11)

2.3.3.1.2.2 Composition of rewards

The mere installation of an optimal performance measure does not guarantee that managers intend to maximize shareholders' wealth. It is essential to transform the performance figure in an adequate remuneration.

In order to link directly the creation of shareholder value and the respective payment to executives many firms designed option plans. Managers receive options on their company's shares. If the stock prices and therefore shareholders' value increase, option values increase in a leveraged way and contribute so substantially to managers' income.

An extensive analysis of this practice by Rappaport shows the limited suitability of such incentive systems: Rappaport states that the exercise price of the option keeps normally unchanged until the expiration date. Consequently, the holder of the options benefits from the whole revaluation of the stock even if the profitability of the shares is clearly below the average profitability of the competitors or the total market. Executives may take advantage of a bullish stock exchange that is stimulated by good news about interest or inflation data

or perspectives but have little to do with the managerial performance. Unlike shareholders, bearers of options only share the chances of the revaluations with them but do not have to assume the risk of devaluations because an option represents a right without an obligation. (Rappaport 1998: 158, 159)

Aware of the problems inherent in these option plans, the EVA inventors designed a consistent incentive system that works as well with options but also "simulates ownership" paying attention to the risk aspect and "makes ownership real". To simulate ownership means to let managers take part of the chances *and* the risks. Managers participate potentially unlimited in their firms' success through deferred payments. Only a part of the bonuses earned in a financial year is directly available to the executives. A significant part is credited in a "bonus bank" and has to be held "on risk" according to the long-term character of the creation of shareholder value. If the manager keeps creating value in the following years the bonuses will be paid fully according to an agreed payout scheme. The bonus amount of each financial year depends on a formula rather than periodical negotiations which adapt payments to the firm's situation. So managers who face a critical economic moment continue to being motivated to increase the company's net present value whereas managers of firms which already generate successfully shareholder value "do not receive a windfall simply for showing up". EVA bonuses make ownership real by "leveraged stock options, which are initially in-the-money, bought and not granted, and project exercise price at a rate that sets aside a minimal acceptable return for the shareholders before management participates". The system links personal success in the creation of shareholder value measured by EVA with the success of

the company which is expressed in the stock price. (Stern, Stewart, Chew 1998: 485, 486)

An empirical study conducted by John F. Boschen and Kimberly J. Smith (1995) that focuses particularly on the performance results of companies when managers' incentive payment have a long-term horizon shows that such systems "enhance [ ] firm efficiency by mitigation the effects of incomplete information about the manager's actions and/or talents. An implication of this conclusion is that omitting the dynamic effects seriously distorts the interpretation of pay-performance sensitivity since the bulk of the compensation response occurs in the years after the performance event." (Boschen, Smith 1995: 603)

2.3.3.2. Other human resources management (HRM) value drivers

Although studies about management reward systems occupy much more space in academic literature than researches about other variables of human resources management concerning their impact on the creation of shareholder value there is sufficient evidence that "the role of human resources can be crucial" for the performance of an organization. (Becker, Gerhart 1996: 779)

Delery and Doty identified seven human resource practices as value drivers "that are coming to much of the theoretical work in SHRM" [strategic human resource management]: internal career opportunities, training, results-orientated appraisals, employment security, participation in decision-making and improvement processes, existence of a job description, and profit sharing. (Delery, Doty 1996: 804, 809, 834) Becker and Gerhart quote some more "high performance work practices" they obtained from a review of recent academic publications: for instance, self-directed work teams, job rotation, problem-solv-

ing groups and quality circles as important components of participation, total quality management, hiring criteria, grievance procedure and conflict resolution, percentage of skilled workers, or social events. (Becker, Gerhart 1996: 785)

In a comprehensive empirical study of the quantitative improvements of some performance key figures obtained through the application of high performance work practices Huselid concluded that “on a per employee basis, $27,044 more in sales and $18,641 and $3,814 more in market value and profits, respectively” could be recorded. (Huselid 1995: 667) His data base contained 3,452 US companies that are not held by foreigners, have more than 100 employees and represent all important industries. (Huselid 1995: 644)

The author emphasizes that “if an increase [of firm’s performance] requires only a[n] one-time expense (as perhaps could be the case with recruiting or selection costs), these values will be underestimate[d] of the impact of High Performance Work Practices on firm performance.” (Huselid 1995: 667)

The current discussion about the impact of human resource practices on a company’s value is dominated by the competition of three different approaches: One school pretends that there are some “best practices” applicable to all firms that increase shareholders’ value. Others argue that the efficient employment of human resource practices depend upon their consistency with firm’s strategy. Finally, the “configurational theories are concerned with how the *pattern* of multiple independent variables is related to a dependent variable rather than with how individual independent variables are related to the dependent variable.” (Delery, Doty 1996: 803, 804)

For example, MacDuffie who researched the flexible production systems in the world auto industry found that “innovative HR practices affect performance not individually but as interrelated elements in an internally consistent HR ‘bundle’ or systems; and that these HR bundles contribute most to assembly plant productivity and quality when they are integrated with manufacturing policies under the ‘organizational logic’ of a flexible production system.” (MacDuffie 1995: 217)

On the other hand Huselid argues that “recent research finding strong main effects for the adaptation of High Performance Work Practices lends credence to the best practices viewpoint.” (Huselid 1995: 643) The author sees only a positive secondary effect if a company matches generally applicable best practices with its strategy in order to further increase the performance. (Huselid 1995: 644)

In any case, it seems to be demonstrated that human resource management practices influence the creation of shareholder value. Future research may show to what extent the isolated application of “best practices” increase shareholders’ wealth and how an optimal alignment of such practices on a strategy can be determined.

2.3.4. Dividend payments and dividend policy

Dividend payments derive their importance from the fact that many people consider them as the shareholders’ income and the visible link between a firm and its owners. Usually, chairmen of board refer to dividends as a central topic in their letters to shareholders that introduce the annual reports and bring dividends in some context with the firm’s performance. Subsection 2.3.4.1

analyses to what extent dividend payments as such affect shareholder value. Often, the subject is not only the dividend payout but more generally the dividend *policy* a company follows up. Dividend policy may be defined as the rulings and habits of a firm to determine the form and the amount of dividends it pays in a long-term horizon. Dividends can be paid as cash dividends or as share dividends (one new share for x existing shares). Repurchases of own shares also return money to shareholders and can be interpreted as a special form of dividend payments. Finally, the amount of dividends paid out may vary from one financial period to the next financial period. Subsection 2.3.4.2 researches whether dividend policy theoretically affects shareholder value and what is the empirical evidence.

2.3.4.1. The theoretical impact of dividend *payments* on shareholder value

Today, the dividend-invariance proposition of Miller and Modigliani (1961) that the amount of dividend that a company pays to its shareholders does not affect the shareholder value when the investment decision is taken is generally accepted. Summing up, Merton Miller argues, “the added cash to fund the higher dividend payout must come from somewhere, after all; and with investment fixed, that somewhere could only be from selling off part of the firm. As long as the securities sold off could be presumed sold at their market-determined values, then, whether the analysis was carried out under conditions of certainty or uncertainty, the whole operation of paying dividends, again holding investment constant, could be seen as just a wash – a swap of equal values not much different in principle from withdrawing money from a pass-book savings account.” (Miller 1998: 102, 103) In other words, “if the firm fixes its borrowing, the only way it can finance the extra dividend is to print some more shares and

sell them. The new stockholders are going to part with their money only if you can offer them shares that are worth as much as they cost. But how can the firm do this when its assets, earnings, investment opportunities, and, therefore, market value are all unchanged? The answer is that there must be a *transfer of value* from the old to the new stockholders. The new ones get the newly printed shares, each one worth less than before the dividend change was announced, and the old ones suffer a capital loss on their shares. The capital loss borne by the old shareholders just offsets the extra cash dividend they receive." (Brealey, Myers 2000: 448) Since dividend payments do not alter a firm's net value as a whole when investment decisions are taken, Brealey and Myers classify them as mere "by-products": "Some firms pay low dividends because management is optimistic about the firm's future and wishes to retain earnings for expansion. In this case the dividend is a by-product of the firm's capital budgeting decision. … Another firm might finance capital expenditures largely by borrowing. This releases cash for dividends. In this case the firm's dividend is a by-product of the borrowing decision." (Brealey, Myers 2000: 439)

Some serious objections against the invariance or irrelevance proposition of Miller and Modigliani come from the tax side. Since dividends are taxed immediately and on a higher rate than capital gains (at least for private Spanish investors because the tax charge is lower if the shares were held at the moment of selling for more than one year) all companies should forgo dividend payments at all and accumulate capital gains. Stockholders who need cash on hand can sell part of their shares. In contrast to the US Internal Revenue Service Spanish tax authorities do not penalize full benefit retains. An argument that could partly neutralize the tax reservation to the irrelevance proposition of

dividend payments is that those private investors who are higher taxed for dividends than for capital gains buy shares that do not pay dividends whereas institutional investors who are indifferent because the state taxes them at the same rate for dividend income and capital gains buy also dividend paying stocks since there were otherwise arbitrage opportunities in the market.

Other common arguments for or against high dividend payments are less important, have only indirectly to do with the dividend payment, or can easily be refused. Some of the most quoted arguments are listed here:

- "A small firm whose stock is closely held and infrequently traded often finds it difficult (or undesirable) to sell new equity shares in the market. As a result, retained earnings are the only source of new equity. When a firm of this type is faced with desirable investment opportunities, the payment of dividends is often inconsistent with the objective of maximizing the value of the firm." (Moyer, McGuigan, Kretlow 1981: 336)

- If there is a big need of capital for attractive investments it is cheaper to retain liquidity instead of paying dividends and selling new shares. (Moyer, McGuigan, Kretlow 1981: 336)

- In the case a firm has no opportunity to invest its gains in projects that return at least capital costs it is better to pay out the excess liquidity than to use it for shareholder value destroying empire building. The argument is in practice absolutely correct and managers act in the interest of the firm's owners when they return money to the shareholders that cannot be invested adequately in the firm's business. However, theoretically those funds could be

used to buy other shares with a high return on investment in order to avoid dividend payments.

- "Many shareholders need and depend on a constant stream of dividends for their income requirements. While they can sell off some of their shares as an alternative source of current income, associated transaction costs and odd-lot charges make this an imperfect substitute for steady dividend income." (Moyer, McGuigan, Kretlow 1981: 340, 341) This argument would be correct if there were not enough companies listed that pay regularly dividends. As long as the investor has such alternatives the shareholder value effect is zero in an arbitrage-free market.

- "One of the most common and immediate objections to MM's [Miller and Modigliani] argument about the irrelevance of dividends is that dividends are cash in hand while capital gains are at best in the bush. … But the reason their money is safe is not because it is special 'dividend money' but because it is in the bank. If the dividend had not been increased, the stockholders could have achieved an equally safe position just by selling shares and putting the money in the bank." (Brealey, Myers 2000: 453)

- As the example of Penn Central shows dividend payments can destroy shareholder value if there are serious liquidity problems. The firm continued paying dividends despite enormous economic problems. That favored the later bankruptcy. (Moyer, McGuigan, Kretlow 1981: 332) Obviously, not the dividend payment is responsible for the loss of shareholder value but a maybe criminal level of indebtness.

It can be concluded that the dividend payment as such has generally if at all only a tax caused impact on shareholder value. In some special cases dividend payments may not be cost-optimal or prevent that liquidity is misled. But in those cases it is not the dividend payment that affects shareholder value but the financing or investment decision.

2.3.4.2. The importance of the dividend *decision*

Although the dividend *payment* or the omission of a dividend payment neither increases nor destroys shareholder value it can be observed that share prices react on announcements that the dividend will be increased or cut. Therefore, it is not the payment but the information about the dividend policy that has an impact on shareholder value. This subsection analyses first the theoretical importance of dividend policy for shareholder value and contrasts then the results with empirical evidence.

2.3.4.2.1. Theoretical importance of the dividend policy

The capital of public listed companies uses to be wide spread between owners who consider their participation in the firm as a mere financial investment that should maximize its return. Investors are not involved in the management of the firm. So, they are dependent on the information that managers provide them in order to determine the value of their shares. The dividend policy is a means by which managers can communicate credibly what the current and the prospected future economic situation of the firm is like. “It is hard to cheat in the long run, for a firm that is not making enough money will not have enough cash to pay out. If a firm chooses a high dividend payout without the cash flow to back it up, that firm will ultimately have to reduce its investment plans or turn to investors for additional debt or equity financing. All of these consequences

are costly. Therefore, most managers don't increase dividends until they are not confident that sufficient cash will flow in to pay them." (Brealey, Myers 2000: 445) However, dividend policy is not only a credible information tool but it may also be "the most cost-effective means of overcoming this information 'gap' between management and investors". (Woolridge, Ghosh 1998: 144) If investors do not have to implement other controlling instruments in the firm because they can rely on the truth of easily interpretable dividend announcements the cost saving effect increases shareholder value.

The theory bases on the observed common behavior of managers to pursue a long-term dividend policy. John Lintner described patterns of management behavior as follows (Lintner 1956):

1. Dividend policy has a long-term character. Managers care to maintain certain payout ratios for the horizon they can predict.

2. The absolute level of the dividend amount is not very important. Managers decide about changes.

3. Managers change the dividend when changes in the generation of profits are long-sighted perceivable.

4. They are especially reluctant to short dividends.

Hence, if there are patterns of dividend policy that managers are believed to follow if they do not explicitly explain what other motivations conduct them to fix dividend payments, investors may interpret dividend announcements as credible signals about the firm's true value. That means that from this theoretical point of view dividend increases point at good prospects and justify higher

share prices while dividend cuts are signs of pessimism and share prices should correct downwards. A simple rise of cash dividends accompanied by a declaration of the board of directors that the firm does very well and will continue to prosper in the foreseeable future may be easily interpreted in this sense. But do dividend cuts always mean that the business is changing for the worse? What signals contain repurchases of own shares? And how should investors react when managers announce to substitute cash dividends for share dividends? Hereinafter it will be analyzed more detailed what are the meanings of those other most usual instruments of dividend policy.

2.3.4.2.1.1 Dividend cuts

At first sight dividend cuts are bad news at all in the way of the above described interpretation of dividend policy. According to the Lintner model that describes managers as especially cautious to reduce the amount of the dividend the measure should provoke a sharp reaction of share prices if there are not yet concrete bad news known that already adjusted the share value. However, there are “special situations where managers are explicitly signaling to the market that dividends are being reduced to provide funds for new investment – investment which, in some cases, might not otherwise be undertaken. … if profitable investment opportunities exist and if external financing is costly (whether in terms of underwriting fees, aftermarket performance, or potential dilution because management feels its shares are ‘undervalued’), stockholder wealth may be increased by management’s decision to reduce cash dividends to provide lower cost funding for new investment.” (Woolridge, Gosh 1998: 144, 145) In order to make the signal efficient and prevent an undesired market reaction

managers should prepare investors as soon as possible for future changes in dividend policy, above all if they have in view to cut dividends.

2.3.4.2.1.2 Share repurchase

If a company buys back its own shares it returns money to shareholders. Therefore, share repurchases can be seen as a special form of “dividend” payments. However, companies do not use to treat share redemptions in the same way as cash dividends. So, consistent with the theory of behavior patterns concerning the dividend policy directors do not feel obliged to repurchase own stocks on a regular basis.

The signal a company sends to the market when it buys back its own stocks is another than in the case of dividend cuts or omissions. Whereas the latter signals that the company will undertake profitable investment projects which justify higher share prices one possible signal of share repurchases is that the management believes the share is undervalued taking into account the publicly known information about the firm’s future perspectives. Therefore managers normally offer a significantly higher price for the own shares than the actual one is. They often stress their argumentation announcing that they “are certainly not going to sell any of [their] own stock at that price. Investors jump to the obvious conclusion” that the “stock is a good value even at” the higher offered price. (Brealey, Myers 2000: 446) The other signal a company may want to send to the stockholders is that it will not mislead funds to unattractive investments and prefers to return the money to stockholders. (Brealey, Myers 2000: 446) The remaining shareholders can be sure that the company pursues a shareholder value oriented policy.

2.3.4.2.1.3 Share dividends

Share dividends are “gratis” stocks that some companies credit their shareholders instead of or in combination with cash dividends. The shareholder receives for every x shares he or she holds 1 gratis share. Hence, “a stock [or share] dividend is very much like a stock split. Both increase the number of shares, but the company’s assets, profits, and total value are unaffected. So, both reduce value *per share*. The distinction between both is technical. A stock dividend is shown in the accounts as a transfer from retained earnings to equity capital, whereas a split is shown as a reduction in the par value of each share.” (Brealey, Myers 2000: 440, 441) “In essence, all a stock dividend does is increase the number of pieces of paper in the stockholders hands.” (Moyer, McGuigan, Kretlow 1981: 346) Therefore, the signal that management sends to the firm’s owners when it announces that cash dividends will be (partly) replaced by stock dividends is absolutely the same as that of the announcement of dividend cuts. If executives convince shareholders that there are attractive investment projects and the funds will be retained to finance the projects in a cheaper way, the market may react positively, more for the good news of forecasted high-returning investment opportunities and less for the saved transaction costs of the financial operations which are necessary to invest and pay dividends at the same time. Gratis share issues themselves should be without any effect on shareholder value.

By the way, a slight positive effect on shareholder value may come from the potentially higher liquidity of the shares (see section 2.3.7) if there is a high ratio of gratis shares to old stock. However, if management aims to improve the liquidity of the firm’s share it probably decides for a stock split instead of “paying” stock dividends since stock splits are usually interpreted as measures to

increase the share liquidity and the continuity of dividend policy is normally applied as well to share dividends (share dividend issues in the ratio of let's say 1 to 3 every six months would not be very rational).

2.3.4.2.2. Empirical evidence – a literature review on dividend policy

Woolridge and Ghosh researched how markets react on dividend cuts. "In an effort to distinguish between different motives for reducing the dividend, we divided our total sample into three categories: (1) those dividend cuts and omissions accompanied by a simultaneous announcement of an earnings decline or a loss; (2) those coming after a *prior* announcement of earnings decline or loss; and (3) those accompanied *either* by a simultaneous (or immediately prior) announcement of higher earnings and/or a statement by management of significant future investment or growth opportunities. Category (3), although it may include cases of management attempting to mislead the market, is intended to isolate those cases where management's decision to cut dividend was essentially 'voluntary' – that is, those where management's intent was not simply to ensure future solvency, but to conserve capital in anticipation of a major investment program." (Woolridge, Ghosh 1998: 148, 149) From the results of the research is deductible that markets are cautious but know to differentiate interpreting on the long run correctly the signals received from managements. Only on short term during the three day announcement period uncertainty dominated the market's faith in the managements' signals although the signals prevented the same sharp downfall of prices experienced by the companies that suffered income declines. "These results do not indicate that the positive signal is sufficiently strong to offset the negative connotations associated with dividend reductions – not, at least, at the time of the announcement. Much, if not all, of

these announcement-period losses, however, appear to have been recouped shortly after the announcement period. During the *quarter following* the dividend cut or omission, … those companies in category (3), however, far outperformed both the general market and the rest of the sample of dividend cutting firms." (Woolridge, Ghosh 1998: 150) If empirical evidence shows that market needs time to react positively on dividend cuts that are intended to strengthen firm's self-financing capacities it may be justified by investors' (analysts') need to judge the investment projects and, therefore, is not necessarily due to the inefficiency of the *signal* itself.

Concerning the repurchase of own stocks Brealey and Myers state that "when companies offer to repurchase their stock at a premium, senior management and directors usually commit to hold onto their stock. So it is not surprising that researchers found that announcements of offers to buy back shares above the market price have prompted a larger rise in the stock price, averaging about 11 percent." (Brealey, Myers 2000: 446, 447) An empirical study conducted by Vermaelen leads also to the conclusion that the signaling hypothesis of common stock repurchases holds: "The results are consistent with a market in which investors price securities such that expected arbitrage profits are precluded. The results are also consistent with the hypothesis that firms offer premiums for their own shares mainly in order to signal positive information, and that the market uses the premium, the target fraction and the fraction of insider holdings as signals in order to price securities around the announcement date. The observation that repurchases via tender offer be followed by abnormal increases in earnings per share and that mainly small firms engage in repurchase

tender offers, provides further support for the signaling hypothesis." (Vermaelen 1981: 178 [abstract])

2.3.5. Growth

Growth seems to be a magic word for many executives. Probably, the word owes its excellent reputation to the fact that growth is something inherent in nature. Everything tends or has the ambition to grow. So, it does not astonish that almost all companies inform shareholders in their annual reports of achieved growth and future growth perspectives. Thereby, a lot of different growth concepts are used. Also, nearly everything in a firm can grow. The most common growth magnitudes companies refer to are growth of income or revenues, growth of production output, growth of investments, growth of dividend payouts, growth of market share, growth of profit, or growth of earnings per share. Whichever growth effort a company makes, shareholders will profit only if an additionally generated risk adjusted expected discounted cash flow exceeds respective capital costs.

The following subsection 2.3.5.1 analyzes briefly the shareholder value impact of all of those growth concepts but one. The relation between growth of market share and business performance is less clear than that of other growths and is therefore intensively discussed in marketing, strategic and financial literature. Subsection 2.3.5.2 examines this relation concerning theoretical implications and reports empirical findings.

2.3.5.1. Growth magnitudes and their impact on value creation

The present subsection comments what different growth concepts mean for the creation of shareholder value.

Growth of income or revenues does not tell much about the creation of shareholder value. It can easily be reached by an aggressive price policy. If a firm achieves to increase income by sacrificing profits it hardly creates value. When earnings grow (maybe that is only possible through revenue increases, that is to sell more) the firm adds value if capital employed for this purpose earns more than its costs. “A company with an already high ROIC [return on invested capital] creates more value by increasing growth rather than earning ever higher ROICs. Companies earning less than their cost of capital can’t create value by growing unless their ROIC moves up above the cost of capital. In fact, additional growth at current ROIC levels actually destroys value.” (Copeland, Koller, Murrin 2000: 67, 68)

Growth of production output may be a condition to increase income that itself is a condition to increase profits. As with income growth and profit growth the statement that production output has grown is nearly meaningless to shareholders if the message is not further explained so that it becomes clear that growth of production is a initial step of the before depicted sequence towards value creation.

When a company reports growth of investments it may want to give shareholders a clue that past investments were profitable and created value. Capital expenditure is then increased to profit even more from lucrative investment projects. Of course, each and every single investment project must be justified through the risk-adjusted expectation of earnings above capital costs.

Dividend payments do not increase shareholders’ wealth (see section 2.3.4) However, managers frequently use dividend policy to signal future per-

spectives. Growth of dividend payouts uses to be interpreted in the sense that management forecasts a bright future, that is, creation of shareholder value. Often the notice of increasing dividends is accompanied by a respective explanation.

Growth of earnings per share is considered one of the main financial key figures of a company. The underlying magnitude is normally growth of benefits. But, Brealey and Myers recommend to “be careful not to equate firm performance with the growth in earnings per share. A company that reinvests earnings at below the market capitalization rate may increase earnings but will certainly reduce the share value.” (Brealey, Myers 2000: 73)

2.3.5.2. A special case: Growth of market share

Economic literature is rich in articles dedicated to examine the impact of higher market share on profit, frequently defined as “a rate of return more than sufficient to maintain capital investment” (Jacobson, Aaker 1985: 11) or in a similar manner. A special Profit Impact of Marketing Strategies (PIMS) program sponsored by the Strategic Planning Institute in Cambridge, Massachusetts, maintains an extensive database with research results regarding this market share – profit relationship, showing the importance of this subject as a research object. Discussion began at mid of the 1960s and holds on so far. That means it is worth to consider both, the theoretical side and empirical results to determine whether or not companies should intend to grow their market share to the end that shareholder value increases.

2.3.5.2.1. Theoretical analysis on market share growth

A very good theoretical analysis of the interaction of market share and profit stems from Cook (1985).

"The net present value of market share is the difference between long run marginal share value and share cost, discounted at the organization's cost of capital. The goal of marketing strategy is to maximize this value." (Cook 1985: 55) The firm may adopt a number of different marketing strategies in response to changing market and competitive conditions. The theoretical effects of six alternative strategies on the net present value of market share are assessed". (Cook 1985: 55) The strategies, Cook refers to are market growth, maturity, decline, competitive attack, price leadership, and heavy user.

- "*Market growth* drives management to build market share because the marginal value of the next share point increases faster than its marginal cost. … The conditions produce what is known as a *building* strategy. A growing market pushes up the value of market share faster than the cost of market share increases at the margin." (Cook 1985: 55)

- "*Market maturity*, with constant marginal costs, leads the firm to a holding strategy. Profits are maximized" where the marginal value of market share equals the marginal cost of market share. "Management holds market share at" this point "until disequilibrium is induced by changes in technology, competitive actions, or the company's own initiatives." (Cook 1985: 55)

- "*Market decline* leads to a downward adjustment in market share if the firm's marginal cost schedule remains constant. Marginal share value falls faster than marginal share costs, driving the firm to disinvest in market share. … It

may not seem intuitively obvious that a business should purposely decrease its share of a declining market, but it is rational. … In the process, its share of marketing capacity will be less than its share of market. This is one set of conditions that gives rise to a harvesting strategy." (Cook 1985: 55, 56)

- "*Competitive attack* dramatically alters a firm's value maximizing market share. … Competitive attack raises the table stakes by rapidly shifting fresh resources into play and thereby sharply increasing the marginal cost of market share." (Cook 1985: 56)

- "*Price leadership* offers an interesting perspective on the effects of company-initiated strategies. The first effect of a price cut is to reduce the firm's value of market share by shifting the" marginal value of market share "schedule downward. … Price leadership anticipates either *long run* increases in primary demand, which shift the VMS [value of market share] schedule upward, or increases market share, which reduces factor costs and shifts the CMS [cost of market share] schedule downwards." (Cook 1985: 57)

- "Segmentation strategies focus the firm's resources on smaller segments of the market that exhibit relatively homogenous demands (Alderson 1965, p. 186). … *Heavy user strategies* differentially affect a firm's capacity to produce, promote, and distribute. In the limit, the CMS schedule may shift downward in proportion to the number of heavy users in the population." (Cook 1985: 57)

Cook emphasizes the dynamic nature of the interaction between market share and profit. "The behavior of demand, factor costs, and competitive re-

source deployments dramatically alter the market share value and cost schedules faced by the firm." (Cook 1985: 57)

The author concludes, "balancing marketing risk with return is not a random walk. It is a challenging management responsibility. Meeting the challenge demands management assesses the long run net present value of its market share." (Cook 1985: 60)

2.3.5.2.2. Empirical findings on market share growth

A huge number of empirical studies have been conducted in order to prove if there exists a positive correlation between market share increases and "profit" increases or better "business performance". Some researches specify an enhanced business performance as creation of shareholder value. Today, it is out of question that a higher market share does not lead automatically and in any case to higher shareholder value (as the above theoretical analysis also suggests). But some studies find that in certain circumstances higher market share can result in a higher firm value. As a representative, the empirical research of Prescott, Kohli, and Venkatraman (1986) will be presented in this subsection. Afterwards and in contrast, the results of Jacobson and Aaker (1985) will be reported. These authors do not find a significant correlation between the variables growth of market share and growth of shareholder value. The results of a meta-analysis of Szymanski, Bharadwaj, and Varadarajan (1993) that bases on 76 empirical studies on the market share – profitability analysis conclude this subsection with the intention to indicate a tendency of empirical findings concerning the subject of interest.

2.3.5.2.2.1 Empirical results I: Increasing market share implies value creation under certain conditions

"MS [market share] is considered to be a valid predictor of BP [business profit] if the relationship between them is predominantly due to the direct effect of MS on BP. In order to determine if MS is a valid predictor of BP, the observed correlation was decomposed into its direct and spurious components. This procedure resulted in the finding that MS is a valid predictor of BP in the Mature, Declining, and Fragmented with Auxiliary Services environments (category 1); a borderline predictor in the Stable Non-Fragmented and Fragmented Standard Products environments (category 2); and is not a valid predictor of BP in the Global Exporting, Emerging, and the Global Importing environment (category 3). The implication of this finding is that market share may be a valid goal to pursue only in those environments where a significant and strong direct effect was found. However, even in these environments a large portion of the observed significant correlation was found to be spurious, with a few conduct variables accounting for much of the observed association between MS and ROI. A potential limitation of this study is that the observed correlations may be contaminated by measurement error." (Prescott, Kohli, Venkatraman 1986: 388, 389)

The analytical implications of these empirical findings are "that real market growth rate and the product life cycle stage were the only environmental variables which exhibited a consistent pattern across the categories. Category 1 environments had real market growth rates below the overall sample mean. While the real market growth rates in category 2 environments were below the overall mean, they were higher than the rates for category 1 environments. Category 3 environments exhibited real market growth rates significantly above the overall mean. In terms of the stage of the product life cycle, category 1 envi-

ronments were above the total sample mean (i.e. in the mature and declining stages), category 2 environments were located around the total sample mean (i.e. late growth and mature stages), and category 3 environments were significantly below the total sample mean (i.e. growth stages). These two environmental variables provide a possible explanation for our findings. For category 1 environments, one part of the explanation may be that the later stages of the product life cycle provide the opportunity to exploit the effects of the experience curve (Henderson, 1979, 1984). During the later stages of the product life cycle a major concern of business is efficiency (Fox, 1973; Harrigan, 1980). Businesses that have captured a sizable share of the market in the earlier stages are now able to more easily attain efficiency, possibly because of their high accumulated volume. Another aspect is that a slow rate of market growth reduces the range of strategic options available to a business (Porter, 1980). Combining these two arguments one can postulate that businesses operating in these environments find a significant direct relationship between MS and ROI. Extending the same logic, one can argue that those businesses operating in category 2 and 3 environments have less opportunity to exploit the experience curve and more strategic options. Therefore the direct relationship between MS and ROI is not as strong." (Prescott, Kohli, Venkatraman 1986: 389, 390)

2.3.5.2.2.2 Empirical results II: Market share – value creation relationship cannot be proved

Jacobson and Aaker examined the relation between market share and return on investment (ROI) "to determine the extent of the causal versus spurious association. By making use of the PIMS data base, it is found that a large proportion of the association is spurious in the sense that both market share and ROI are the joint outcome of some third factor(s). The direct impact of mar-

ket share on ROI is found to be much smaller than previous studies have indicated. It is suggested that too much emphasis is placed on market share and that more attention needs to be focused on other fundamentals." (Jacobson, Aaker 1985: 11)

So, Jacobson and Aaker come to another interpretation of the implication the experience curve has on the relation between market share and profitability than Prescott, Kohli, and Venkatraman. With reference also to other empirical researches they shed light to a distinct cause and effect connection:

"Two causal explanations are usually offered for the observed link between market share and profitability. First is the related effects of the experience curve and economies of scale. Through cumulative experience, tasks can be accomplished more efficiently by improving methods and procedures or by simply repetition. The desire to achieve cumulative experience effects can foster capital investment in operations and product redesign efforts to reduce costs. Scale economies can be achieved by larger share businesses, as plant and equipment investment and expenses such as marketing and R&D can be spread over more units. Although experience and scale effects have been observed literally thousand of times, they are neither universal nor automatic (Aaker 1984, chapter 10). Experience effects tend to be found in industries with high levels of value added, continuous process manufacturing and high capital intensity. In other contexts, most notably service and extractive industries, experience effect strategies are rarely applied successfully. Further, experience effects are not automatic but require disciplined, effective programs in worker efficiency, product redesign, and capital utilization. In addition, economies of scale do not appear in all contexts, and, in fact, diseconomies of scale are very

possible. Empirical evidence, e.g., Scherer (1980), suggests that minimum optimal scale can be achieved at output levels consistent with relatively small market shares. A second causal explanation is that large market share can create market power over and above the cost advantage achieved by experience / scale effects. Large share firms may be able to extract favorable concessions from channel members because of their size and importance in the market. In addition, large market share may serve as an indicator of concentration, which may encourage collusive behavior and higher prices. … There is, however, a third explanation for the observed association between market share and ROI. This explanation suggests the association is not causal but spurious, in that it is the result of both being jointly influenced by some third factor(s). One possible common causal factor is management quality. Good management may generate programs that make the marketing effort effective and the product line attractive and thereby achieve a high market share. Good management may also initiate programs that encourage cost control, productivity gains, wise product line decisions, etc., and achieve high ROI. … Perhaps of equal or more importance is another possible common factor, luck. Based on pure chance, a business may be lucky enough to stumble onto one or more products or strategies that will prove to be successful.” (Jacobson, Aaker 1985: 11, 12)

Using the PIMS database for a numerical analysis Jacobson and Aaker came to the result that “instead of the commonly cited figure of a 1% change in market share being associated with a .5% change in ROI, we have found a 1% change in market share associated with a .1% change in ROI.” (Jacobson, Aaker 1985: 20)

“The results of this study point to the conclusion that the direct impact of market share on ROI is substantially less than commonly assumed and, in fact, relatively minor. Market share would not appear to be, at least on average, a key to profitability. Certainly this is not to suggest that market share is unimportant to the management of a business. High market share, together with high ROI, are indications that management has been following policies, whether by design or chance, that have proved to be successful. Market share can be used as an indicator of the effectiveness of current policies and suggestive of how these policies might be altered.” (Jacobson, Aaker 1985: 21)

2.3.5.2.2.3 Empirical results III: A meta-analysis

Empirical researches on the market share – profitability relationship come to different conclusions. Some show a positive correlation, others refuse that there is a direct implication and seek the reasons for a mostly rather weak relationship, if any, in third factors. “Therefore, the purpose of” the study of Szymanski, Bharadwaj, and Varadarajan “is to synthesize and scrutinize the findings on the market share – profitability relationship. … Only studies that examined the effects of market share on profitability were included in the meta-analysis. … In all, 76 empirical studies on the market share – profitability relationship were uncovered, and 48 of these studies reported a total of 276 market share elasticity estimates.” (Szymanski, Bharadwaj, Varadarajan 1993: 2)

“The studies addressing the relationship between market share and profitability span a broad spectrum. … Although the meta-analysis findings cannot completely reconcile these differing viewpoints, one hand, the findings indicate, on average, market share has a significant (SSW mean = .259) effect on business profits. On the other hand, the multivariate findings reveal that the esti-

mate of the market share elasticity is moderate by modeling, sample, and measurement factors. These findings support the perspective that third factors moderate the estimate of the market share elasticity." (Szymanski, Bharadwaj, Varadarajan 1993: 14)

2.3.5.2.3. Conclusion of theoretical and empirical findings on market share growth

Does market share growth imply creation of shareholder value? The implication of this growth magnitude is theoretically less clear than that of other growth magnitudes examined earlier in this section. Therefore the subject is intensively treated in literature.

Efforts to prove generally or context specifically a direct correlation have not succeeded so far. While, for example, Cook, who contributed to the discussion with a theoretical analysis, came to the conclusion that in a market growth environment firms can increase shareholder value by increasing market share, Prescott, Kohli, and Venkatraman find the contrary.

Since a significant number of researches prove a positive correlation between market share growth and shareholder value creation, validated for example by the meta-analysis of Szymanski, Bharadwaj, and Varadarajan, some authors like Jacobson and Aaker argue the relationship is not causal but to be attributed to other factors as management quality or just luck.

Summing up, it has to be stated that market share growth itself cannot be considered as a shareholder value driver. However, shareholder value increasing strategies and measures may lead to higher market shares.

2.3.6. Corporate control: mergers, acquisitions, and alliances

Most of the sample companies were in merger processes, were acquiring firms or were forming far-reaching alliances with other companies during the three years research period 1998 – 2000. So, it is interesting to analyze if these forms of corporate restructuring contribute significantly to the variation of shareholder value.

This section dedicates its first part (2.3.6.1) to the nature of shareholder value variable *corporate control* which includes in this context mergers, acquisitions and strategic alliances (spin-offs and divestures will only be mentioned in the subsection related to the creation of value for shareholders of target firms, and buyouts are not treated since there are little activities in this respect developed by the sample companies chosen for the empirical research).

When companies merge, or one company acquires another, or two (or more) firms sign cooperation contracts, shareholders of all parties are affected. For the main focus of this subchapter, mergers and acquisitions, the points of view of *both* shareholders of acquiring firms and shareholders of target firms will be analyzed individually (subsections 2.3.6.2 and 2.3.6.3). The rare cases of *real mergers of equals* (although often declared as such by buying and bought firms, above all for psychological reasons) are not analyzed in detail. In those cases, if the valuation of all of the partner companies is fair, the simple rule applies that the merger is profitable if the merged company is worth more than the sum of the two or more parts separated.

Sometimes, a merger or acquisition may not be the best solution. Subsection 2.3.6.4 of this section examines when strategic alliance or internal growth can be valid alternatives.

2.3.6.1. The nature of shareholder value variable *corporate control*

Shareholder value variable *corporate control* has two optimization functions. Firstly, “the activity of mergers and acquisitions is an important mechanism so that capital flows where the highest profitability is expected and offers investors substantial benefits for the risk born.” (Black, Wright, Backman, Davis 1999: 127) Secondly, the “market for corporate control” can be “viewed as a major component of the managerial labor market. It is the arena in which alternative management teams compete for the rights to manage corporate resources.” (Jensen, Ruback 1983: 23) “The internal control mechanisms of corporations, operating through the board of directors, should encourage reluctant managers to restructure. But when the internal processes for change in large corporations are too slow, costly, and clumsy to bring about the required restructuring or change in managers efficiently, the capital markets, through the market for corporate control, are doing so. The takeover market serves as an important source of protection for investors in these situations. Other management teams that recognize an opportunity to reorganize or redeploy an organization’s assets and thereby create new value can bid for the control rights in the takeover market. To be successful, such bids must be at a premium over current market value. This gives investors an opportunity to realize part of the gains from reorganization and redeployment of the assets.” (Jensen, Ruback 1983: 27, 28)

Empirically, the market for corporate control works well from the viewpoint of shareholders. Jensen (1988) summarizes, that takeovers above all benefit shareholders of target firms who earn on average premiums that historically exceed 30 percent with tendency to increase in recent times. Shareholders

of acquiring companies earn somewhat less, but, after all, amount to 4 percent on average in hostile takeovers. Finally, the author stresses that “takeovers do not waste credit or resources. Instead, they generate substantial gains: historically, 8 percent of the total value of both companies. Those value gains represent gains to economic efficiency, not redistribution between various parties.” (Jensen 1988: 22, 23)

2.3.6.2. Creating value for shareholders of the acquiring firm

From the viewpoint of shareholders of the acquiring firm success bases on three prerequisites:

1. Managers must be led by the objective to create shareholder value when acquiring a firm. In a survey conducted by the consultant and auditor firm KPMG, executives of 700 companies involved in big cross border merger deals between 1996 and 1998 were questioned “on the business aims behind their merger or acquisition.” The objective ‘maximizing shareholder value’ was cited by 20% of our respondents [107 companies participated].” That “means that the remaining 80% still fail to recognize the importance of the focus on shareholder value.” KPMG comes to an implicit conclusion by asking whether “it is a coincidence that these findings are very similar to the result of our objective benchmarking which tells us 83% of acquirers still fail to unlock shareholder value following their transactions.” (KPMG 1999:8)

2. Financial arguments or motives for the merger must be coherent to the conditions of value creation.

3. The merger must be well implemented and executed from its very beginning.

This subsection details the second and third prerequisite and concludes listing the main errors committed by managers.

2.3.6.2.1. Financial motives and conditions for a successful merger

“A merger adds value only if the two companies are worth more together than apart”. (Brealey, Myers 2000: 940) Seen from the point of view of the shareholders of the acquiring firm the condition for a justified merger is that the purchase price must not be higher than the isolated price of the target firm plus the savings or additional profits from synergies that are expected to be realized. In other words, since the acquisition of a whole firm or at least a controlling participation is only possible by paying the shareholders of the target firm a premium on the current market price, that premium must not be higher than the expected value of synergies from the merger. Otherwise shareholders of the acquiring company will see a destruction of value. (Rappaport 1998: 197) To be more precise than Rappaport, the condition for a successful merger should be that the discounted risk-adjusted profits from synergies exceed the premium from the viewpoint of the acquiring firm's shareholders.

“Synergies” can be interpreted as a comprehensive term for advantages that a merged firm has in comparison to the two isolated entities, that is, the merged firm obtains “benefits through revenue enhancement as well as direct operational cost reductions”. (KPMG 1999: 11) Brealey and Myers concrete as reasonable arguments from a shareholder value point of view the achievement of economies of scale, the combination of complementary resources, the use of tax shields or surplus funds, and the elimination of inefficiencies:

“Achieving economies of scale is the natural goal of horizontal mergers.” (Brealey, Myers 2000: 943) “A *horizontal merger* is one that takes place between two firms in the same line of business.” (Brealey, Myers 2000: 941) “But such economies have been claimed in conglomerate mergers” too. (Brealys, Myers 2000: 943) “A *conglomerate merger* involves companies in unrelated lines of business.” (Brealey, Myers 2000: 942) “The architects of these mergers have pointed to the economies that come from sharing central services such as office management and accounting, financial control, executive development, and top-level management. … Optimistic financial managers can see potential economies of scale in almost any industry. But it is easier to buy another business than to integrate it with yours afterwards.” (Brealey, Myers 2000: 943)

“Vertical integration facilitates coordination and administration.” (Brealey, Myers 2000: 944) “A *vertical merger* involves companies at different stages of production.” (Brealey, Myers 2000: 942) “Nowadays the tide of vertical integration seems to be flowing out. Companies are finding it more efficient to *outsource* the provision of many services and various types of production. … This is partly because the outside suppliers tended to use nonunion labor at lower wages. But it also appears that manufacturers have more bargaining power versus independent suppliers than versus a production facility that's part of the corporate family.” (Brealey, Myers 2000: 944)

“Many small firms are acquired by large ones that can provide the missing ingredients necessary for the small firms' success. The small firm may have a unique product but lack the engineering and sales organization required to produce and market it on a large scale. … The two firms have *complementary resources* - each has what the other needs - and so it may make sense for them

to merge. The two firms are worth more together than apart because each acquires something it does not have and gets it cheaper than it would by acting on its own." (Brealey, Myers 2000: 944)

"Sometimes a firm may have potential tax shields but not have the profits to take advantage of them." (Brealey, Myers 2000: 945) The authors cite for example "tax-loss carry-forwards".

"There are always firms with unexploited opportunities to cut costs and increase sales and earnings. Such firms are natural candidates for acquisition by other firms with better management. … [But] Notice that the motive for such acquisitions has nothing to do with benefits from combining two firms. Acquisition is simply the mechanism by which a new management team replaces the old one." (Brealey, Myers 2000: 945)

Apart from the above-discussed financial arguments speaking for mergers when synergies can be realized and the premium paid to target firm's shareholders does not exceed the value creating effect of the merger, the authors detect also motives for mergers that fit less to increase shareholders' wealth.

"Firms with a surplus of cash and a shortage of good investment opportunities often turn to merger *financed by cash* as a way of redeploying their capital." (Brealey, Myers 2000: 945) This justification for an acquisition or merger, however, has to be seen more differentiated because in most cases it is cheaper for shareholders to diversify by themselves and it may be in investors' interest to form portfolios on their own criterions. (see section 2.3.8 *Risk Management*) In general, the frequently quoted argument that the firm di-

versifies by the merger has to been seen very critically. (Brealey, Myers 2000: 946) Additionally to the theoretical arguments, empirical evidence shows that “investors do appear to be concerned principally with those risks that they cannot eliminate by diversification. If this would not be so, we should find that stock prices increase whenever two companies merge to spread their risks.” (Brealey, Myers 2000: 199) This is obviously not the case. As stated in the previous subsection most of mergers fail regarding the creation of shareholder value.

If the management argues that the merger enhances earnings per share it is playing a mere mathematical game. (Brealey, Myers 2000: 947)

It seems to be more difficult to beat the argument that the merger lowers financing costs because “when two firms merge, the combined company can borrow at lower interest rates than either firm could separately. This, of course, is exactly what we should expect in a well-functioning bond market. While the two firms are separate, they do not guarantee each other's debt; if one fails, the bondholder cannot ask the other for money. But after the merger each enterprise effectively does guarantee the other's debt; if one part of the business fails, the bondholders can still take their money out of the other part. Because these mutual guarantees make the debt less risky, lenders demand a lower interest rate. Does the lower interest rate mean a net gain to the merger? … it does not make sense for A and B to merge just to get that lower rate. Although AB's [merged company] do gain from the lower rate, they lose by having to guarantee each other's debt. In other words, they get the lower interest rate only by giving bondholders better protection. There is no *net* gain.” (Brealey, Myers 2000: 949)

Black, Wright, Backman, and Davies (1999) stress that also the market context, i.e. customers, competitors, and regulating authorities have to be taken into account when the financial impacts of a merger are evaluated. There could be a loss of income when acquirer and target have the same customers and customers look for other suppliers in order to maintain competence between them. Also, competitors may react on the merger so that the realization of a part of the synergies is finally impossible. And the intervention of regulatory authorities can as well diminish a merger's profit if, for example, one or more of the merging partners are obliged to sell a division before the asset deal is approved. (Black, Wright, Backman, Davies 1999: 136)

2.3.6.2.2. Implementation and execution of a successful merger

Success of a merger not only depends upon the fulfillment of financial conditions. If there are theoretically ideal circumstances for a shareholder value increasing outcome but the merger is poorly installed, all efforts can end in failure and shareholder value is destroyed. This subsection presents a guideline of strategic planning of a merger based on Rappaport (1998) as well as the results of the above mentioned study conducted by KPMG (1999) that researched what successful firms do in order to generate shareholder value through a merger.

Rappaport points out that the merger has two dimensions: the acquisition process and the company's organization.

The acquisition process contains five essential phases: the analysis of competition, search and selection, formulation of a strategy, financial evaluation, and finally negotiations. (Rappaport 1998: 186-188)

The essential objective of the analysis of competition is to identify relations of synergies between the own business and those other businesses in which the company could wish to enter. These relations represent opportunities to create competitive advantages by reduction of costs or enhancement of differentiation.

The second step, search and selection, is to elaborate a list of good candidates for acquisition.

The strategy formulation phase searches for synergies which can be realized with each of the candidates.

Financial evaluation gives answers to the following questions

- Which is the maximum price that could be paid for the target firm?
- What are the main risks?
- What are the consequences of the acquisition for cash flow and balance sheet?
- What is the best form to structure the acquisition?

Finally, the last phase is the negotiation. The success of the negotiations depends largely on how the first four steps were executed. Rappaport, summarizing Fisher and Ury, advises executives to adhere to four fundamental rules:

- separate persons from the problem and treat personal questions apart;

- concentrate on interest, not on positions; objective of negotiations is to satisfy the interests of each part instead of the negotiation position which frequently hides underlying interests;
- search for options that benefit both parts; looking for a sole solution is dysfunctional, since partners have to find a wide range of solutions corresponding to the interests of both parts;
- insist in the utilization of objective criterions.

As mentioned above, also the organizational dimension is important for a successful merger implementation. Strategic planning of a merger has to be realized at company level and at business units' level. At the business unit level it is urged on questions on product-market. On the contrary, strategic planning at company level is oriented towards a portfolio philosophy. (Rappaport 1998: 185, 186)

What are now empirically the activities that make mergers successful in the sense of shareholder value creation? KPMG (1999) elaborated a bench-mark analysis where the measure of success was creation of shareholder value. The study "found that successful companies achieved long-term success

- by prioritizing three key activities in the pre-deal phase (the so called hard keys) which had a tangible impact on ability to deliver financial benefits from the deal", that is synergy evaluation, integration project planning, and due diligence,

- and also behaved well concerning three soft keys: selecting the management team, resolving cultural issues, and communications. (KPMG 1999: 2, 3)

"Synergies are vital to the success of any merger or acquisition." The study stresses that "only by gaining a clear understanding of *what* and *where* value can be obtained from a deal, can companies hope to avoid 'bad' deals and be in a position to work out *how*, during integration planning, this value extraction will be achieved." That "requires a thorough process of synergy evaluation, beginning as soon as possible in the pre-deal phase." Synergy benefits can be obtained "through revenue enhancement as well as direct operational cost reductions." Interestingly, it seems to be easier to realize positive synergy effects by cutting costs than by increasing revenues. "Although benefit areas such as procurement, R&D or new product development and cross-selling feature widely in synergy papers, our findings show they are actually delivered by less than half of the companies. On the other hand, headcount reduction is the area where most companies have achieved benefits." (KPMG 1999: 10-12)

The second hard key is integration project planning. In the experience of KPMG "there is no substitute for pre-deal planning. Company managements have a 'honeymoon' period of some 100 days after deal completion to take hold of the business and begin delivering benefits." Hence, "companies that invest time and effort in pre-deal planning will be in a much better position to meet stakeholder expectation and unlock value from the deal." (KPMG 1999: 13)

A decisive third hard key is a reliable and strong database for a sophisticated pre-merger analysis. KPMG considers that "forward-looking acquirers use

a ‘springboard’ approach to due diligence which often encompasses a range of investigative tools designed to systematically assess all the facts impacting on value. This can include market reviews, risk assessments, and the assessment of management competencies, as well as areas to concentrate on for synergies or operational impact.” (KPMG 1999: 14)

As could be expected what the KPMG “survey also showed is that hard factors alone are not enough, and acquirers must devote to the ‘softer’ aspects of their transactions if they are to deliver ultimate benefit to shareholders.” (KPMG 1999: 15)

When two companies merge, a lot of manager positions use to be occupied twice. For successful management appointments KPMG emphasizes the importance of the process of appointments that must “be transparent, logical, rational and above all fair.” (KPMG 1999: 16) Experience shows “that for a ‘bolt-on’ or portfolio business, success rates will be improved if the management team is replaced. On the other hand, for a fully integrated business, success rates are enhanced if managers in the acquired company are retained and incorporated into the new management structure.” (KPMG 1999: 16)

A crucial success impact has also the second soft key, namely, the way by which cultural issues are resolved. “The type and complexity of the cultural challenge will depend upon the nature of the merger or acquisition. If both companies are to be fully integrated, the best aspects of both legacy organizations will need to be incorporated into a single new company culture focused on achieving future business growth. Where the companies are to be run as two separate entities, cultural integration is neither wise nor necessary, yet close

links to ensure mutual co-operation between two separate cultures will be essential to ensure the deal unlocks shareholder value." Resolving the soft key of cultural integration can be further promoted by hard facts for employees. "The survey results also suggest that a company increases its chances of success if it uses reward systems to stimulate cultural integration of co-operation, as opposed to more informal methods." (KPMG 1999: 17)

As regarding to the third soft key, communication, the study advises that "unless key stakeholders, from shareholders to customers, are appropriately informed during the merger process, their positive buy-in is likely to be lost and the merger process may be derailed." KPMG found "own employees are often forgotten, as acquirers concentrate on communications to staff in the target company, yet they are equally likely to feel anxious about the change to the business" and not less a factor of success or failure. (KPMG 1999: 17) In fact, "poor communications with own employees appeared to pose greatest risk to deal success, more so than poor communication to shareholders, suppliers or customers." (KPMG 1999: 3)

It is no surprise that KPMG "found that the acquirers who achieved best results were those who recognized the importance of both sets of keys. In our survey just nine companies (equating to less than 10% of respondents) addressed all three soft keys and carried out integration project planning. All nine were successful." That means, "success, then, comes with a holistic approach where the people aspects are an integral part of the focus on financial performance and one cannot exist without the other. It is effective handling of this delicate balance which actually determines success." (KPMG 1999: 4)

2.3.6.2.3. The most common errors in mergers

There are many reasons why mergers fail: the pre-deal phase is very hectic and the partners have little time to think about the merger. They aim to keep the preparation secret involving only few people: top managers and investment bankers. (Balzer, Hirn, Wilhelm 2000: 88) The two main negative consequences are that important facts may be simply forgotten and arguments speaking against the merger are undervalued since both parties involved are strongly interested that merger takes place. Managers may wish to grow also for other reasons than creating shareholder value, for example, to increase their empire, and investment bankers get maximum consultant's fee only when the merger becomes reality.

Then, when the merger is announced a lot of activities happen. People discuss and intrigue – the only thing they do not is working. (Balzer, Hirn, Wilhelm 2000: 88)

Obviously, in many cases executives are so much fixed on mergers that they do not think enough about alternatives, such as networks, strategic alliances, and joint-ventures. Also, those forms of partnership allow to realize many advantages. Analysts hold that alliances are 'not sexy', they do not move share prices, and there is no story that could be sold at stock exchange. That is wrong. Consultants of McKinsey have proved that alliances, on average, are more successful than mergers as regards share price revaluation. (Balzer, Hirn, Wilhelm 2000: 88)

Often mergers fail to generate value for the acquiring firm's shareholders because the paid price is too high. It is difficult to find those candidates for takeovers available at a price that allows the acquiring company to realize an ac-

ceptable rate of profitability adjusted to risk because the price of acquisition always contains a bonus on the market value of the target. Shareholders of the target firm want to participate in the expected benefits from synergies. But while the acquiring company pays the bonus when the asset deal takes place, it leaves with the risk not to turn expected synergies into additional profit that exceeds the paid bonus, which uses to amount to 40% to 50% of the market price, sometimes up to 100% of said value. (Rappaport 1998: 196, 197)

2.3.6.3. Creating value for shareholders of the target firm

Mergers and acquisitions not only affect shareholders of acquiring firms but also, and frequently to the larger extent, shareholders of target firms. The following paragraph analyses theoretically shareholder value implications of a possible absorption. Afterwards different behaviors of target's managers are examined concerning their impact on value creation.

2.3.6.3.1. Theoretical considerations

If a firm is targeted for a takeover attempt, the operation may be in the best interest of target's shareholders. When the acquirer offers a premium, that exceeds target firm's value to such a degree that shareholders cannot expect from their managers to generate at least the same value, shareholders will consider to accept a takeover of their company. In this case they will be interested that managers come to an agreement with that company willing to acquire the own one for the highest premium. They expect also that managers do everything to maximize this premium.

"It is important to recognize that divestment is an integral part of the market for corporate control. It performs at least three key functions:

(a) it provides a *flexible* mechanism whereby resources can be reallocated both within and between markets;

(b) it provides a *constraint against unnecessary bigness* and enables entrepreneurs to recognize opportunities for gains where the current value of a firm is less than the value of the sum of its parts;

(c) it provides a means whereby past mistakes can be rectified at relatively low cost and is an important part of the *search* of the most efficient structural composition of the firm in a dynamic environment." (Wright, Chiplin, Coyne 1989: 117)

Just the possibility that their firm may be a takeover candidate benefits shareholders already since managers, eager to defend their jobs, are interested "to not convert [the company] in an object of absorption, consequence that can be avoided by offering constantly an increased profitability to shareholders. If assets cannot obtain profitability above capital costs, investors will sell their shares converting the company in an objective of absorption." (Black, Wright, Backman, Davies 1999: 126)

2.3.6.3.2. Managerial behavior

Managers of target firms use to play an important role in takeover battles. Although offerors can turn directly to target firm's shareholders, behavior of managers may have a tremendous impact on shareholders' wealth.

Generally, managers can be expected to defend their jobs, that is, to hinder a takeover. However, a takeover by another company is sometimes exactly what maximizes shareholders' wealth. Therefore shareholders should care that managers' contracts are so designed that managers behave as shareholders

expect. “Unfortunately, a major component of the solution to the conflict of interests between shareholders and managers has been vastly misunderstood. I am referring to severance contracts that compensate managers for the loss of their jobs in the event of a change in control. These have been popularly labeled ‘golden parachutes’. These control-related contracts are beneficial when correctly implemented, because they help to reduce the conflict of interest between shareholders and managers at times of takeover and therefore make it more likely that the productive gains stemming from changes in control will be realized.” (Jensen 1988: 39) A critical question is of course *how* those ‘golden parachutes’ contracts should be designed because “contracts that award excessive severance compensation to the appropriate group of managers will tend to motivate managers to sell the firm at too low a price. No simple rules can be specified that will easily prevent the misuse of golden parachutes because the appropriate solution will depend on many factors that are specific to each situation” (Jensen 1998: 40). Jensen recommends that “in general, contracts that award inappropriately high payments to an excessively large group will reduce efficiency and harm shareholders by raising the cost of acquisition and by transferring wealth from stockholders to managers. The generally appropriate solution is to make the control-related severance contracts pay off in a way that is tied to the premium earned by the stockholders. Stock options or restricted stock appreciation rights that pay off only in the event of a change in control are two options that have some appropriate properties. In general, policies that encourage increased stock ownership by managers and the board of directors will provide incentives that will tend to reduce the conflicts of interests with managers.” (Jensen 1988: 40, 41)

It can be concluded that the contractual situation of managers determines to a large extent their behavior when confronted with a takeover offer. Then, they dispose of infinite possibilities to act and react. However, there are some typical measures taken by managers of targeted companies that are worth to be examined concerning their shareholder value implications: defense or resistance of managers, ‘greenmail’, ‘poison pill’, presentation of a ‘white knight’, sale of ‘crown jewels’, and employee stock option programs.

“Stockholders are concerned about how takeover defenses affect all three components of value: the value of the firm under current managers, the probability of an acquisition, and the offer price if a takeover bid occurs. While takeover defenses may lower the probability of being acquired, they may also increase the offer price. Furthermore, takeover defenses can affect the value of the firm even if it is not acquired, that is, the value with its incumbent management team.” (Ruback 1988: 50) The author admits that “it is difficult to determine *a priori* whether takeover defenses are good or bad for stockholders. But one way to assess a takeover defense is to examine the rationale for resistance. Managers resist takeovers for three broad reasons: (1) the belief the firm has hidden values; (2) the belief resistance will increase the offer price; and (3) the want to retain their positions.” (Ruback 1988: 50)

The argument the firm has hidden values may be correct because “managers of most corporations have private information about the future prospects of the firm. This information usually includes plans, strategies, ideas, patents, and similar items that cannot be made public. Even if efficient, market prices cannot include the value of information that the market does not have. When assessing a takeover bid, managers compare the offer price to their own esti-

mate of the value of the firm. Their estimate, of course, includes the value of the private information they possess. When the inside information is favorable, the managers' per share assessment of value will exceed the market price of the firm's stock. Offer prices above the market price of the stock could be below the managers' assessment of its value. In such cases, managers would help stockholders by actively opposing the offer. Opposition based on 'hidden values' is in the shareholders' interests only when the private information is valuable." (Ruback 1988: 51)

Also those resistance strategies that simply drive offer prices are welcome by shareholders. "In most transactions in which there is disagreement about value, it pays to haggle about price. Corporate takeovers are no exception. In mergers, the managers of the target and bidding firms negotiate directly. In tender offers, however, the haggling generally occurs in the newspapers. The bidder circumvents the target's managers by making an offer directly to the shareholders. The target shareholders, therefore, lack a centralized bargaining agent. But takeover defenses can help: by making takeovers more difficult, resistance can slow down a bidder. This gives potential competing bidders the opportunity to enter the auction for the target firm." (Ruback 1988: 51, 52) In consequence, offer prices are likely to increase.

"The third reason for takeover defenses, managerial self-interest, benefits the stockholders only if resistance happens by chance to be the appropriate action for one of the first two reasons [hidden values and resistance]." (Ruback 1988: 52)

Another common instrument to avoid a takeover is the so-called ‘greenmail’. “Greenmail is actually a targeted repurchase, an offer by management to repurchase the shares of a subset of shareholders at a premium, an offer not made to other shareholders. Greenmail is an appellation that suggests blackmail; yet the only effective threat possessed by a greenmailer is the right to offer to purchase stock from shareholders at a substantial premium. The ‘damage’ to shareholders caused by this action is difficult to find. Those who propose to ‘protect’ shareholders by paying greenmail hide this fact behind emotional language designed to mislead. But management can easily prohibit greenmail without legislation: it needs only to announce a policy that prohibits the board or management from making such payments.” (Jensen 1988: 41)

Similarly dubious is the ‘poison pill’ strategy from the shareholder value standpoint. “This strategy involves the issue of convertible securities which may be converted into shares of the company owning it at the time of the conversion. Such conversions would have the effect of diluting the bidder’s shares and perhaps deterring an acquisition. There are variants of this strategy. For example, the ‘poison pill preferred’ strategy involves declaring a dividend to preference shareholders which is convertible into the stock of the bidder.” (Cooke 1986: 242, 243)

“‘White knight’ is a term used for a bidder who steps in when the target company is trying to avert a takeover by a hostile suitor. … if a small premium is offered over the current price, there is a stronger chance of a white knight coming to the rescue of the offeree. If a substantial premium is offered, the costs to white knights become correspondingly higher and the chance of rescue diminishes.” (Cooke 1986: 237) Although managers present ‘white knights’ to protect

the company from a takeover and their primary intention may not be to increase shareholder value but to safe their own jobs, in fact the ‘white knight’ can result as a competitor in the battle to take control over the targeted company what drives prices and benefits shareholders.

“A particularly useful defense strategy for conglomerate companies that possess what is often referred to as a ‘crown jewel’ – a highly valued asset” is to sell to the offeror only this asset, for example, a division. “If the offeror wishes to acquire the company in order to acquire the crown jewel, it may be useful to sell the crown jewel on its own, leaving the rest of the company intact. As an alternative strategy, the crown jewel could be mortgaged or sold to another undertaking.” (Cooke 1986: 238) Shareholders are benefited when the ‘crown jewel’ is worth more for the acquirer than for the targeted firm.

Finally, the instrument of employee stock option programs that prevents firms to become objective of a takeover bid is considered. “The aim of this strategy is to defend the company from attack by assuming that employees with stock options are less likely to tender shares to an offeror because of loyalty to their existing employers.” (Cooke 1986: 244) The strategy may work if employees hold enough options and shares to defend the company against takeovers. Since employees are then the largest group of shareholders they should do everything to increase their own wealth. However, there remains a danger that managers will not optimize shareholder value when shareholding is widespread among thousands of employees and their actual position as shareholders is weaker than that as employees.

To sum up, managers dispose of various instruments to respond on a takeover bid. Some should be used to increase shareholders' wealth. Others harm shareholders. Therefore shareholders are recommended to design managers' contracts such that they will take measures that benefit shareholders when confronted with a takeover offer.

2.3.6.4. The alternatives: alliances and internal growth

Taking into account the above analyzed arguments for and against mergers and acquisitions in many cases it seems improbable that all affected shareholders profit substantially from such an operation.

Alternatively, the so-called strategic imperatives can be obtained also by means of collaboration like participation, a wide range of strategic alliances, or by a minority investment. Strategic alliances contain agreements that are not related to the company's capital, as there is an interchange of licenses, cooperation in biddings, associations for R&D purposes, or joint production or distribution. Finally, there is the alternative of internal growth. Given a real alternative, directors have to compare shareholder value effects of both, internal development and acquisition. The increasing tendency towards acquisitions, however, reflects some important advantages of acquisitions with respect to internal growth. Internal growth should be considered in any case if

- it can be realized swiftly. Entry in a market of a product through acquisition takes normally weeks or months while an internal development sometimes requires years.
- it is not less costly to acquire a company with a solid market as a competition battle to enter the market.

- it is not too difficult or impossible to develop internally some strategic assets owned by a potential target firm such as the image of a brand, distribution channels, own technology, patents, registered brands or an experienced management.

- the maintenance of an existing and experienced company is not less risky than the development of a new one. (Rappaport 1998: 192)

2.3.7. Liquidity of shares

This section shows that market liquidity of company shares is a highly relevant shareholder value variable. This has already been recognized by Harold Demsetz in 1968: “The statistical analysis strongly indicates that the cost of exchanging a security declines as trading activity in that security increases” (Demsetz 1968: 50). However, the most profound analyses were made by Yakov Amihud and Haim Mendelson in the 1980’s.

The following subsections offer a definition of the magnitude “liquidity”, analyze the implications of the liquidity effect and present some measures to increase liquidity.

2.3.7.1. Liquidity of financial securities

Liquidity in the context of financial markets and the securities traded in these markets (e.g. stock shares or bonds) is according to Bernstein defined by the characteristic that a market participant “can buy and sell promptly with minimal impact on the price” (Bernstein 1987: 54). In order to operationalize and quantify the magnitude “liquidity”, financial literature uses mostly the negative definition stating “illiquidity can be measured by the cost of immediate execution” (Amihud, Mendelson 1986: 223). However, it is not easy to relate costs

correctly to liquidity. For example, a relation between trading volume and real transaction costs shows that the trading volume is a very bad indicator for liquidity – it implies exactly the contrary order (Theissen 1999: 259). Although Bernstein finds “one thing is for sure: simple and obvious measurements of liquidity paint a distorted picture and should receive only minor consideration in any analysis of liquidity” (Bernstein 1987: 61), most authors tend to recognize the bid-ask spread as the most appropriate measure for liquidity: “An important component of this [transaction] cost is the spread between the bid and ask prices at which dealers are willing to satisfy sellers’ and buyers’ demands for immediate execution of their transaction. A seller who wants to obtain the full market value of an asset will have to wait for the arrival of a buyer willing to buy at that price. He can avoid the associated delay by promptly selling the asset to a dealer at the quoted bid price, which reflects a liquidation discount. Similarly, to avoid delays, a buyer can choose to consummate an immediate purchase at the dealer’s ask price, which is higher than the asset’s current resale value” (Amihud, Mendelson 1988: 5).

2.3.7.2. Implications of the liquidity effect

The higher the bid-ask spread the higher are the trading costs, or in other words, the liquidity costs. “Investors require a higher expected return from an asset with lower liquidity to compensate for its higher trading costs. Thus, firms have an incentive to carry out policies which increase the liquidity of the financial claims they issue, since this may lower the required return on these claims and increase their value” (Amihud, Mendelson 1988: 6). The authors “published a study demonstrating that portfolios of less-liquid stocks provide investors with significantly higher returns, on average, than highly liquid stock portfolios, even

after adjusting for risk" (Amihud, Mendelson 1998: 69). "Our model predicts that higher-spread assets yield higher expected returns, and that there is a clientele effect whereby investors with longer holding periods select assets with higher spreads. The resulting testable hypothesis is that asset returns are an increasing and concave function of the spread. The model also predicts that expected returns net of trading costs increase with the holding period, and consequently higher-spread assets yield higher net returns to their holders. Hence, an investor expecting a long holding period can gain by holding high-spread assets. We test the predicted spread-return relation using data for the period 1961-1980, and find that our hypotheses are consistent with the evidence: Average portfolio risk-adjusted returns increase with their bid-ask spread, and the slope of the return-spread relationship decreases with the spread. Finally, we verify that the spread effect persists when firm size is added as an explanatory variable in the regression equations. We emphasize that the spread effect is by no means an anomaly or an indication of market inefficiency; rather, it represents a rational response by an efficient market to the existence of the spread" (Amihud, Mendelson 1986: 224). "The ensuing equilibrium has the following characteristics: (i) market-observed average returns are an increasing function of the spread; (ii) asset returns to their holders, net of trading costs, increase with the spread; (iii) there is a clientele effect, whereby stocks with higher spreads are held by investors with longer holding periods; and (iv) due to the clientele effect, returns on higher-spread stocks are less spread-sensitive, giving rise to a concave return-spread relation" (Amihud, Mendelson 1986: 246).

The price implications of the magnitude liquidity are considerable "because the overall effect of trading costs of, say, 4 percent of an asset's value is

substantially higher than 4 percent, because these costs will be incurred repeatedly – whenever the asset is traded" (Amihud, Mendelson 1998: 69). "Consider a security whose holding period is two years, … assuming an 8% discount rate … Thus, the 4 percent cost per transaction represents a total reduction of 28 percent in the potential market value of the asset (that is, assuming it could be traded costlessly)" (Amihud, Mendelson 1998: 70). "We found that, on average, an increase of 1 percentage point in the bid-ask spread was compensated by an additional stock yield of 0.21 percent per month (or about 2.5 percent per annum), after adjusting for differences in risk". (Amihud, Mendelson 1998: 70)

However, "the benefits of liquidity-increasing financial policies which reduce the firm's opportunity cost of capital have to be balanced against their costs". (Amihud, Mendelson 1988: 13) "In equilibrium, the marginal increase in value due to improved liquidity will equal the marginal cost of such an improvement". (Amihud, Mendelson 1986: 247)

Amihud and Mendelson summarize the major consequences deriving from their findings in the following points:

1. "The benefits of increasing liquidity to be greater for corporations whose stocks and bonds already enjoy a relatively high level of liquidity. This is because liquid assets are typically held by frequent traders who are more sensitive to changes in liquidity. …
2. … the costs of increasing liquidity are also likely to be an increasing function of the initial level of liquidity. That is, the costs of improving liquidity are likely to be greater when liquidity is already relatively high.
3. Because the benefits of increasing liquidity are proportional to the value of the firm, the dollar value of a reduction in cost of capital resulting from

greater liquidity will be more beneficial to larger firms, thus reinforcing point 1.

4. In many cases, especially among small, relatively illiquid firms, the costs of increased liquidity are likely to be greater than the benefits." (Amihund, Mendelson 1998: 72)

2.3.7.3. Liquidity increasing measures

The management of a firm has several possibilities to increase liquidity in order to create shareholder value. Amihud and Mendelson list eight measures or circumstances in which to increase the liquidity of shares and stocks: going public, standardization of claims, limited liability, corporate borrowing, disclosure of inside information, underwriting and certification of new public issues, stock denominations, and listing on organized exchanges. (Amihud, Mendelson 1988) These measures will be presented in this subsection. They may be classified in the three categories of subsequent liquidity increasing steps and the category of financing. Firstly, the organizational form of a company – private or public company – determines the current and possible future degree of liquidity of a company's shares. Then, secondly, if a company has decided to change its organizational form and to go public, there are various factors regarding the placement which are liquidity sensitive. Thirdly, after going public management has at its disposal some helpful instruments that further increase firm's liquidity. Finally, corporate borrowing may be less considered concerning its liquidity aspects. Nevertheless, there is also an important impact on shareholder value.

2.3.7.3.1. Organizational form of a company

"'Going public' is the most fundamental form of increasing liquidity". (Amihud, Mendelson 1988: 8) It is logical that a change of the organizational

form of a company switching the class of shares from those of a private to a public company has a fundamental impact on liquidity because there are less administrative requirements when transferring a share of a public limited company. Also, “by limiting stockholders’ losses to the amount of their investment, the limited liability provision increases the liquidity of stocks. Without limited liability, investors would trade stocks very cautiously, the market would become thin and the bid-ask spreads would be considerably higher since buyers and sellers set prices to protect themselves”. (Amihud, Mendelson 1998: 75)

On the other hand, the change of a company’s organizational form has its inconveniences – or costs – for shareholders: “… like all forms of insurance, the limited liability provision gives rise to the well-known ‘moral hazard’ problem – briefly stated, the tendency for most activities to experience higher losses when the burden of such losses has been transferred from an agent to a third-party insurer. And besides moral hazard, limited liability also spawns a related ‘agency’ or incentive problem. When levered public companies approach insolvency, the insurance policy effectively bestowed upon stockholders gives management (as a representative of stockholders) an incentive to take on even larger risks because they have claims that resemble call options (that is, an upside without a commensurate downside)”. (Amihud, Mendelson 1998: 75) “In addition, there are the agency costs that result from the separation of ownership from control, and from the consequent weakening of management incentives to maximize efficiency. Having publicly traded shares also imposes regulations and constraints on management and exposes the information generated inside the firm to competitors”. (Amihud, Mendelson 1998: 72) Last but not least, “– an initial public offering of stock – entails large up-front underwriter fees as well as

recurring shareholder servicing and disclosure costs". (Amihud, Mendelson 1998: 72)

Amihud and Mendelson find that, in general, the weighing between costs and benefits must tend to the advantages of higher liquidity just for empirical evidence: "The fact that public corporations dominate private partnerships and other extended liability vehicles as the major form of American business suggests that the liquidity benefits of limited liability outweigh the costs arising from incentive problems" (Amihud, Mendelson 1998: 76). Moreover, "the fact that so many firms choose to remain public and forego the potential gains of 'going private' provides some evidence on the value they place on liquidity" (Amihud, Mendelson 1988: 8).

In the micro-level of individual companies "the choice of organizational form thus demonstrates the general tradeoff involved in undertaking liquidity-increasing financial policies. On the one hand, the net cash flows of the close corporation are expected to exceed those of its public counterpart; on the other hand, the return required on the public corporation is lower, affecting the value of these cash flows. In considering the decision to 'go public,' the firm has to balance the benefits of lower required returns against the costs". (Amihud, Mendelson 1988: 8)

2.3.7.3.2. Public placement

The mere conversion of a private company into a public company has already a benefiting liquidity effect since it is easier for owners to sell their shares and for buyers to acquire shares. However, the bigger step to improve liquidity consists in the right choice of the share design and the stock exchange(s) where shares will be listed. Concerning the public placement of shares there

are two services of investment banks that are costly but contribute to increase liquidity. Here, again, management has to calculate the tradeoff between costs and benefits.

A considerable liquidity difference exists between ordinary bearer shares and so called ‘letter’ stocks. “There is strong evidence on the value of liquidity from the prices of ‘letter’ stocks. Some companies whose stocks are publicly traded also issue ‘letter’ stocks that are not registered with the Securities and Commission, and thus the trading of these securities is restricted. Restricted stocks are identical in every other respect to their counterparts (in terms of dividends, rights in liquidation, voting, etc.), but they can become publicly traded only following a lengthy procedure – all of which renders them quite illiquid. Evidence suggests that letter stocks sell at a discount of about 25% relative to their publicly-traded counterparts”. (Amihud, Mendelson 1998: 71)

What is the liquidity increasing function of a stock exchange in general? Demsetz argues, that “the distinguishing characteristic of such trading on organized exchanges is the willingness of customers to forego a personal examination of the goods bought and sold. This allows a high degree of standardization and enables communication and title exchange costs to be kept low even for large transaction rates. When customers are willing to let others buy and sell for them, when they are willing to conclude an exchange without a personal prior examination of the goods, the concentration of trading on relatively few markets offers the prospect of lower transaction costs” (Demsetz 1968: 50).

The importance of the number of stock exchanges where the shares are listed and the choice of those stock exchanges becomes evident through respective empirical researches.

- “We examined the effect of stock delisting on firm value and market liquidity. … Using stocks dual listed between the stock exchanges of Malaysia and Singapore, we found delistings to decrease firm value. The larger capitalized delisted stocks showed a cumulative abnormal return of -11.84% in the two weeks encompassing the delisting announcement. However, the lower capitalized stocks showed a drop of only 4.13% in the same period. Therefore this study supports earlier findings that delisting brings about a fall in firm value” (Meera, Tripathy, Redfearn 2000: 205). The authors recommend to firms, they “should strive to list its stock in as many other markets as possible. Not only would this increase firm value, it would also bring about other benefits of dual listing like opening itself a wider choice of capital markets while improving the marketability and thus liquidity of the securities it issues”. (Meera, Tripathy, Redfearn 2000: 205)
- “Securities markets differ in their method of trading and depth, and this affects the liquidity of the asset traded in them. A company can thus affect the liquidity of its shares or stock by choosing where they will be traded. Evidence suggests that the desire to increase liquidity may motivate companies to ‘list’ on the large and organized security exchanges. In particular, firms that listed on the NYSE have experienced significant declines in the spread of their stocks after listing”. (Amihud, Mendelson 1998: 76)
- “This paper examines the behavior of common stock returns for samples of OTC firms that were newly listed on the NYSE both before and after the introduction to the NASDAQ [National Association of Securities Dealers Automatic Quotation] communication system in the OTC market. In the pre-NASDAQ period, we document a positive and significant reaction by the

capital market to the news of a major stock exchange listing. This result is consistent with a number of earlier studies conducted over long periods of time prior to the introduction of NASDAQ. In the post-NASDAQ period, we observe a reduced and statistically insignificant capital market reaction to initial announcements of impending exchange listings. Additionally, despite some peculiarities in the stock return data surrounding listing announcements, the market's response to the news of new listing differs significantly between these two periods. This result is consistent with the joint hypothesis that the primary source of increases in value associated with exchange listings in the pre-NASDAQ period resulted from the superior liquidity services provided by the NYSE and that the introduction of NASDAQ in the OTC market has reduced the liquidity advantage provided by the NYSE". (Sanger, McConnell 1986: 22)

When a company has taken the decision to list its shares on a stock exchange it can ask an investment bank or a consortium of investment banks to underwrite and certify the new issue. Both measures have a positive liquidity effect:

- "A corporation considering the use of an underwriter to issue its securities should take into account (among other things) the liquidity-increasing functions it provides that the corporation cannot perform on its own. First, the underwriter provides 'stabilization' of the price of the new issue during the offering period. Then, for some time thereafter, it serves as a market-maker, prepared to step in and provide liquidity as necessary by buying or selling the security". (Amihud, Mendelson 1998: 76)

- "Another liquidity-increasing service provided by underwriters is the 'certification' of the new issue. The underwriting investment bank is an independent agency that takes on the responsibility of providing the public with accurate information about the new issue. … This process of certification effectively reduces the bid-ask spread of the new issue and thus increases its liquidity". (Amihud, Mendelson 1998: 76)

2.3.7.3.3. Liquidity increasing measures after placement

After a public offering and listing of shares management has chiefly two instruments at hand to further increase liquidity and as a consequence shareholder value – always if costs of those measures do not outweigh the benefits: stock splits, above all, if share prices have increased strongly so that some investors no longer can afford to acquire the shares, and corporate communication towards shareholders and analysts.

- "Liquidity considerations may also explain why companies split their stocks and why stocks are typically issued in relatively small denominations to begin with. … the cost savings in servicing the smaller group of shareholders would be considerable. Lower per share trading ranges may increase liquidity by reducing dealer spreads. … By issuing shares with smaller denominations, the firm increases the divisibility of its securities, makes small transactions possible, and thus facilitates greater dispersion of ownership". (Amihud, Mendelson 1998: 76)
- "A corporation can affect the liquidity of its claims – and consequently its cost of capital – by the amount and quality of the information it releases to investors. The liquidity of a security is reduced when investors suspect that insiders are trading on the basis of privileged information. In that case, mar-

ket-makers widen the bid-ask spread in order to protect themselves against better-informed traders, and to be compensated for bearing greater risk". (Amihud, Mendelson 1998: 75) "Our argument that liquidity considerations give rise to voluntary corporate disclosure, even at a cost, is also supported by the existence of the bond-rating system. Although companies issuing public debt are under no formal obligation to have their bonds rated, almost all firms voluntarily pay the rating agencies to rate their publicly issued bonds". (Amihud, Mendelson 1998: 75) "Consistent with our analysis, most NYSE-listed firms published financial statements even before they were required to do so by the Securities Exchange Act of 1934". (Amihud, Mendelson 1988: 11)

2.3.7.3.4. Corporate borrowing

Liquidity does not only affect prices of shares but also those of bonds. "The bond markets also provide evidence that liquid debt instruments have a lower yield to maturity, thus lowering the corporate cost of capital". (Amihud, Mendelson 1998: 73) This has to be taken into consideration when management decides about the design of a bond. The authors conclude, "the advantage of innovative design of new securities should be weighed against the disadvantages of the lower liquidity that may result". (Amihud, Mendelson 1998: 74) "In sum, while 'financial engineering' and the design of special securities might look beneficial to the issuer, the associated illiquidity costs should also be taken into account because the reduction in liquidity of special securities may increase the return required by investors". (Amihud, Mendelson 1998: 74)

Bond rating as a liquidity enhancing measure has been already discussed above in the context of corporate communication.

2.3.7.4. Implications for the researched companies

All of the researched companies are at least once index listed. That means that these companies already proved high liquidity. However, indexes change in certain periods or from time to time their composition eliminating those companies of less liquidity and market capitalization than the shares of firms that enter the index. Thus, managers of firms that belong to important indexes have a permanent incentive to maintain the status.

From the above analysis can be concluded that for the great corporations researched it is especially benefiting to further increase liquidity. Stock splits are liquidity increasing measures if they reduce stock prices to an extent that more investors are attracted. Bond ratings and active corporate communication reduce also costs for investors and hence increase liquidity. The researched firms should be eager to be listed in important stock exchanges.

2.3.8. Risk management

Subchapter 2.1 showed that a key variable to calculate capital costs is risk. Risk determines the value of a project or the value of the total enterprise as the sum of all its projects if the time-structure of cash flows is given. Obviously, risk is a highly important shareholder value variable.

This section begins by analyzing theoretically the shareholder value variable *risk* – how risk is defined and measured. From this starting point conclusions will be drawn for a shareholder value generating risk management.

2.3.8.1. Shareholder value variable risk

2.3.8.1.1. Some basic considerations of investors

“Risk in investment means that future returns are unpredictable.” (Brealey, Myers 2000: 179) “The usual measure of this spread [of possible out-

comes] is the standard deviation or variance." (Brealey, Myers 2000: 187) For the purpose of pricing project or enterprise risks, however, it is necessary to distinguish two risk components: "There is the *unique risk* that is peculiar to that stock, and there is the *market risk* that is associated with market wide variations. Investors can eliminate the unique risk by holding a well-diversified portfolio, but they cannot eliminate market risk. *All* the risk of a fully diversified portfolio is the market risk." (Brealey, Myers 2000: 187) When investors are able to diversify unique or, as it is sometimes called, 'unsystematic' risks away, they are not willing to pay for the elimination of those risks, for example on part of the firm. "Recent scholarship, however, has argued that although total risk may not affect investors' required returns, large unsystematic risks, if unmanaged, can substantially reduce the value of the firm. In terms of the DCF model, diversifiable risks may not raise investors' discount rate (the denominator), but they can significantly lower the level of the firm's expected cash flows (the numerator). If this is the case, then reducing total risk can increase expected cash flows, thereby increasing the value of the firm." (Shapiro, Titman 1998: 252) Labor risks or Y2K computer risks, for instance, may be classified as 'unsystematic', but can have a tremendous impact on the return.

If the capital market is efficient there are only securities that combine risk and expected return in a way which does not permit to realize arbitrage gains. (Markowitz 1952) At the moment when the investor buys the share the price is adequately related to the risk of the underlying. Then, from the above stated follows that managers must take into consideration two risk-related conclusions in order to create shareholder value: 1. Investments have to earn more than their capital costs calculated on basis of projects' market risks. 2. Every meas-

ure the firms takes to reduce the risk that cannot be diversified benefits shareholding investors if returns maintain unchanged. Then the share price increases in the efficient market since expected returns are discounted at lower rates.

2.3.8.1.2. Risk measurement

A crucial point is the correct determination of (risk adjusted) capital costs. The Capital Asset Pricing Model and the Arbitrage Pricing Theory are the two useful and most frequently used quantitative tools for managers to compute the required rate of return.

2.3.8.1.2.1 Capital Asset Pricing Model (CAPM)

The Capital Asset Pricing Model (CAPM) that William Sharpe (1964), John Lintner (1965), Jan Mossin (1966), and Jack Treynor (1961, unpublished) derived is the most applied tool to quantify risk and bring it into context with the value of a risky asset, such as an investment project.

Lintner summarizes that “the aggregate market value of any company’s equity is equal to the capitalization at a risk-free interest rate of a uniquely defined *certainty-equivalent* of the probability distribution of the aggregate dollar returns to all holders of its stock. For each company, the certainty equivalent is the expected value of these uncertain returns less an adjustment term which is proportional to their aggregate risk. The factor of proportionality is the *same for all companies* in equilibrium, and may be regarded as a *market price of dollar risk*. The relevant risk of each company’s stock is measured, moreover, not by the standard deviation of its dollar returns, but by the *sum* of the *variance* of its own aggregate dollar returns and their *total covariance* with those of all other

stocks." (Lintner 1965: 14) Usually the CAPM is expressed as the following formula:

$$r - r_f = \beta\,(r_m - r_f)$$

where r is the expected return on the asset, r_f is the risk-free rate of interest, beta (β) is the measure of the asset's systematic risk, and r_m is the market return. For the purpose to use the model for project pricing the corresponding formula is:

$$\textit{Expected project return} = r = r_f + (\textit{project beta})(r_m - r_f).$$

Whereas the beta of a listed company is easily computed when the calculation bases on historical share prices (the usual method), it is more complicated to determine the beta of a company division or of a project when the corresponding risk is not identical to that of the whole firm. Similar is the situation of a company that is not listed on a stock exchange. Furthermore, the mathematically derived beta from past market prices is not correct when future risk is higher or lower than past risk.

Rosenberg and Rudd (1998) make some proposals to overcome the deficiencies of a beta that exclusively bases on historical share prices of listed companies.

The method of similars uses betas of other listed companies with a comparable risk profile. This method can be applied for an unlisted firm, but it can also "be extended to a number of other applications – the pricing of mergers and acquisitions, decisions to divest divisions or subsidiaries, the structuring of management compensation contracts, and the evaluation of individual invest-

ments. All of these are areas where the CAPM (and, more specially, the 'method of similars') can be used to quantify investment risks and required returns." (Rosenberg, Rudd 1998: 63)

When the historical risk profile cannot be assumed to be valid also in the future, "it is natural to ask whether superior prediction of beta can be accomplished by using a third source of information – namely, the fundamental operating and financial characteristics of the company. … For publicly-traded companies, the fundamental approach to risk prediction offers the potential for considerable improvement. In the case of untraded assets like projects or divisions, where price behavior is unavailable, this approach will often be essential. … From a corporate practitioner's point of view, fundamental betas have three advantages over market generated betas. First, they have a stronger intuitive appeal: the prediction rules for beta coincide with our common sense impression of what it is that makes a company risky. Second, the fundamental prediction rules are ideally suited to the analysis of non-trading investments such as divisions, SBUs, and individual projects. And third, the fundamental betas outperform predictions based only upon historical market co-variability (i.e., historical betas). In other words, prediction rules based on fundamentals alone have proven superior to both historical betas and to Bayesian-adjusted historical betas. Significantly, however, predictions based on both historical price behavior and fundamentals have outperformed either source when used separately." (Rosenberg, Rudd 1998: 64)

What are possible fundamental data which could be utilized in order to calculate the best beta? Rosenberg and Rudd's answer is to refer to the income statement and the balance sheet to obtain information that help to adjust the

risk estimation. They list growth, earnings variability, financial leverage and size as appropriate magnitudes (Rosenberg, Rudd 1998: 65):

- “The more pronounced the growth orientation, the higher the beta is likely to be. A growth oriented strategy implies large capital investment plans. … A high payout ratio implies little growth, while higher earnings retention generally reflects a high level of expected capital investment.”

- “Earnings variation is a good and persistent indicator of the business risk of the company and, hence, of likely future business risk and beta.”

- “The greater the financial leverage, the greater the beta. But this result, although confirming our intuition, must be interpreted with caution. The observed effects are not as large as financial theory would suggest.”

- “As common sense suggests, the stocks of smaller companies are typically perceived by investors as riskier investments.”

Today, the CAPM is one of the most frequently applied risk measurement tools to calculate the required rate of return. Although the concept suffered many attacks from financial theorists – standing out the critics of Fama and French (1992) who argue that the worth of model is poor because it bases on the variable risk only – Kothari and Shanken (1998) object to those critics that other models such as that of Fama and French who introduce “the book-to-market ratio and the market capitalization” as “two other easily measured variables” do not perform significantly better than the CAPM when empirically tested. The authors conclude that “while the CAPM may not provide a perfect description of expected returns, the latest pronouncements that beta is dead appear, once again, to have been premature.” (Kothari, Shanken 1998: 52, 57)

2.3.8.1.2.2 Arbitrage Pricing Theory (APT)

"Stephen Ross's arbitrage pricing theory, or ATP, … starts by *assuming* that each stock's return depends partly on pervasive macroeconomic influences or 'factors' and partly on 'noise' - events that are unique to that company. … The theory doesn't say what the factors are: There could be an oil price factor, an interest-rate factor, and so on. The return on the market portfolio *might* serve as one factor, but then again it might not. … Exxon would be more sensitive to an oil factor than, say, Coca Cola." (Brealey, Myers 2000: 205)

"For any individual stock there are two sources of risk. First is the risk that stems from the pervasive macroeconomic factors which cannot be eliminated by diversification. Second is the risk arising from possible events that are unique to the company. Diversification *does* eliminate unique risk, and diversified investors can therefore ignore it when deciding whether to buy or sell a stock. The expected risk premium on a stock is affected by factor or macroeconomic risk; it is *not* affected by unique risk. (Brealey, Myers 2000: 205)" Parallels to the CAPM are obvious. An APT scenario with just one macroeconomic factor 'market risk' can be shaped that CAPM appears as a special case of APT.

"Arbitrage pricing has some attractive features. For example, the market portfolio that plays such a central role in the capital asset pricing model does not feature in arbitrage pricing theory. So we don't have to worry about the problem of measuring the market portfolio, and in principle we can test the arbitrage pricing theory even if we have data on only a sample of risky assets. Unfortunately you win and lose some. Arbitrage pricing theory doesn't tell us what the underlying factors are - unlike the capital asset pricing model, which col-

lapses *all* macroeconomic risks into a well-defined *single* factor, the return on the market portfolio. Arbitrage pricing theory will provide a good handle on expected returns only if we can (1) identify a reasonable short list of macroeconomic factors, (2) measure the expected risk premium on each of these factors, and (3) measure the sensitivity of each stock of these factors." (Brealey, Myers 2000: 206, 207)

2.3.8.2. Managing risk to increase shareholder value

Risk – or, in other terms, the required rate of return – is a crucial shareholder value variable. So, sophisticated risk management is an outstanding task of firms committed to shareholders. For the impact that risk has on the value of a company the topic should concern directly the top management, including CEO and CFO. They have to define risk politics and to control the firms risk position.

From the above stated follows that risk is an elemental variable in capital budgeting and project management. Projects should be realized only if they promise a positive (risk-adjusted) net present value taking into account real options (see section 2.3.2), which for their part again may directly impact on risk. "To some extent managers can choose the risks that the business takes … by building flexibility into their operations. A company that uses standardized machine tools rather than specialized equipment lowers the cost of bailing out if things go wrong. A petrochemical plant that is designed to use either oil or natural gas as a feed-stock reduces the impact of an unfavorable shift in relative fuel prices." (Brealey, Myers 2000: 760)

Besides project-individual risk management there are some frequently proposed general risk strategies that will be discussed in the following pages: Investors can reduce significantly the overall risk of their portfolio through diversification. Should companies also diversify in order to decrease total risk? (2.3.8.2.1) Does it make sense to hedge risky financial positions (interests, currencies)? (2.3.8.2.2) To what extent does the capital structure of a company intervene in its risk position? (2.3.8.2.3)

Finally, paragraph 2.3.8.2.4 treats political risks. Political risks affect most multinational companies and especially most of the firms researched in this doctoral thesis which are heavily invested in Latin America.

2.3.8.2.1. Diversification

"Diversification reduces risk and, therefore, makes sense for investors. But does it also make sense for the firm? Is a diversified firm more attractive to investors than an undiversified one? If it is, we have an *extremely* disturbing result. If diversification is an appropriate corporate objective, each project has to be analyzed as a potential addition to the firm's portfolio of assets. The value of the diversified package would be greater than the sum of the parts. So, present values would no longer add. Diversification is undoubtedly a good thing, but that does not mean that firms should practice it. If investors were *not* able to hold a large number of securities, then they might want firms to diversify for them. But investors *can* diversify. In many ways they can do so more easily than firms. Individuals can invest in the steel industry this week and pull out next week. A firm cannot do that. To be sure, the individual would have to pay brokerage fees on the purchase and sale of steel company shares, but think of the time and expense for the firm to acquire a steel company or start up a new steel-making

operation. … If investors can diversify on their own account, they will not pay any *extra* for firms that diversify." (Brealey, Myers 2000: 178)

Theoretically also the contrary is correct: "if they [investors] have a sufficiently wide choice of securities, they will not pay any *less* because they are unable to invest separately in each factory [of the same firm]. … The total value is the sum of its parts. This conclusion is important for corporate finance, because it justifies adding present values. … If the capital market establishes a value $PV(A)$ for asset A and $PV(B)$ for B, the market value of a firm that holds only these two assets is

$$PV(AB) = PV(A) + PV(B)$$

A three-asset firm combining assets A, B, and C would be worth $PV(ABC) = PV(A) + PV(B) + PV(C)$, and so on for any number of assets." (Brealey, Myers 2000: 178, 179) "Thanks to *value additivity*, the net present value rule for capital budgeting works even under uncertainty." (Brealey, Myers 2000: 180)

However, there may be situations when diversification in other businesses (for instance with opposite business cycles) are seen very critically by investors since they may want to diversify in another way than the company does. For example, if a telecommunications company holds important industrial participations, investors may only be interested in the telecommunications business. Instead of rewarding that firm which holds to diversify for the sake of risk limitations in other sectors and businesses that do not belong to the hard core of the firm's competences markets, investors penalize the firm discounting from the price of the firm's shares a so-called *conglomerate reduction* as the company takes away from shareholders the full opportunity to diversify on their own.

Moreover, engaging in businesses a firm does not domain may cause additional risk if those investments not only are considered financial investments and the inexperienced parent company plays an active managing and controlling role.

Financial literature cites also a motive in favor of diversification that in extreme situations increases shareholder value when diversification “result[s] in a lower probability of bankruptcy and thus lower[s] expected costs incurred during bankruptcy. These costs include:

- The loss of funds that occurs when assets are sold at distressed prices during liquidation.
- The legal fees and selling costs incurred when a firm enters bankrupcy proceedings.
- The opportunity costs of the funds that are unavailable to investors during the bankruptcy proceedings.” (Moyer, McGuigan, Krewtlow 1981: 255)

The scenario is quite theoretical since a company close to bankruptcy has no money available to invest and a financially sound company can not argue to provide for bad times.

“Diversification may also reduce the firm's cost of capital. By reducing the overall risk of the firm, diversification will lower the default risk of the firm's debt securities, and the firm's bonds will receive higher ratings and require lower interest payments.” (Moyer, McGuigan, Krewtlow 1981: 255)

2.3.8.2.2. Risk insurance

Most firms insure against financial and operational risks. Do they create shareholder value by those means? The first part of this paragraph deals with financial risks such as currency risks or interest risks. The second part analyzes

whether or not a company should buy insurances that cover operating risks, for example transport risk, fire risk or earth quake risk.

"The expected net present value of buying insurance or a futures or forward contract should be zero in an efficient market. In this light, management decisions to insure or hedge assets appear, at best, 'neutral mutations' (having no effect on the value of the firm). At worst, such actions, to the extent they are costly, are viewed as 'irrational behavior' penalizing corporate stockholders." (Shapiro, Titman 1998: 252)

But is firm's risk management *always* bad for investors although they could do it by themselves? Ronnie Barnes specifies some situations and circumstances which indicate that the management of diversifiable risks by the firm can be in the best interest of shareholders:

- The hypothesis that investors can likewise as the firm's managers eliminate risk by acting in the capital market "depends on two critical assumptions. First, investors are fully aware both of the companies' underlying exposures and of their hedging decisions - there is no asymmetry of information. Second, there must be no transaction costs of trading in the derivatives markets. Both of these assumptions are subsumed under the perfect markets heading. Broadly speaking, corporate risk management has a potentially valuable role to play, and the irrelevancy result breaks down when one or other of the perfect market assumptions is invalidated." (Barnes 1998: 321)

- If the risk reduction prevents probable bankruptcy costs the company should undertake the necessary measures. "Bankruptcy costs refer to the direct (such as legal and accountancy fees) and the indirect (such as diversion of

management time and loss of competitiveness) costs that arise when the cash flow of a company that is partially financed by debt are (or appear to be about to be) insufficient to meet its debt obligations. … hedging can [then] create value by reducing the probability of such so-called financial distress … [but] it is not the reduced risk that leads to the increase in the value but rather the increase in the expected level of operating cash flow available to investors." (Barnes 1998: 322)

- If information is asymmetric between managers and shareholders hedging risks may "reduce the 'noise' in reported profits, [and] thereby enabling investors to make better portfolio choice." (Barnes 1998: 323)

- "Similarly, asymmetric information has also been proposed as a reason why companies speculate using derivatives. A company with relatively unprofitable underlying business may attempt to mask this by speculating and hoping the speculation pays off." (Barnes 1998: 323)

- Finally, "even with symmetric information, speculation may be valuable to shareholders of a geared company that is close to financial distress. If the speculation does pay off, the rewards accrue to shareholders while if it is unsuccessful, the costs are born by the organization's debt-holders." (Barnes 1998: 323)

"Most businesses insure or hedge to reduce [operating] risk, not to make money. Why, then, bother to reduce risk in this way? For one thing, it makes financial planning easier and reduces the odds of an embarrassing cash shortfall. A shortfall might mean only an unexpected trip to the bank, but if financing is hard to obtain on short notice, the company might need to cut back its capital

expenditure program. In extreme cases an unhedged setback could trigger financial distress or even bankruptcy.” (Brealey, Myers: 760)

That does not mean that insurances against every operating risk increment shareholder value. Managers have to analyze in detail the specific individual situation of their companies. There is the interesting example of British Petroleum that sheds some light on how executives could act in the best interest of shareholders: “Recently BP took a hard look at its insurance strategy. It decided to allow local managers to insure against routine risks, for in those cases insurance companies have an advantage in assessing and pricing risk and compete vigorously against one another. However, it decided not to insure against losses above $10 million. For these larger, more specialized risks BP felt that insurance companies had less ability to assess risk and were less well placed to advise on safety measures. As a result, BP concluded, insurance against large risks was not competitively priced. How much extra risk does BP assume by its decision not to insure against major losses? BP estimated that large losses above $500 million could be expected to occur once in 30 years. But BP is a huge company with equity worth about $85 billion. So, even a $500 million loss, which could throw most companies into bankruptcy, would translate after tax into a fall of less than 1 percent in the value of BP’s equity. BP concluded that for large, low-probability risks the stock market was a more efficient risk-absorber than the insurance industry.” (Brealey, Myers 2000: 763)

2.3.8.2.3. Capital structure

“In 1958, Franco Modigliani and Merton Miller published a paper entitled ‘The cost of capital, corporation finance and the theory of investment’ in which they demonstrated that, assuming perfect capital markets, the value of any or-

ganization is determined solely by its operations and real investment decisions and is independent on how it finances those investments, i.e. its capital structure." (Barnes 1998: 321) From this follows that managers cannot create shareholder value by altering the capital structure.

However, there is an indirect impact. "Financial leverage does not affect the *risk* or the expected return on the firm's assets, but it does push up the risk of the common stock and lead the stockholders to demand a correspondingly higher return." (Brealey, Myers 2000: 228) "How does higher total risk lower expectations about future cash flows? Firms with higher total risk, all else equal, are more likely to find themselves in financial distress. Financial difficulties in turn are likely to disrupt the operating side of the business, reducing the level of future operating cash flows. Perhaps most important, financial distress can give rise to management incentives that conflict with the interests of other parties who do business with the firm; and the adverse effect of such incentives on sales and operating costs is compounded by the risk aversion of customers, managers, employees, suppliers, and other corporate stakeholders. In addition, variability in corporate earnings can affect a firm's ability to take full advantage of tax credits and write-offs." (Shapiro, Titman 1998: 252)

To sum up, capital structure changes do not alter shareholder value by the very nature of themselves. However, in a critical situation a lack of own funds can trigger secondary effects that harm shareholders seriously. Tax impacts have to be evaluated in function of the firm's individual circumstances within the country's tax legislation context.

2.3.8.2.4. Coping with political risks

"Political risk is the possibility that a multinational firm may be adversely influenced by political events within a host country, or by a change of political relationships between that host country and another country." (Eiteman, Stonehill 1989: 513) Firms are not powerless against political risks. Before they invest in a foreign country and when invested they have a lot of instruments to reduce or minimize political risks. "The best approach to political risk management is to anticipate problems and negotiate understandings beforehand. … pre-negotiation of all conceivable areas of conflict provides a better basis for a successful economic future for both parties [firm and foreign state] than does simplistic overlooking of the possibility that divergent objectives will evolve over time. Negotiating the environment prior to investment often takes the form of a formal investment agreement, or at least some governmental insurance against arbitrary changes in the rules." (Eiteman, Stonehill 1989: 502, 503) Also, "multinational firms can sometimes transfer political risk to a public agency through an investment insurance and guarantee program." (Eiteman, Stonehill 1989: 505) Afterwards investment conditions can change. "Most multinational firms therefore follow a policy of adaptation to changing host country priorities whenever possible … The essence of such adaptation is anticipating host country priorities and making the activities of the firm of continued value to the host country. (Eiteman, Stonehill 1989: 506)" Other measures proposed by Eiteman and Stonehill (1989: 507 – 512) are:

- The company produces needed components itself. "If local producers supply the components, local strikes or other turmoil may shut down the operation. (Eiteman, Stonehill 1989: 507)"

- Geographic separation of different stages of production, as usual in extractive industries, keeps host countries in a weak bargaining position. (Eiteman, Stonehill 1989: 507)

- In some cases, control of transport may be an appropriate means to reduce political risks. (Eiteman, Stonehill 1989: 507)

- "Control of key patents and processes is a viable way to reduce political risk. If a host country cannot operate a plant because it does not have technicians capable of running the process, or of keeping up with changed technologies, negotiation of an investment agreement with a foreign firm is more likely. (Eiteman, Stonehill 1989: 508)"

- Also, "control of markets is a common strategy to enhance a firm's bargaining position (Eiteman, Stonehill 1989: 508)."

- "Control of a brand name or trademark can have an effect almost identical to that of controlling patents or processes. (Eiteman, Stonehill 1989: 509)"

- "Various financial strategies can be adopted to enhance the continued bargaining position of a multinational firm. … [for example] Foreign affiliates can be capitalized with a thin equity base and a large proportion of local debt. If the debt is borrowed from locally owned banks, host government actions that weaken the financial viability of the firm also endanger local creditors." (Eiteman, Stonehill 1989: 509)

2.3.9. Cost management

"The 1990s were a new era in managing for cost efficiency. Increased competition and pressure to create shareholder value have resulted in unprece-

dented pressures for cost reduction. At the same time, a more turbulent business environment and the development of new management tools have opened new opportunities for cost reduction. A characteristic of recent cost reduction strategies is that they rely less on static sources of cost reduction – scale economies and experience effects – and more on continuous improvement, innovation, restructuring, and process redesign." (Grant 1998: 212)

This section seeks to determine the role cost management plays in the effort to create shareholder value. The following subsection 2.3.9.1 relates analytically the variable *cost management* to the management objective of shareholder value maximization. Subsection 2.3.9.2 gives a very brief overview on traditional cost accounting systems and reviews critically their suitability for shareholder value management. It cannot be the purpose of this doctoral thesis to add another textbook to the countless ones that already exist. But it is helpful to concisely review the cost accounting analytical tools managers dispose of to pursue shareholder value effective strategies. Subsection 2.3.9.3 shows how the shortcomings of traditional cost accounting can be overcome and proposes some solutions to close the gaps. In fact, 80-year-old cost accounting principles in combination with newly developed analytical procedures give managers a wide range of possibilities to calculate, plan, and control costs in order to increase shareholders' wealth. Finally, subsection 2.3.9.4 presents some cost cutting strategies for executives aiming at shareholder value creation.

2.3.9.1. Cost management and shareholder value

It is simply impossible to undertake a business without causing costs. From this follows, that the management task is not to minimize costs – maybe

the biggest cut could be reached by closing a company – but to optimize cost management in order to maximize shareholder value.

Generally, cost reductions that lead to higher returns without affecting the market risk of a project or the whole firm, and without knocking off real options, increase the company's value. Even if drastic cost reduction measures reduce return on investment or remove real options, they might be rational until the trade-off between savings and losses of expected return at present value is reached. The theory is very simple. To put it into practice may be somewhat more difficult. However, sophisticated cost management tools aid firms to act cost-efficiently.

Utmost important is management's fundamental attitude towards the topic of cost management. Companies, which are oriented towards the creation of shareholder value, are *always* eager to cut unnecessary costs that are expenditures which do not help to enhance shareholders' value. Therefore, investors will be interested not only in knowing the cost cutting programs but also in the general cost policy of the company they hold shares of. If managers are always cost sensitive future creation of value will be more probable as if they act only in special circumstances (e.g. deregulation of a market) that oblige to take exceptional cost reducing measures.

2.3.9.2. Traditional cost accounting systems

Cost accounting systems – often called managerial or management accounting systems in order to draw boundaries to financial accounting systems designed for external reporting to stakeholders like shareholders, banks and public authorities (for example profit and loss statement or balance sheet) –

have been developed since the 1920s and provide a wide range of tools for a solid cost analysis for many management requirements up to now. They form the analytical basis to improve efficiency and effectiveness, assign responsibility, measure and evaluate performance, and make decisions. In other words, cost accounting is the groundwork for managerial controlling.

The analytical instruments developed allow controlling costs at all levels and hierarchies of a company.[8] Different cost classifications were created for different purposes: for example, cost accounting distinguishes between product costs and period costs, direct and indirect costs, manufacturing and non-manufacturing costs, variable and fixed costs, and also between controllable and uncontrollable costs, and relevant and irrelevant costs.

Also for a pro-active shareholder value management it is important to have the distinguished cost information. For *example*[9], Ward (1992: 291-293) stresses three "critical success factors", namely, 1. to separate committed from discretionary costs, 2. to distinguish discretionary form engineered costs, and 3. to use standard costs strategically.

1. "Most accounting systems bring cost in when they actually occur, in the sense of the event to which they refer having taken place. This is the fundamental basis of accrual accounting and the matching principle: but it does not, in reality, reflect when the cost is normally committed. The company may enter into a legally binding agreement a long time before the actual

[8] Financial literature provides numerous excellent textbooks about cost accounting. This overview orientates on Helmkamp (1990).

[9] To get an overview of a series of different analytical cost concepts necessary in a shareholder value oriented management see for example: Morse, Wayne, Davis, and Hartgraves (1991).

event takes place and the accounting entries are recorded. For example, if the business takes on a 25-year property lease agreement, it is committed to pay the lease payments for the full lease period, even if it no longer wanted to occupy the property. The only point at which control can be exercised over the decision to spend money therefore is before the commitment is made."

2. "By breaking discretionary costs down into further, more specific elements it is possible to concentrate analytical resources on those areas of the business where the true exercise of strategic choice is possible. This can be further aided by distinguishing discretionary costs from engineered costs. As its name implies, an engineered cost has an input to output relationship which is relatively predictable." Ward concludes that "engineering type costs can be used wherever there is a predictable input to output relationship and this frees strategic decision-makers to concentrate their time on their discretionary ability to use these resources most effectively."

3. Regarding the proposal to use standard costs strategically, the "physical input-output relationships enable close controls over the efficient use of resources to be maintained, even when the levels of activity deviate from those expected. By using a standard price per unit, these physical measures can be turned into standard costs; thus enabling more general comparisons to be made."

Cost accounting allows the control over materials costs and labor costs. There are job order costing systems, product costing systems for repetitive production, and tools to report cost behavior. "Cost systems in manufacturing com-

panies assign indirect factory expenses to products by a two-stage procedure. The first stage of the procedure assigns indirect resource expenses to cost centers, and the second stage assigns the expenses accumulated in the cost centers to products. The objective of the first stage is to assign all the factory expenses, both support- (such as quality assurance and inventory management) and production-related (such as supervision and setup), to production cost centers. Some firms do the first-stage assignment in several sub-stages, particularly when support department expenses are reassigned among themselves as well as to production departments. The first-stage assignment is typically used for two purposes. First, the expenses assigned to cost centers are used to evaluate the performance of the cost center manager. Second, the accumulated production cost center expenses are assigned, in the second stage of the procedure, to products to satisfy financial reporting requirements for inventory valuation." (Cooper, Kaplan 1991: 94)

Cost accounting systems can be used to make decisions calculating break-even points and margins or evaluating changes with 'what if' analysis playing with changes in different variables such as selling price, variable costs or sales volumes. Indeed, cost accounting delivers the fundamental data for budgeting, financial planning and control. It influences in all lines of a planned income statement: sales budget, production budget, materials budget, personnel expense budget, capital expenditures budget, or cash budget. Later on real figures can be compared to the planned ones to analyze the gaps and maybe correct processes or adapt strategies to the new information, again using the instruments of cost accounting.

However, although indispensable for controllers and executives those cost accounting systems have also some serious weak points. “Existing cost accounting and management control practices are unlikely to provide useful indicators for managing contemporary firms’ manufacturing operations. Traditional cost measurement systems will imperfectly reflect, and with considerable lags at best, the dramatic increase in manufacturing efficiency and effectiveness that occurs when firms achieve total quality control, Just-In-Time (JIT) inventory systems, and computer-integrated manufacturing processes. Financially oriented measurement systems will not capture the benefits from decreased new product launch times, from the flexibility afforded from computer-controlled production systems, and from the large decrease in throughput and lead times which modern manufacturing organization and technology make possible. Further, short-term profitability indicators will not signal the decrease in firm’s value when they reduce discretionary expenditures for developing new products, for improving production processes, for maintaining the skill, loyalty, and morale of the work force, for expanding distribution networks and customer awareness, for developing improved software for production and information systems, and for maintaining and improving their physical capital resources. Quite the contrary, the existing financial accounting systems signal short-term increases in accounting profits when firms decrease their economic wealth by foregoing investments in their long-term information and productive capital. Effective managerial accounting systems must reflect the value-creating activities of companies: in operations, in marketing and sales, and in product and process development. In particular, they cannot be developed and maintained in isolation from the organization and technology of a company’s manufacturing processes. If substantial changes are taking place in manufacturing processes, the man-

agement accounting system must also change if they are to provide relevant information for managerial decisions and control." (Kaplan 1991: 63)

The following subsection describes how to cope with the deficiencies of traditional cost accounting systems. Doubtlessly, only those managers who apply all analytical instruments correctly, each in its place, will be able to utilize shareholder value driver *cost management* so that it contributes to shareholder value maximization.

2.3.9.3. New tendencies in cost accounting

"Companies are now using a full range of operating measures – of quality, throughput, cycle times, and on-time delivery – while still retaining their traditional financial measures. The task of reconciling between operational and financial measures is currently left to middle-level management, who are squeezed between the pressure to show ever-improving financial performance to their superiors while encouraging and supporting the continuous improvement activities under TQM [Total Quality Management] and JIT [Just in Time supply] programs among their subordinates. In good times, operational and financial performance are linked together, but frequently one set of measures is moving up while the other set is moving down. At those times, the lack of an integrated view of the organization, with a single clear focus on appropriate performance measures at all levels, lead to frustration and confusion" (Cooper, Kaplan 1991: 205) and prevents in consequence the creation of shareholder value.

H. Thomas Johnson's (1991*) Blueprint for World-Class Management Accounting* gives an excellent introduction into how an activity-based cost ac-

counting solves the problems of traditional cost management and is therefore summarized hereafter:

"For more than 60 years, managers have used cost information from transaction-based financial accounts to judge the impact of their decisions on company profits. Costs are used in budgets for planning and control, and they also are used to evaluate both the profitability of resource allocation decisions. Relying on cost to evaluate the consequences of a manager's decisions succeeds if cost is the primary determinant of profitability. Today, however, we recognize that profitability no longer results exclusively from controlling costs."

"New management methods make quality and flexibility as important as cost in determining profitability." Therefore, Johnson asks for "a new approach to management accounting" that "must be built on 'activity-based-information'." The reason is simply that "the way to achieve profitability is to manage activities. When managers attempt to achieve profits by managing costs, as has been done for decades, they implicitly use cost to measure activities indirectly."

There are "two types of activity-based information" that "should form the backbone of world-class management accounting. One type is non-financial information about sources of competitive value (e.g., quality, flexibility …) in a company's operating activities. This information indicates how effectively operating activities deliver value to the customer. The second type of activity-based information, strategic cost information, enables managers to assess the long-term profitability of a company's current mix of products and activities. Strategic cost information indicates if a company's activities are cost-effective in comparison to alternatives outside the company, and if the mix of products

son to alternatives outside the company, and if the mix of products management has chosen to sell uses activities in the most profitable way."

The advantage of activity-based information is that it "focuses managers' attention on underlying causes (drivers) of cost and profit unlike the distant, often distorted, financial echoes of those causes that appear in traditional cost and performance reports." Concretely, "to achieve competitive operations that deliver value to customers, managers need information about sources of delay, excess, and unevenness that cause waste in operating activities. Eliminating delay, excess, and unevenness removes waste and makes activities more competitive." Obviously, traditional cost accounting systems are of limited usefulness when executives aim to "improving all determinants of competitiveness simultaneously by managing setup time" which "runs counter to what occurs when we optimize batch sizes by managing setup and storage *costs*."

There is "a trade-off among determinants of competitiveness. To see this trade-off, consider what happens if the marketing organization asks the factory to be more flexible (i.e., change models frequently) or to improve quality, once total per unit setup and storage cost is minimized by producing at the optimal batch size. Changing models more often means shortening run length, and shorter runs will raise total unit costs". Hence, "the factory can deliver increased flexibility only at greater cost. Likewise with quality. To improve quality when running large batches, one might stop a machine periodically and adjust its setting to eliminate out-of tolerance pieces near the end of a run. But stopping a machine to reset it increases total unit cost. Thus, we can have higher quality, but only at greater cost."

The conclusion for Johnson is clear: “a company striving to achieve world-class standards of value should manage waste, not costs. The presence of non-value activity forces us to accept trade-offs among sources of competitiveness. By reducing waste in activities, companies can forestall the trade-offs among cost, quality, and flexibility that otherwise prevent them from becoming world-class competitors.” For example, “the elapsed time it takes to do something – make an assembly, make a product, run a process – is an all encompassing index of competitiveness. Less time to do something means greater flexibility; it also means higher quality and lower cost in most cases.” Another example is that “indicators of waste help companies achieve the goal of continuous improvement by giving employees an incentive to continuously identify and remove generators of delay, excess, and unevenness. Continuously identifying and removing generators of delay, excess, and unevenness improves the indicators of a company’s competitive position.”

“In contrast to traditional management accounting indicators of performance, the indicators of competitiveness referred to above – elapsed time, distance moved, space occupied, number of part numbers – are all *non-financial* measures of performance in operating activities.” That does not mean traditional management accounting indicators are unnecessary, “managers should be aware that their success at eliminating non-value activity will not automatically reduce costs recorded in the financial accounts.” Therefore, “using non-financial indicators of performance to control operations does not eliminate financial cost information in business.” For instance cost information are needed to compare alternatives. “If any activity’s output costs more or provides less value than the

output of an alternative activity, then the company is not as profitable as it could be."

"Managers need information to compare the competitiveness and cost of each activity's output with the next best alternative, whether that alternative be inside or outside the company." Johnson proposes what he calls 'chargeout' to obtain that type of needed information. The positive characteristics of chargeouts are those:

- "Chargeouts resemble the price a company charges for output it sells to final customers."
- "Chargeouts help allocate resources within a company in a manner similar to prices in competitive markets, although the comparision is not quite exact."
- "Chargeouts have a greater long-term impact on a company's competitiveness and profitability than do traditional methods for allocating activity center costs."
- "Chargeout information to price activities, together with operating information about causes of waste, helps companies sustain profitability while giving competitive value to customers."

Also the use of traditional product cost accounting can be misleading. "A company may achieve world-class standards of competitiveness in its operating activities and all its activities may be as cost-effective as any in the market, yet the mix of products or services it sells may not use the company's activities as profitable as possible. This occurs when the company uses traditional product cost accounting information to evaluate the costs and profit margins of its vari-

ous products or services." Why is it possible that "managers who use cost accounting information to judge an individual product's costs can make serious marketing errors"? Johnson explains, "this happens because the over-aggregated averages that cost accounting systems use to distribute indirect costs to products *systematically* distort the costs of individual products." He concretes that "traditional cost accounting systems tend to overcost high volume products – not the ones that cause most overhead growth – and they undercost the low volume products that are chiefly responsible for most overhead growth."

The answer to the question what to do again is activity-based costing since it "assumes that resource-consuming activities cause costs; products incur costs by the activities they require for design, engineering, manufacture, sale, delivery, and service. Activity based costing traces costs to products through activities – essentially the activities that operating managers control with non-financial indicators of waste. In general, those products identified as winners by the traditional product costing system were found to be losers by the activity-based system and vice versa."

Summing up, "managers can achieve low cost, high quality, and flexibility simultaneously by focusing operational control on generators of nonvalue activity": "Combined together, non-financial information to control operating activities and activity-based cost information can provide the management information that businesses need in today's competitive environment." (Johnson 1991[1988]: 257-265)

2.3.9.4. Cost cutting strategies

"Historically, business strategy analysis has emphasized cost advantage as a primary basis for competitive advantage in an industry. The focus on cost advantage reflects the traditional emphasis on price as the principal medium of competition among firms – competing on price depends ultimately on cost efficiency." Changed, however, has the focus on the different possible cost cutting measures. "Since the mid-1980s, cost efficiency has remained a priority, but the focus has shifted toward cost cutting through restructuring, downsizing, outsourcing, 'lean production', and the quest for dynamic rather than static sources of cost efficiency." (Grant 1998: 196)

For the relevance restructuring has nowadays, Grant analyses how those organizational measures can contribute to save costs. "Reorganizing production processes can achieve substantial efficiency gains even without new investment in capital or process innovation. What has become popularized as business process reengineering (BPR) is the idea that most production processes involve complex interactions among many individuals, and that these processes tend to evolve over the time with little conscious or consistent direction." Therefore, a good approach "is to detach from the way in which a process is currently organized and to begin with the question, 'If we were starting afresh, how would we design this process?'" Here are some examples the author proposes

- "Several jobs are combined into one".
- "Workers make decisions". In any case, the ideas and proposals of workers who know details of processes better than directors should be taken into consideration when a decision has to be made.

- “The steps in the process are performed in a natural order”.
- “Processes have multiple versions, i.e., processes are designed to take account of different situations”. Then, the best option will deliberately be executed.
- “Processes are performed where it makes the most sense, e.g., if the accounting department needs pencils, it is probably cheaper for such a small order to be purchased directly from the office equipment store around the block than to be ordered via the firm’s purchasing department”.
- “Checks and controls are reduced to the point where they make economic sense”. That means controls are useful only as long as benefits derived exceed the implicated expenses.
- “Reconciliation is minimized” or optimized in the sense of the previous point.
- “A case manager provides a single point of contact at the interface between processes”.
- “Hybrid centralized / decentralized operations are prevalent, e.g., through a shared database decentralized decisions can be made while permitting overall coordination simply through information sharing.” (Grant 1998: 206)

Other approaches explained by Grant are to cost cuttings based on optimized capacity utilization, lowering input costs, increasing residual efficiency, and Total Quality Management.

“Over the short and medium term, plant capacity is more or less fixed, and variations in output are associated with variations in capacity utilization.

During periods of low demand, plant capacity is underutilized. This raises unit costs because fixed costs must be spread over fewer units of production." So, "in declining industries, the ability to speedily adjust capacity to the current level of demand can be a major source of cost advantage." (Grant 1998: 206, 207)

As regards lower input costs Grant lists five major sources (Grant 1998: 207-208):

1. There are "locational differences in input prices. The prices of inputs may vary between locations, the most important being differences in wage rates from one country to another." All other valuation criterions equal a move to another country in order to save costs may be considered, but in general advantages and disadvantages must be evaluated.

2. Sometimes it pays to own sources. "In raw material-intensive industries, ownership or access to low-cost sources may be a key cost advantage."

3. Also the influence of unions can have a considerable impact on personnel costs. "In some labor-intensive industries, cost leaders are often the firms that have avoided unionization."

4. Power to negotiate and bargain is a factor that largely determines prices in some markets. "Where bought-in products are a major cost item, differences in buying power among the firms in an industry can be an important source of cost advantage."

5. Last but not least personal and business relations to suppliers are price relevant factors and therefore cost-sensitive. "Recently companies have developed closer and longer-term relationships with a smaller number of sup-

pliers. Closer coordination permits economies from more effective quality control, just-in-time scheduling, technology transfer, reducing invoicing costs, and accelerated new product development cycles." Whenever possible, concentration on two suppliers of every product or family of products is optimal since competition between them is assured, purchase quantities are large enough to get attractive prices, and administrative expenditures are low.

The third approach cited by Grant consists in the realization of "residual efficiency" that "depends on the firm's ability to eliminate … costs in excess of maximum efficiency operation. These costs are typically a consequence of employees' desire – both at managerial and shop-floor levels – to maintain margin of slack in preference to the rigors of operating at maximum efficiency. The ability of firms to achieve dramatic cost reductions when faced with bankruptcy is evidence of such slack." If not confronted with such dangerous circumstances residual efficiency normally can be unlocked only when the staff is highly motivated. (Grant 1998: 209) Insofar, human resources management can play a decisive role in a firm's effort to eliminate all unproductive costs in the sense of shareholder value optimization.

"Although the focus of TQM [Total Quality Management] is the pursuit of quality improvement, TQM also introduced new thinking about the management of costs. The emphasis of TQM on the rigorous analysis of production activities, the simplification of processes, training, and increasing the responsibility and decision-making authority of shop-floor workers results in reducing the costs of defects and rework, lowers costs of supervision and maintenance, cuts invento-

ries and work in progress, and stimulates process innovation." (Grant 1998: 212)

2.3.10. Competitive advantages

Shareholder value variable *competitive advantages* is the last but not least analyzed value driver in this doctoral thesis. The special nature of this variable comes from its interrelationship with other value drivers. "… marketing, production, control, finance, and many other activities in firm have a role in competitive advantage. … However, competitive advantage cannot be truly understood without combining all these disciplines into a holistic view of the entire firm." (Porter 1985: xvi) So, shareholder value variable *competitive advantage* is the culmination of most value drivers, their synthesis, but it is at the same time an "independent" variable for enabling an independent approach to create shareholder value and therefore worthwhile to be analyzed in the theoretical framework of this thesis. For instance, a company can initiate a cost-cutting program to improve net present value of its investment projects and thus create shareholder value. However, it may also seek for shareholder value creating competitive advantages by a cost leadership strategy. Effects and results may be the same or similar, but the approaches are different.

The following subsection 2.3.10.1 explains why competitive advantages are so essential for a firm that aims at increasing shareholder value. Then, the second subsection (2.3.10.2) examines the conditions for competitive advantages to be effective in the sense of shareholder value creation. The third subsection (2.3.10.3) discusses some generic and specific strategies to obtain competitive advantages.

2.3.10.1. The need for competitive advantages

Microeconomic theory teaches that in a world of perfect competition, perfect market transparency and unlimited free market entry – conditions that usually do not exist in real markets but help to explain the consequences of competitive advantages – there is no long-term market equilibrium if at least one seller makes profits. Profits attract new suppliers in such optimal market conditions. The entrance of new suppliers leads to drops in prices, and consequently to profit erosions. All companies in an unfavorable cost situation become submarginal suppliers and will be eliminated form the market on the long run. Markets tend always to come to equilibrium. Only those firms that apply a cost optimal production technology will remain in the market. They will not make 'profits' on the long term since new suppliers would sell at a more attractive price. To make no profits does not mean that companies work for free. Entrepreneurs are paid for their work corresponding to the value of work in the labor market and earn their capital costs, but they do not increase their wealth as owners or shareholders. (Harbrecht 1986: 78, 79)

As a result, a firm that pretends to increase shareholder value in competitive markets (as a really existing substitute for "perfect markets") has to take into account that high margins tend to be eliminated rapidly because innovative processes, products, or services are imitated by other firms in a short time. High margins that surpass the cover of all costs (including capital costs) can only be realized if the company has and defends a comparative advantage over the competition and / or seeks steadily new opportunities to reestablish or widen its competitive advantages.

2.3.10.2. Definition of and conditions for competitive advantages

John Anderson Kay defines a competitive advantage as a “distinctive capability … when it is applied in a relevant market”. (Kay 1983: vii) What does that mean?

“A capability can only be distinctive if it is derived from a characteristic which other firms lack. Yet it is not enough for that characteristic to be distinctive. It is necessary also for it to be sustainable and appropriable. A distinctive capability is sustainable only if it persists over time. … A distinctive capability is appropriable only if it exclusively, or principally, benefits the company which holds it.” (Kay 1983: 13)

“There are relatively few types of distinctive capabilities which meet these conditions of sustainability and appropriability. There are three which recur in analysis of the performance of successful companies. … (Kay 1983: 14)

- “Architecture is the first of three primary sources of distinctive capability. It is a network of relational contracts within, or around, the firm. Firms may establish these relationships with or among their employees (internal architecture), with their suppliers or customers (external architecture), or among a group of firms engaged in related activities (networks). The value of architecture rests in the capacity of organizations which establish it to create organizational knowledge and routines, to respond flexibly to changing circumstances, and to achieve easy and open exchanges of information. Each of these is capable of creating an asset for the firm – organizational knowledge which is more valuable than the sum of individual knowledge, flexibility, and responsiveness which extends to the institution as well as to its members.” (Kay 1983: 66)

- “Innovation is an obvious source of distinctive capability, but it is less often a sustainable or appropriable source because successful innovation quickly attracts imitation.” (Kay 1983: 14) “Yet firms often fail to gain competitive advantage from innovation. … What appear to be the rewards of innovation are often really the product of the firm’s architecture. Some firms have established an architecture which stimulates a continuous process of innovation. Other firms have created an architecture which enables them to implement innovation particularly effectively.” (Kay 1983: 101)

- “A third distinctive capability is reputation. Reputation is, in a sense, a type of architecture but it is so widespread, and so important that it is best to treat it as a distinctive source of competitive advantage. Easier to maintain than to create, reputation meets the essential conditions for sustainability. Indeed an important element of the strategy of many successful firms has been the transformation of an initial distinctive capability based on innovation or architecture to a more enduring one derived from reputation.” (Kay 1983: 14) “Reputation is the most important commercial mechanism for conveying information to customers. … The importance of reputation can be seen in markets – from car hire to accountancy – where product quality is important but can only be identified through long-term experience. In these markets, reputations are difficult and costly to create but once established can yield substantial added value.” (Kay 1983: 87)

“The key issue for the firm is its choice of markets – in both product and geographic dimensions – and its membership of industry and strategic group follow from that. A distinctive capability applied in a relevant market becomes a competitive advantage. For each distinctive capability there is a market, or

group of markets, in which the firm which holds it may enjoy a competitive advantage. For some distinctive capabilities – as with those which are based on reputation or on some kinds of architecture – it is the nature of demand for the product which identifies the appropriate market. For other distinctive capabilities – as with most innovations – it is the technical characteristics of the product which define the markets in which they yield competitive advantage. Similar issues influence the choice of product position with a given market." (Kay 1983: 127)

"Some competitive advantages are based not on the distinctive capabilities of firms, but on their dominance or market position. These are strategic assets for the firm concerned. Strategic assets are of three main types. Some companies may benefit from a natural monopoly. They are established in a market which will not readily accommodate more than one firm. In some other markets, incumbent firms have already incurred many of the costs of supply, but entrants have not. In these the cost structure of firms may give them a competitive advantage. Still other firms benefit from market restrictions which are the product of licenses and regulation. What distinguishes all these from true distinctive capabilities is that any other firm which had entered the industry, or had already made that expenditure or held that license, would have enjoyed the same competitive advantage." (Kay 1983: 113) "But firms may be very vulnerable if that strategic asset is eroded, as various privatized and deregulated firms have discovered. Strategic assets are often less secure sources of competitive advantage than distinctive capabilities." (Kay 1983: 126)

2.3.10.3. Strategies for achieving competitive advantage

A company has a competitive advantage if it disposes of sustainable and appropriable capabilities or a dominant market position. Most important for managers is the question how a competitive advantage can be obtained. A more theoretical approach is the well-known one of Michael Porter who derived three general strategies to get competitive advantages (2.3.10.3.1). However, literature offers also a lot of concrete strategies to obtain competitive advantages. Representative for them are the proposals of Pankaj Ghemawat which will be cited here (2.3.10.3.2). Of course, managers have many possibilities to formulate other specific strategies to improve a competitive position. Those approaches have to be developed in function of the firm's specific environment. "The basic tool for diagnosing competitive advantage and finding ways to enhance it is the value chain, which divides a firm into the discrete activities it performs in designing, producing, marketing, and distribution its product." (Porter 1985: 26)

2.3.10.3.1. Generic strategies

Michael Porter proposes "three *generic* strategies for achieving competitive advantage: cost leadership, differentiation, and focus." (Porter 1985: xvi)

"Cost leadership is perhaps the clearest of the three generic strategies. In it, a firm sets out to become *the* low-cost producer in its industry. … If a firm can achieve and sustain overall cost leadership, then it will be an above-average performer in its industry provided it can command prices at or near the industry average. … A cost leader must achieve *parity* or *proximity* in the bases of differentiation relative to its competitors to be an above-average performer, even though it relies on cost leadership for its competitive advantage." (Porter

1985: 12, 13) “The strategic value of cost advantage hinges on its sustainability. Sustainability will be present if the sources of a firm’s cost advantage are difficult for competitors to replicate or imitate. Cost advantage leads to superior performance if the firm provides an acceptable level of value to the buyer so that its cost advantage in not nullified by the need to charge a lower price than competitors.” (Porter 1985: 97)

“A firm differentiates itself from its competitors when it provides something unique that is valuable to buyers beyond simply offering a low price. Differentiation allows the firm to command a premium price, to sell more of its product at a given price, or to gain equivalent benefits such as greater buyer loyalty during cyclical or seasonal downturns.” (Porter 1985: 120) “A firm that can achieve and sustain differentiation will be an above-average performer in its industry if its price premium exceeds the extra costs incurred in being unique. … A differentiator thus aims at cost *parity* or *proximity* relative to its competitors, by reducing cost in all areas that do not affect differentiation.” (Porter 1985: 14)

“The third generic strategy is focus. This strategy is quite different from the others because it rests on the choice of a narrow competitive scope within an industry. … The target segments must either have buyers with unusual needs or else the production and delivery system that best serves the target must differ from that of other industry segments. … The focuser can thus achieve competitive advantage by dedicating itself to the segments exclusively.” (Porter 1985: 15)

2.3.10.3.2. Some specific strategies

Pankaj Ghemawat follows another approach and proposes three more specific strategies to gain competitive advantages: growing to get an overwhelming size, secure preferred access to resources or customers, and politics that limit competitors' possibilities.

"Size advantages exist because markets are finite. If a business can commit to being large, competitors may resign themselves to remaining smaller. What holds them back is the fear that if they matched the leader's size, supply might exceed demand by enough to make the market unprofitable for everyone. Commitment to being large means making durable, irreversible investments. To exploit commitment opportunities, a business must be able to preempt its competitors. … Size is an advantage only if, net net, there are compelling economies to being large. Such economies have three possible bases: scale, experience, and scope. Scale economies usually summon up a vision of a global factory running flat out. But it is important to remember that scale can work on a national, regional, or even local level, and that its effects need not be confined to manufacturing. … Experience effects are based on size over time, rather than size at a particular point in time. If you think about it, experience is a kind of irreversible, market-specific investment. While it is usually cited in the context of the experience curve – the inverse relation between cumulative production and average costs – its ambit is actually much broader. For example, experience has been shown to increase the operating reliability of processing plants, the success rate of product introductions, and the marketability of high-tech products. … Scope economies are derived from activities in interrelated markets. If they are strong, a sustainable advantage in one market can be used to

build sustainability in another. The term scope economy isn't just a newfangled name for synergies; it actually defines the conditions under which synergy works. To achieve economies of scope, a company must be able to share recourses across markets, while making sure that the costs of those resources remain largely fixed. Only then can economies be effected by spreading assets over a great number of markets." (Ghemawat 1986: 54, 55)

"Preferred access to resources or customers can award a business a sustainable advantage that is independent on size. The advantage persists because competitors are held back by an investment asymmetry: they would suffer a penalty if they tried to imitate the leader. Access will lead to a sustainable advantage if two conditions are met: it must be secured under better terms than competitors will be able to get later, and the advantage has to be enforceable over the long run. Enforceability can come from ownership, binding contracts, or self-enforcing mechanisms such as switching costs. … Superior access to information may reflect the benefits of scale or experience. … An obvious but important point: know-how must be kept secret if it is to yield an advantage. … Tying up inputs will lead to a sustainable advantage only if the commodity's supply is bounded and the company has the right to use it on favorable terms. … In many ways, preferred access to markets is the mirror image of preferred access to inputs. But access to markets relies less on vertical integration of contracts and more on self-enforcing mechanisms such as reputation, relationships, switching costs, and product complementary." (Ghemawat 1986: 55, 56)

"Sometimes the sustainability of an advantage cannot be pinned on either size or access. Instead, competitors' options may differ fundamentally from yours, hamstringing their ability to imitate your company's strategy. Rivals may

be frozen into their current positions [for example by] public policy. Government intervention always affects the working of markets; that is its avowed purpose. Sometimes its actions percolate so far as to affect competitive positions within an industry. The examples are familiar: patents (try to) protect innovators from imitators, antitrust laws prevent large businesses from being as aggressive as smaller competitors, some companies get handouts while others do not. The lesson, strategically, is that a company that is on the right side of public policy can exploit its position to build sustainability against companies that are not." (Ghemawat 1986: 57)

2.3.10.4. Measurement of competitive advantages

Sometimes, controlling for value creation due to appropriate application of a value driver is a quite simple exercise, as for example in the case of cost management. To measure value creation through competitive advantages is more complicated since competitive advantage is inherently a relative measure. However, for shareholder value oriented executives it is necessary to know to what extent their respective measures increase the wealth of shareholders. One interesting concept is that of Simons (1999). But also the ideas of Kay (1983), several times cited in this subchapter, are noteworthy.

Simons' proposal is: "Profit from competitive effectiveness focuses on how well a business fared against its competitors. It is gauged by two principal output indicators: market share growth and price premium. Market share growth reveals how customers reacted to a business's value proposition. Price premium, reflected in the revenue line of the income statement, reveals the success of a business in extracting value based on differentiation of its goods and services. … Two key variables affect profitability attributable to market share:

- increase (or decrease) in profit due to changes in market size (i.e., changes in total unit or dollar volume sold in the entire market)
- increase (or decrease) in profit due to changes in market share (i.e., changes in percentage of total market served by the business) …

With market share variance as a backdrop, we now evaluate managers' success in generating acceptable levels of revenue. Revenue is a simple accounting term; it equals sales volume in units multiplied by unit price. However, revenue is much more than that. Revenue is the unequivocal measure of the desirability of a value proposition. It is a key indicator of customer acceptance of products and services. In the long term, it is the ultimate measure of customer satisfaction. Managers are especially interested in two sources of revenue-based profit:

- increase (or decrease) in profit due to changes in prices
- increase (or decrease) in profit due to changes in product mix …

A favorable sales price variance, or price premium (selling prices are higher than profit plan estimates), indicates that managers have been successful in extracting value form the marketplace – either because of product superiority or weakness in competitors' product positions. …

The second revenue variance focuses on product mix. Product mix describes the percentage of total sales that is generated by each product in a business's product line. For example, a firm may generate 25% of its revenue from product A, 40% from product B, and 35% from product C. Product mix is important because selling prices and manufacturing costs often differ by prod-

uct. If companies sell more or less of different products – each with different prices and contribution margins – then actual profit will differ from profit plan estimates. To isolate the effect of product mix variances on profit, we must work with standard contribution margins. Contribution margin is defined as selling price minus variable costs. For our purposes, we are interested in isolating the profit effects of changes in product mix; therefore, we need to hold changes in variable costs and selling price constant. Thus, it is important to remember to compute product mix variances using standard (i.e., planned) variable costs per unit rather than actual variable costs per unit, which may reflect unanticipated changes in production efficiency. Similarly, we use planned changes in selling prices in the calculation of contribution margin because the effects of changes in selling price changes have already been identified above as part of the sales priced variance." (Simons 1999: 115-120)

Another model to measure competitive advantage stems from Kay (1983):

"Competitive advantage is, necessarily, relative – a competitive advantage is something that one firm has over another." (Kay 1983: 192) "Where no explicit comparator is stated, the relevant benchmark is the marginal firm in the industry. The weakest firm which still finds it worthwhile to serve the market provides the baseline against which the competitive advantage of all other firms can be set. In this way, it is possible to measure the size of a competitive advantage. [For example,] Sainsbury's competitive advantage over Asda is 10 per cent of net output and 1.7 per cent of gross output, implying that a unit of gross sales is achieved with 1.7 per cent fewer total inputs. The value of that competitive advantage over Asda is around 150 million Ecus per year, given that Sains-

bury's has gross output of nearly 8 billion Ecus and net output of around 1.5 billion Ecus. That is the measure of the difference in the value created by a highly successful firm, with strong distinctive capabilities, over that achieved by the merely competent." (Kay 1983: 195)

"Since the marginal firm to the industry is the benchmark for measuring competitive advantage, the relevant cost of risk-bearing is what it would cost that firm to obtain the risk capital it needs for its business. The price of risk may then be calculated as an addition to the cost of capital applied to the value of current cost assets." (Kay 1983: 216)

"In a contestable market, where it is easy for firms to enter or leave, the added value created by each firm will be exactly equal to the size of its competitive advantage. But if entry is costly, firms with little competitive advantage may nevertheless succeed in adding value, and if there is excess capacity in an industry there may be no added value even for firms which have competitive advantages." (Kay 1983: 192)

The literature review on theoretical aspects of the shareholder value variables ends here. The following chapter bases on these theoretical findings in order to evaluate the shareholder value orientation of the researched companies.